

THE
PHRENOLOGICAL
JOURNAL AND MISCELLANY.

VOL. IX.

SEPTEMBER 1834—MARCH 1836.

Homo, naturæ minister et interpres, tantum facit et intelligit quantum de naturæ ordine re vel mente observaverit; nec amplius scit, aut potest.—BACON.

Quiconque n'est pas poussé par un instinct inné d'observation; quiconque trouve trop difficile l'abnégation de ses opinions et de son savoir puisé dans l'instruction antérieure; . . . quiconque a une trop haute idée de la force et de la justesse de ses raisonnemens pour se croire obligé de les soumettre à une expérience mille et mille fois répétée, ne perfectionnera jamais la physiologie du cerveau. Cependant ce sont les seuls moyens de vérifier nos découvertes, et les seuls propres à les rectifier ou à les réfuter.—GALL.

One fact is to me more positive and decisive than a thousand metaphysical opinions.—SPURSKIN.

EDINBURGH:
JOHN ANDERSON JUN. 55. NORTH BRIDGE STREET;
SIMPKIN, MARSHALL, & CO. LONDON; JOHN M'LEOD, GLAGOW;
HODGES & SMITH, DUBLIN; W. GRAPEL, LIVERPOOL; AND
MARSH, CAPEN & LYON, BOSTON, UNITED STATES.

MDCCCXXXVI.

No. XLIII.

1. Reasons for concluding that the Function attributed to a Faculty for Mechanical Resistance, is twofold, viz. the Function of an External Sense for Resistance, and of an Internal Faculty for Force. By Mr SIMPSON. 193
2. Annals of Phrenology, Nos. I. & II. 216
3. Dublin Phrenological Society. 229
4. Rammohun Roy. 232
5. Anti-Phrenological Essay, by a Clergyman of the Church of Scotland; with an Answer thereto, by Mr WALTER TID. 233
6. The Teacher; or Moral Influences employed in the Instruction of the Young. Intended chiefly to assist Young Teachers in Organising and Conducting their Schools. By JACOB ABBOTT, Principal of 233

- Mount Vernon School, New England. Revised by the Rev. CHARLES MARO, LL.D. 250
7. Physiologie de l'Homme Aliéné appliquée à l'Analyse de l'Homme Social. Par SCIBLON PINEL. 259
 8. Proceedings of the Manchester Phrenological Society. 260
 9. Education and Crime. 267
 10. Chambers's Information for the People, No. 45. — Treatise on Moral Philosophy. 269
 11. Mr J. L. Lavison. 271
 12. A Singular Dream. 278
 13. Prospectus of a British Association for the Advancement of Mental Science. By Sir GEORGE S. MACKENZIE, Bart. 281
 - Notices. 284

No. XLIV.

1. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWNE, Esq. Medical Superintendent of that Institution. 289
2. Lectures on Phrenology; delivered before the Young Men's Association for Mutual Improvement of the City of Albany. By AMOS DEAN. (Review). 302
3. Suggestions for Facilitating and Extending the Study of Mental Derangement, and Improving the Treatment of the Insane. By Mr JAMES FOULIS DUNCAN, A. B., Dublin. 309
4. Mr Carmichael's Examination of Mr Macnish's Objections to his Theory of Sleep, in the Phrenological Journal for December 1834. 318
5. Casts of the Heads of two Swedish

- Lapländers, and of the Skull of a Swedish Criminal. 328
6. Remarks on Inhabitiveness and Concentrativeness. 330
 7. Christian Phrenology; or the Teachings of the New Testament respecting the Animal, Moral, and Intellectual Nature of Man. By HENRY CLARKE. (Review). 335
 8. Character and Cerebral Development of William Manuel, a Precocious Child. 344
 9. Letter from Sir G. S. Mackenzie, Bart., on Mr Simpson's Views as to the Sense of Resistance. 349
 10. Cerebral Development and Inferred Character of Kabooti, an Egyptian Mummy. 356
 11. Observations on the Phrenological Standard of Civilization. 360
 12. The Constitution of Man considered in Relation to External Objects. By GEORGE COMBE. 2d Edition. (Review). 375
 - Notices. 379

No. XLV.

1. Christian Ethics; or Moral Philosophy on the Principles of Divine Revelation. By RALPH WARD LAW, D.D. 383
- A General View of the Progress of Ethical Philosophy, &c. By Sir JAMES MACKINTOSH. Being

- Dissertation Second, prefixed to the Seventh Edition of the Encyclopedia Britannica. 385
- A Fragment on 'Mackintosh's' being Strictures on some Passages of his Dissertation. ib.
2. Hints on the Formation and Con-

- duct of a General Model Normal School for Training Teachers to supply the Demand of a National System of Popular Education. By Mr SIMMONS, 397
3. Observations on the Mutual Influence of the Mental Faculties; and, in particular, on the Modes and Laws of the Activity of Destructiveness. By Mr ROBERT COX, 402
4. Remarks on the Influence of Mental Cultivation and Mental Excitement upon Health. By ALFRED BARNARD, M.D. (Review), 424
5. Letter on the Functions of the Organs of Comparison and Wit. By GEORGE HANCOCK, Esq. 435
6. The Church of Scotland's Infidelity, &c.; being the Substance of an Address delivered before the General Assembly of the Church, on 25th May 1835. By the Rev. ALEXANDER DUFF, A.M. (Review), 443
7. An Essay on the Application of Phrenology to the Investigation of the Phenomena of Insanity. By DANIEL NOBLE, Esq. 447
8. Case illustrative of the Utility of Phrenology. 456
9. Account of the Skull of Dean Swift, recently discovered at Dublin. 466
10. Case of Derangement of the Faculty of Language. By JOHN GRATTAN, Esq. Belfast, 471
- Notices, 474

No. XLVI.

1. Thoughts on Physical Education; being a Discourse delivered to a Convention of Teachers in Lexington, Kentucky, on the 6th and 7th November 1833, by CHARLES CALDWELL, M.D. (Review), 481
2. Owenism and Phrenology. 489
3. Comments on Mr Hancock's "Letter on the Functions of the Organs of Comparison and Wit," contained in No. 45. of the Phrenological Journal. By H. C. WATSON, F.L.S. 494
4. On the Uses and Modes of Activity of Destructiveness. By Mr ROBERT COX—concluded, 498
5. Journal de la Société Phrénologique de Paris, April and July 1835, 505
6. Case of Impairment of the Faculty of Language, accompanied by Pain above the Eyes. By Mr WILLIAM GIBSON, 515
7. Phrenological Quacks, 517
8. Mr Combe's Visit to Newcastle, 519
9. Dr Spurzheim and the Edinburgh Reviewer, 526
10. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWNE, Medical Superintendent of that Institution—(continued), 532
11. Account of the System of Education followed in the Rev. J. C. BRUCE's Academy at Newcastle-on-Tyne, 545
12. Phrenological Analysis of the Character of George Campbell, recently executed at Glasgow for Murder, 553
13. Dublin Phrenological Society, 558
14. Proposed Association for the Advancement of Mental Science, 561
15. The Christian Examiner, No. 65.—Annals of Phrenology, No. 5.—The Educational Magazine, Nos. 9, 10, 11.—The Christian Physician and Anthropological Magazine, Nos. 1, 2, 3.—The Analyst, Nos. 11, 12, 566
- Notices, 570

No. XLVII.

1. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWNE, Esq. Medical Superintendent of that Institution—(continued), 577
2. On the Authenticity of the Skulls of Dean Swift and Stella. By Dr HENRY OF DUBLIN, 593
3. What is the Use of the Double Brain? 608
4. Concentrativeness, 612
5. On the Importance of Physiology with reference to Education. By ANDREW COMBE, M.D. 620

No. XLIII.

1. Reasons for concluding that the Function attributed to a Faculty for Mechanical Resistance, is twofold, viz. the Function of an External Sense for Resistance, and of an Internal Faculty for Force. By Mr SIMPSON, 193
2. Annals of Phrenology, Nos. I. & II. 216
3. Dublin Phrenological Society, 229
4. Rammoohun Roy, 232
5. Anti-Phrenological Essay, by a Clergyman of the Church of Scotland; with an Answer thereto, by Mr WALTER TUN, 233
6. The Teacher; or Moral Influences employed in the Instruction of the Young. Intended chiefly to assist Young Teachers in Organising and Conducting their Schools. By JACOB ANNOT, Principal of

- Mount Vernon School, New England. Revised by the Rev. CHARLES MARO, LL.D. 250
7. Physiologie de l'Homme Aliéné appliquée à l'Analyse de l'Homme Social. Par SCRIEUX PIRREL, 259
8. Proceedings of the Manchester Phrenological Society, 260
9. Education and Crime, 267
10. Chambers's Information for the People, No. 46. — Treatise on Moral Philosophy, 269
11. Mr J. L. LAYTON, 271
12. A Singular Dream, 278
13. Prospectus of a British Association for the Advancement of Mental Science. By Sir GEORGE S. MACKENZIE, Bart. 281
- Notices, 284

No. XLIV.

1. Observations on Religious Fanaticism; illustrated by a Comparison of the Relief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Esq. Medical Superintendent of that Institution, 289
2. Lectures on Phrenology; delivered before the Young Men's Association for Mutual Improvement of the City of Albany. By AMOS DEAN. (Review), 302
3. Suggestions for Facilitating and Extending the Study of Mental Derangement, and Improving the Treatment of the Insane. By Mr JAMES FOULIS DUNCAN, A. B., Dublin, 309
4. Mr Carmichael's Examination of Mr Macnish's Objections to his Theory of Sleep, in the Phrenological Journal for December 1834, 318
5. Casts of the Heads of two Swedish

- Laplanders, and of the Skull of a Swedish Criminal, 328
6. Remarks on Inhabitiveness and Concentrativeness, 330
7. Christian Phrenology; or the Teachings of the New Testament respecting the Animal, Moral, and Intellectual Nature of Man. By HENRY CLARKE. (Review), 335
8. Character and Cerebral Development of William Manuel, a Precocious Child, 344
9. Letter from Sir G. S. Mackenzie, Bart., on Mr Simpson's Views as to the Sense of Resistance, 349
10. Cerebral Development and Inferred Character of Kabooti, an Egyptian Mummy, 356
11. Observations on the Phrenological Standard of Civilization, 360
12. The Constitution of Man considered in Relation to External Objects. By GEORGE COMBE. 2d Edition. (Review), 375
- Notices, 379

No. XLV.

1. Christian Ethics; or Moral Philosophy on the Principles of Divine Revelation. By RALPH WARDLAW, D. D. 385
- A General View of the Progress of Ethical Philosophy, &c. By Sir JAMES MACKINTOSH. Being

- Dissertation Second, prefixed to the Seventh Edition of the Encyclopædia Britannica, 385
- A Fragment on 'Mackintosh'; being Strictures on some Passages of his Dissertation, ib.
2. Hints on the Formation and Con-

- duct of a General Model Normal School for Training Teachers to supply the Demand of a National System of Popular Education. By Mr. SHARSON, 397
3. Observations on the Mutual Influence of the Mental Faculties; and in particular, on the Modes and Laws of the Activity of 'Destructiveness.' By Mr. ROSSER COX, 402
4. Remarks on the Influence of Mental Cultivation and Moral Education upon Health. By ANNA MARIA BURGESS, M.D. (Review), 424
5. Letter on the Functions of the Organs of Comparison and Wit. By GEORGE HANCOCK, Esq., 435
6. The Church of Scotland's India Mission, &c.; being the Substance of an Address delivered before the General Assembly of the Church, on 25th May 1835. By the Rev. ALEXANDER DUFF, A.M. (Review), 443
7. An Essay on the Application of Phrenology to the Investigation of the Phenomena of Insanity. By DANIEL NOBLE, Esq., 447
8. Case illustrative of the Utility of Phrenology, 456
9. Account of the Skull of Dean Swift, recently skinned at Dublin, 466
10. Case of Derangement of the Faculty of Language. By JOHN GRATTAN, Esq. Belfast, 471
- Notices, 474

No. XLVI.

1. Thoughts on Physical Education; being a Discourse delivered to a Convention of Teachers in Lexington, Kentucky, on the 6th and 7th November 1833, by CHARLES CALDWELL, M.D. (Review), 481
2. Openism and Phrenology, 489
3. Comments on Mr. Hancock's Letter on the Functions of the Organs of Comparison and Wit, contained in No. 45, of the Phrenological Journal. By H. C. WATSON, F. L. S., 494
4. On the Uses and Modes of Activity of Destructiveness. By Mr. ROSSER COX—concluded, 496
5. Journal de la Société Phrénologique de Paris, April and July 1835, 505
6. Case of Impairment of the Faculty of Language, accompanied by Pain above the Eyes. By Mr. WILLIAM GIBSON, 515
7. Phrenological Quacks, 517
8. Mr. Combe's Visit to Newcastle, 519
9. Dr. Spurzheim and the Edinburgh Reviewer, 526
10. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Medical Superintendent of that Institution—(continued), 532
11. Account of the System of Education followed in the Rev. J. C. BRUCE's Academy at Newcastle-on-Tyne, 545
12. Phrenological Analysis of the Character of George Campbell, recently executed at Glasgow for Murder, 553
13. Dublin Phrenological Society, 558
14. Proposed Association for the Advancement of Mental Science, 561
15. The Christian Examiner, No. 63.—Annals of Phrenology, No. 5.—The Educational Magazine, Nos. 8, 10, 11.—The Christian Physician and Anthropological Magazine, Nos. 1, 2, 3.—The Analyst, Nos. 11, 12, 566
- Notices, 570

No. XLVII.

1. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Esq. Medical Superintendent of that Institution—(continued), 577
2. On the Authenticity of the Skulls of Dean Swift and Stella. By Dr. HENSON, of Dublin, 593
3. What is the Use of the Double Brain? 606
4. Concentrativeness, 612
5. On the Importance of Physiology with reference to Education. By ANASTAS COMAR, M.D., 620

6. On the Functions of the Organs called Weight and Constructiveness; being the Substance of a Paper read before the Members of the Manchester Phrenological Society, June 2. 1835: with some Observations on Mr Simrson's Views, as given in the 43d Number of the Phrenological Journal. By RICHARD EDMONDSON,	624	7. The Details of Phrenology,	635
		8. Remarks on the Cerebral Organ called Marvellousness by Spurzheim, and Wonder by Combe,	636
		9. Case of John Adam, executed at Inverness, on the 18th October 1835, for the Murder of his Wife,	644
		Notices,	657

WOOD-CUTS IN THIS VOLUME.

Robert Burns, 57.—Manchester Idiot, 128.—Rammohun Roy, 128.—John Adam and John Linn, murderers, 651.—David Haggart, thief, 655.

THE
PHRENOLOGICAL JOURNAL.

No. XLI.

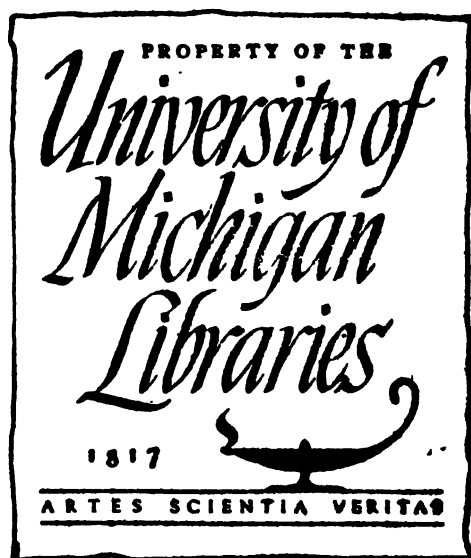
ARTICLE I.

A DISCOURSE ON THE STUDIES OF THE UNIVERSITY. By
ADAM SEDGWICK, M. A., F. R. S., &c. Woodwardian Professor and Fellow
of Trinity College, Cambridge. Third Edition. Cambridge, 1834. 8vo,
pp. 187.

THIS is a work of great merit, and is one of the most pleasing indications with which we are acquainted, of the progress of sound philosophy in the University of Cambridge. Mr Sedgwick enjoys a high reputation as a geologist—second, we believe, only to Lyell; but this Discourse proves that, in moral science also, he possesses extensive knowledge, and powers of profound and correct investigation. A beautiful strain of rational piety and love of truth pervades it, which leads us at once to love and respect the author. It is prefaced by a text (Psalm cxvi. 17, 18, 19,) and contains throughout numerous quotations from Scripture; from which circumstances, and its title, we conclude that it is a sermon. Far from objecting to it on this account, we wish that many sermons of a similar character were preached and published. We have, therefore, much pleasure in introducing some of the author's views to our readers.

The Discourse was delivered on the day of the annual commemoration of the founders of the University of Cambridge, and is published at the request of the junior members of the Society to whom it was more immediately addressed. It contains, not a formal, but a comprehensive and valuable, dissertation on academic studies.

One of the most important features in modern philosophy, is the practical application of the doctrine, that all nature is regulated by laws instituted by the Creator, and that human happiness and virtue are promoted by studying and obeying them. Mr Sedgwick observes,—“ We are justified in saying, that in the moral as in the physical world, God seems to govern by ge-



NEILL & CO., PRINTERS, EDINBURGH.

BF
866
P57

CONTENTS OF VOL. IX.

No. XLI.

<ol style="list-style-type: none"> 1. A Discourse on the Studies of the University. By ADAM SEDGWICK, M.A., F.R.S., &c. Woodwardian Professor and Fellow of Trinity College, Cambridge. (Review.) 1 2. Affection of the Faculty of Language from Injury of the Brain, 17 3. Characteristics of the Caribs, 20 4. The Book of Aphorisms. By a Modern Pythagorean. (Review), 23 5. Necessity of Popular Education as a National Object; with Hints on the Treatment of Criminals, and Observations on Homicidal Insanity. By JAMES SIMPSON, Advocate. (Review), 28 6. Pauper Lunatic Asylum at Hanwell, near London, 44 7. Opinions of Tiedemann and Arnold respecting Phrenology—Inconsistency of the Anti-Phrenologists, 48 8. An Essay on the Character and 	<ol style="list-style-type: none"> Cerebral Development of Robert Burns. Read, on 5th May 1834, before The Edinburgh Ethical Society for the Study and Practical Application of Phrenology. By Mr ROBERT COX, 52 9. The Principles of Physiology applied to the Preservation of Health, and to the Improvement of Physical and Mental Education. By ANDREW COMBE, M.D., Fellow of the Royal College of Physicians of Edinburgh. (Review), 74 10 Proceedings of Societies— <ol style="list-style-type: none"> 1. The Phrenological Society, 86 2. The Warwick and Leamington Phrenological Society, 87 3. The Edinburgh Ethical Society for the Study and Practical Application of Phrenology, 88 Notices, 91
--	--

No. XLII.

<ol style="list-style-type: none"> 1. The Physiological Characters of Races of Mankind considered in their Relations to History; being a Letter to M. Amédée Thierry, Author of the History of the Gauls. By W.F. EDWARDS, M.D., F.R.S.L., &c. &c. (Review), 97 2. An Essay on the Temperaments. By Mr DANIEL NOBLE, Member of the Royal College of Surgeons in London, 109 3. Case of Derangement of the Faculty of Language, in consequence of a Blow near the Eye, 118 4. Phrenology and the British Association, 120 5. Case of Idiocy, 126 6. Journal de la Société Phrénologique de Paris, No. 5, 131 7. Observations on the Functions of the Organ of Weight. By Mr RICHARD EDMONDESON, Manchester, 142 8. Dundee Lunatic Asylum, 144 9. Observations on Comprehensiveness; being an Attempt to determine the 	<ol style="list-style-type: none"> Elementary Faculty to which that Name is generally applied. By Mr ROBERT COX, 147 10. Remarks on two Cases of Cerebral Disease, published by Dr Moir in the Edinburgh Medical and Surgical Journal, and imagined to be subversive of the Conclusions of Phrenologists as to the Seat of the Organ of Language. By W. A. F. BROWN, Esq. 162 11. Proximate Cause of Sleep— <ol style="list-style-type: none"> 1. Mr Andrew Carmichael's Reconsideration of his "Conjectures," in reference to Mr Macnish's "Philosophy of Sleep," 164 2. Notes on Mr Carmichael's Essay, by Mr Macnish, 175 12. Letter from Mr J. L. LEVISON, 181 13. Epilepsy, a Case of Twenty Years' Standing Cured; with the Treatment and Remarks thereon. By JOHN EPPS, M.D., &c. 186 Notices, 189
---	--

No. XLIII.

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Reasons for concluding, that the Function attributed to a Faculty for Mechanical Resistance, is twofold, viz. the Function of an External Sense for Resistance, and of an Internal Faculty for Force. By Mr SIMPSON, . . . 193 2. <i>Annals of Phrenology</i>, Nos. I & II. . . 216 3. <i>Dublin Phrenological Society</i>, . . . 229 4. Rammohun Roy, . . . 232 5. Anti-Phrenological Essay, by a Clergyman of the Church of Scotland; with an Answer thereto, by Mr WALTER TUD, . . . 233 6. The Teacher; or Moral Influences employed in the Instruction of the Young. Intended chiefly to assist Young Teachers in Organising and Conducting their Schools. By JACOB ASSORT, Principal of | <ol style="list-style-type: none"> Mount Vernon School, New England. Revised by the Rev. CHARLES MATO, LL.D. . . 250 7. <i>Physiologie de l'Homme Aliéné appliquée à l'Analyse de l'Homme Social</i>. Par SCIPION PIRKEL, . . 259 8. <i>Proceedings of the Manchester Phrenological Society</i>, . . . 260 9. <i>Education and Crime</i>, . . . 267 10. <i>Chambers's Information for the People</i>, No. 45, — <i>Treatise on Moral Philosophy</i>, . . . 269 11. Mr J. L. LEVISON, . . . 271 12. <i>A Singular Dream</i>, . . . 278 13. <i>Prospectus of a British Association for the Advancement of Mental Science</i>. By Sir GEORGE S. MACKENZIE, Bart. . . 281 Notices, . . . 284 |
|---|---|

No. XLIV.

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Esq. Medical Superintendent of that Institution, . . 289 2. Lectures on Phrenology; delivered before the Young Men's Association for Mutual Improvement of the City of Albany. By AMOS DEAN. (Review), . . . 302 3. Suggestions for Facilitating and Extending the Study of Mental Derangement, and Improving the Treatment of the Insane. By Mr JAMES FOULIS DUNCAN, A.B., Dublin, . . . 309 4. Mr Carmichael's Examination of Mr Macnish's Objections to his Theory of Sleep, in the <i>Phrenological Journal</i> for December 1834, . . . 318 5. Casts of the Heads of two Swedish | <ol style="list-style-type: none"> Laplanders, and of the Skull of a Swedish Criminal, . . . 328 6. Remarks on Inhabitiveness and Concentrativeness, . . . 330 7. <i>Christian Phrenology; or the Teachings of the New Testament respecting the Animal, Moral, and Intellectual Nature of Man</i>. By HENRY CLARKE. (Review), . . 335 8. <i>Character and Cerebral Development of William Manuel, a Precocious Child</i>, . . . 344 9. Letter from Sir G. S. Mackenzie, Bart., on Mr Simpson's Views as to the Sense of Resistance, . . . 349 10. <i>Cerebral Development and Inferred Character of Kabooti, an Egyptian Mummy</i>, . . . 356 11. Observations on the Phrenological Standard of Civilization, . . 360 12. The Constitution of Man considered in Relation to External Objects. By GEORGE COMBE. 2d Edition. (Review), . . . 375 Notices, . . . 379 |
|---|--|

No. XLV.

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <i>Christian Ethics; or Moral Philosophy on the Principles of Divine Revelation</i>. By RALPH WARDLAW, D.D. . . . 383 A General View of the Progress of Ethical Philosophy, &c. By Sir JAMES MACKINTOSH. Being | <ol style="list-style-type: none"> <i>Dissertation Second, prefixed to the Seventh Edition of the Encyclopædia Britannica</i>, . . . 385 A Fragment on 'Mackintosh; being Strictures on some Passages of his Dissertation', . . . ib. 2. Hints on the Formation and Con- |
|--|---|

duct of a General Model Normal School for Training Teachers to supply the Demand of a National System of Popular Education. By Mr SHARSON, . . .	397	sion, &c.; being the Substance of an Address delivered before the General Assembly of the Church, on 25th May 1835. By the Rev. ALEXANDER DUFF, A. M. (Review), . . .	443
3. Observations on the Mutual Influence of the Mental Faculties; and, in particular, on the Modes and Laws of the Activity of Destructiveness. By Mr ROBERT COX, . . .	402	7. An Essay on the Application of Phrenology to the Investigation of the Phenomena of Insanity. By DANIEL NOBLE, Esq. . . .	447
4. Remarks on the Influence of Mental Cultivation and Mental Excitement upon Health. By AMANAH BUCHANAN, M.D. (Review), . . .	424	8. Case illustrative of the Utility of Phrenology, . . .	456
5. Letter on the Functions of the Organs of Comparison and Wit. By GEORGE HANCOCK, Esq. . . .	435	9. Account of the Skull of Dean Swift, recently disinterred at Dublin, . . .	466
6. The Church of Scotland's India Mission, &c.; being the Substance of an Address delivered before the General Assembly of the Church, on 25th May 1835. By the Rev. ALEXANDER DUFF, A. M. (Review), . . .	471	10. Case of Derangement of the Faculty of Language. By JOHN GRATTAN, Esq. Belfast, . . .	471
		Notices, . . .	474

No. XLVI.

1. Thoughts on Physical Education; being a Discourse delivered to a Convention of Teachers in Lexington, Kentucky, on the 6th and 7th November 1833, by CHARLES CALDWELL, M. D. (Review), . . .	481	10. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Medical Superintendent of that Institution—(continued), . . .	532
2. Owenism and Phrenology, . . .	489	11. Account of the System of Education followed in the Rev. J. C. BRUCE's Academy at Newcastle-on-Tyne, . . .	545
3. Comments on Mr Hancock's "Letter on the Functions of the Organs of Comparison and Wit," contained in No. 45, of the Phrenological Journal. By H. C. WATSON, F. L. S., . . .	494	12. Phrenological Analysis of the Character of George Campbell, recently executed at Glasgow for Murder, . . .	553
4. On the Uses and Modes of Activity of Destructiveness. By Mr ROBERT COX—concluded, . . .	498	13. Dublin Phrenological Society, . . .	558
5. Journal de la Société Phrénologique de Paris, April and July 1835, . . .	505	14. Proposed Association for the Advancement of Mental Science, . . .	561
6. Case of Impairment of the Faculty of Language, accompanied by Pain above the Eyes. By Mr WILLIAM GIBSON, . . .	515	15. The Christian Examiner, No. 65.—Annals of Phrenology, No. 5.—The Educational Magazine, Nos. 9, 10, 11.—The Christian Physician and Anthropological Magazine, Nos. 1, 2, 3.—The Analyst, Nos. 11, 12, . . .	566
7. Phrenological Quacks, . . .	517	Notices, . . .	570
8. Mr Combe's Visit to Newcastle, . . .	519		
9. Dr Spurzheim and the Edinburgh Reviewer, . . .	526		

No. XLVII.

1. Observations on Religious Fanaticism; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Esq. Medical Superintendent of that Institution—(continued), . . .	577	2. On the Authenticity of the Skulls of Dean Swift and Stella. By Dr HENRY OF DUBLIN, . . .	603
		3. What is the Use of the Double Brain? . . .	608
		4. Concentrativeness, . . .	612
		5. On the importance of Physiology with reference to Education. By ANDREW COMBE, M. D., . . .	620

neral laws." "I am not now," says he, "contending for the doctrine of moral necessity; but I do affirm, that the moral government of God is by general laws, and that it is our bounden duty to study those laws, and, as far as we can, to turn them to our account." (Pp. 5, 9.)

He classes the studies of Cambridge, as far as they relate to mere human learning, under three heads:—1st, The study of the laws of nature, comprehending all parts of inductive philosophy; 2d, The study of ancient literature; and, 3d, The study of ourselves, considered as individuals and as social beings. Under the third head are included ethics and metaphysics, moral and political philosophy, and some other kindred subjects of great complexity.

Under the *first* head, the author introduces some excellent observations. "By the discoveries of a new science," says he, " (the very name of which has been but a few years engrafted on our language), we learn that the manifestations of God's power on the earth have not been limited to the few thousand years of man's existence. The geologist tells us by the clearest interpretation of the phenomena which his labours have brought to light, that our globe has been subject to vast physical revolutions. He counts his time not by celestial cycles, but by an index he has found in the solid framework of the globe itself. He sees a long succession of monuments, each of which may have required a thousand ages for its elaboration. He arranges them in chronological order, observes on them the marks of skill and wisdom, and finds within them the tombs of the ancient inhabitants of the earth. He finds strange and unlooked for changes in the forms and fashions of organic life, during each of the long periods he thus contemplates; he traces these changes backwards through each successive era, till he reaches a time when the monuments lose all symmetry, and the types of organic life are no longer seen. He has then entered on the dark age of nature's history, and he closes the old chapter of her records. This account has so much of what is exactly true, that it hardly deserves the name of figurative description.

"Geology, like every other science when well interpreted, lends its aid to natural religion. It tells us out of its own records, that man has been but a few years a dweller on the earth; for the traces of himself, and of his works, are confined to the last monuments of its history. Independently of every written testimony, we therefore believe that man, with all his powers and appetencies, his marvellous structure, and his fitness for the world around him, was called into being within a few thousand years of the days in which we live—not by a transmutation of species (a theory no better than a phrensiad dream), but by a provident contriving power. And thus we at once remove a stumblingblock, thrown in our way by those who would rid

themselves of a prescient first cause, by trying to resolve all phenomena into a succession of constant material actions, ascending into an eternity of past time.

"But this is not the only way in which geology gives its aid to natural religion. It proves that a pervading intelligent principle has manifested its power during times long anterior to the records of our existence. It adds to the great cumulative argument derived from the forms of animated nature, by shewing us new and unlooked for instances of organic structure adjusted to an end, and that end accomplished. It tells us that God has not created the world and left it to itself, remaining ever after a quiescent spectator of his own work ; for it puts before our eyes the certain proofs, that during successive periods there have been, not only great changes in the external conditions of the earth, but corresponding changes in organic life ; and that in every such instance of change, the new organs, as far as we can comprehend their use, were exactly suited to the functions of the beings they were given to. It shews intelligent power not only contriving means adapted to an end, but at many successive times contriving a change of mechanism adapted to a change of external conditions ; and thus affords a proof, peculiarly its own, that the great first cause continues a provident and active intelligence." (Pp. 25, 26, 27.)

Our readers are aware that we have repeatedly and earnestly dwelt upon geological facts as of great importance in forming a correct estimate of the true position of man on earth. We have here one of the first living authorities certifying boldly the great facts—which, indeed, physical evidence renders absolutely indisputable—that organic beings lived and died before man appeared on earth, and that there were "not only great changes in the external condition of the earth, but corresponding changes in organic life ; and that in every such instance of change, the new organs, as far as we can comprehend their use, were exactly suited to the functions of the beings they were given to."

Another point, the importance of which we have frequently advocated, is also discussed by Mr Sedgwick. "Not only," says he, "is every portion of matter governed by its own laws, but its powers of action on other material things are governed also by laws subordinate to those by which its parts are held together ; so that, in the countless changes of material things, and their countless actions on each other, we find no effect which jars with the mechanism of nature, but all are the harmonious results of dominant laws." "What are the laws of nature but the manifestations of the wisdom of God ? What are material actions, but manifestations of his power ? Indications of his wisdom and his power co-exist with every portion of the universe." "Yet I have myself heard it asserted, within these very walls,

that there is no religion of nature, and that we have no knowledge of the attributes of God, or even of his existence, independently of revelation. The assertion is, I think, mischievous, because I believe it untrue: and by truth only can a God of truth be honoured, and the cause of true religion be served." "The single-minded writers of the New Testament, having their souls filled with other truths, thought little of the laws of nature: but they tell us of the immutable perfections of our heavenly Father, and describe him as a being *in whom is no variableness or shadow of turning*. The religion of nature and the religion of the Bible are therefore in beautiful accordance; and the indications of the Godhead, offered by the one, are well fitted to give us a livelier belief in the promises of the other." (Pp. 15, 16, 18, 19.)

It is moreover a favourite doctrine with a large class of phrenologists, that man cannot advance in the improvement of his nature, except by studying his own constitution and that of external objects, and acting in conformity with the laws which the Creator has impressed on both; and that this is natural religion. The same view is eloquently enforced by Mr Sedgwick. "As all parts of matter," says he, "are bound together by fixed and immutable laws; so all parts of organic nature are bound to the rest of the universe, by the relations of their organs to the world without them. If the beautiful structure of organic bodies prove design, still more impressive is the proof, when we mark the adaptation of their organs to the condition of the material world. By this adaptation, we link together all nature, animate and inanimate, and prove it to be one harmonious whole, produced by one dominant intelligence." (P. 24.)

"Under no form of government is man to be maintained in a condition of personal happiness and social dignity, without the sanction of religion. As all material laws, and all material organs, throughout animated nature, are wisely fitted together, so that nothing, of which we comprehend the use, is created in vain; and as the moral and intellectual powers of man, working together according to the laws of his being, make him what he is—teach him to comprehend the past and almost to realize the future—and rule over his social destiny; we may surely conclude, as a fair induction of natural reason, that this religious nature (so essential to his social happiness) was not given to him only to deceive him; but was wisely implanted in him, to guide him in the way of truth, and to direct his soul to the highest objects of his creation. And thus we reach (though by steps somewhat different), the same end to which I endeavoured to point the way in the former division of this discourse." (P. 45.)

Under the *second* head, Mr Sedgwick makes the following observations regarding the study of classical literature. "I think it incontestably true, that for the last fifty years our clas-

sical studies (with much to demand our undivided praise), have been *too critical and formal*; and that we have sometimes been taught, while straining after an accuracy beyond our reach, to value the husk more than the fruit of ancient learning: and if of late years our younger members have sometimes written prose Greek almost with the purity of Xenophon, or composed Iambics in the finished diction of the Attic poets, we may well doubt whether time suffices for such perfection—whether the imagination and the taste might not be more wisely cultivated than by a long sacrifice to what, after all, ends but in verbal imitations—in short, whether such acquisitions, however beautiful in themselves, are not gained at the expense of something better." (P. 37.) These are precisely the views which we have for a considerable time been urging on the public, and it is gratifying to see them propounded by a Professor of distinguished reputation in such a stronghold of antiquated customs as the University of Cambridge.

Under the *third* branch of studies—those relating to human nature,—he informs us, that "Locke's *Essay on the Human Understanding*," and "Paley's *Principles of Moral and Political Philosophy*," have long formed such prominent subjects of instruction in the University of Cambridge, that he confines his remarks almost to these two works. His criticisms on both authors are bold, just, and discriminative. Locke's *Essay* he considers to be defective in many important particulars, especially in its omission of the faculties of moral judgment. He bestows the highest commendation on Locke's love of truth, vigour of intellect, and generosity of sentiment; but maintains that his system of psychology is extremely defective from the omission alluded to. Mr Sedgwick contends eloquently for the innate existence of moral faculties in man. "The greatest fault in Locke's system," says he, "is the contracted view he takes of the capacities of man,—allowing him, indeed, the faculty of reflecting and following out trains of thought according to the rules of abstract reasoning; but depriving him both of his powers of imagination and of his moral sense. Hence it produced, I think, a chilling effect on the philosophic writings of the last century." "It is to the entire domination his '*Essay*' had once established in our University, that we may perhaps attribute all that is faulty in the Moral Philosophy of Paley."

Ample commendation is bestowed on Paley also: "His homely strength and clearness of style," says Mr Sedgwick, "and his unrivalled skill in stating and following out his argument, must ever make his writings popular;" but "he commences by denying the sanction and authority of the moral sense." "Amidst all the ruin that is within us," continues Mr S., "there are still the elements of what is good; and were there left in the natural heart no kindly affections and moral senti-

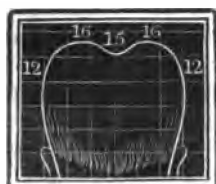
ments, man would be no longer responsible for his sins ; and every instance of persuasion against the impulse of bad passion, and of conversion from evil unto good, would be nothing less than a moral miracle. On such a view of human nature, the Apostles of our religion might as well have wasted their breath on the stones of the wilderness as on the hearts of their fellow men in the cities of the heathen." (P. 59.)

These views have often appeared in the pages of this Journal, and in the standard phrenological works ; and we are much gratified to find them so ably expounded and advocated by Mr Sedgwick. Yet he never even alludes to Phrenology. Being so much disposed to commend, we are loath to be under the necessity of condemning any part of Mr Sedgwick's conduct ; but the great interests of truth compel us to speak our mind. Has Mr Sedgwick heard of Phrenology or has he not? We know positively that he is not ignorant of its existence ; but he appears not to have esteemed it worthy of his consideration. He has a profound perception of the power and wisdom of God displayed in the works of creation ; and it is our duty to tell him, that, in despising Phrenology, he is deliberately shutting his eyes against one of the most wonderful and important revelations of divine power and wisdom that has ever been made to the human understanding. It is perverse to assume that Phrenology is the *invention* of Drs Gall and Spurzheim, in the absence of all evidence to this effect, and in opposition to the most positive asseverations of themselves and their followers that it is a mere announcement of natural institutions. 'The founders of Phrenology have no more created the functions of the brain and the relations of these to external objects, than Copernicus, Kepler, and Newton, created the planetary system. Mr Sedgwick laments the grave errors of Locke and Paley in omitting the faculties of imagination and the moral sense, in their schemes of the philosophy of man ; but we desire to ask him by what means the existence of these and other faculties omitted by the metaphysical and moral philosophers, can be proved with half the force of evidence that is afforded by Phrenology ? Mr Combe, in his System of Phrenology, enumerates the discordant opinions concerning the moral sense, entertained by ten philosophers of the highest reputation, and adds : " I have introduced this sketch of conflicting theories, to convey some idea of the boon which Phrenology would confer upon moral science, if it could fix, on a firm basis, this single point in the philosophy of mind, That a power or faculty exists, the object of which is to produce the sentiment of justice or the feeling of moral duty and obligation, independently of selfishness, hope of reward, fear of punishment, or any extrinsic motive ; a faculty, in short, the natural language of which is ' Fiat justitia, ruat cælum.' Phrenology does this by a demonstration founded on numerous ob-

servations, that those persons who have the organ of Conscientiousness large, experience powerfully the sentiment of justice, while those who have that part small are little alive to this emotion. This evidence is the same in kind as that adduced in support of the conclusions of physical science." (P. 291.)

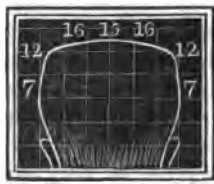
The phrenologists do not leave the fact here asserted to rest on their own observations merely, but present the means of verifying its truth to every one who chooses to qualify himself and to take the necessary trouble to do so. The following figures are given in Mr Combe's work as representing the organ of Conscientiousness in different degrees of development.

Mrs H.



15. Firmness small;
16. Conscientiousness large; 12. Cautiousness full.

JOHN GIBSON.



15. Firmness, and 16. Conscientiousness, both deficient: 12. Cautiousness, and 7. Secretiveness, both large.

D. HAGGART.



15. Firmness large; 16. Conscientiousness deficient; 12. Cautiousness rather large.

These figures, we affirm, represent Nature, not a casual appearance, but forms which are found constantly in combination with the qualities here named: and we inquire why Nature, when she speaks to the geologist or the chemist, should be listened to with profound attention, and her revelations treasured for human improvement,—but scouted and despised when she speaks to and is interpreted by phrenologists? It is God who speaks from Nature in all her departments; and the brain is as assuredly his workmanship as the Milky Way itself, with all its myriads of suns. History presents us with numerous examples of the rejection, by men calling themselves philosophers, of the best authenticated natural truths, which had subsequently been universally received. We are the witnesses of a repetition of the same conduct in the case of Phrenology; but we appeal to Mr Sedgwick, and to every man possessing his reach of thought and elevated sentiments, whether the individuals who have thus acted have secured to themselves a permanent reputation for wisdom, or afforded any reason for gratitude towards them on the part of their fellow men. The neglect, by inferior minds, of the doctrine of the functions of the brain, and its consequences, gives us no uneasiness; but we cannot behold this neglect on the part of men who have within them a profound and reverential respect

for the philosophy of nature, and a capacity to perceive the invaluable consequences that flow from obedience to the natural laws, without feeling regret that ignorance, indifference, or the fear of losing a little temporary reputation, should lead them to shut their eyes against such an important discovery.

Mr Sedgwick might have expounded many other deficiencies in the philosophy of Locke and Paley, which it will be impossible to supply without the aid of Phrenology. "The external world," he observes, "proves to us the being of a God, in two ways; by addressing the imagination, and by informing the reason. It speaks to our imaginative and poetic feelings, and they are as much a part of ourselves as our limbs and our organs of sense. Music has no charms for the deaf, nor has painting for the blind; and all the touching sentiments and splendid imagery borrowed by the poet from the world without, would lose their magic power, and might as well be presented to a cold statue as to a man, were there no preordained harmony between his mind and the material beings around him. It is certain that the glories of the external world are so fitted to our imaginative powers as to give them a perception of the Godhead and a glimpse of his attributes; and this adaptation is a proof of the existence of God, of the same kind (but of greater or less power, according to the constitution of our individual minds) with that we derive from the adaptation of our senses to the constitution of the material world." (Pp. 20, 21.)

The concluding part of this sentence might be made the subject of a whole chapter on the philosophy of mind. The proof of the existence of God afforded by the external world, is of "greater or less power, according to the constitution of our individual minds." Is it of no importance, then, to possess the means of expounding to every man what the constitution of his individual mind is; to be able to point out to those who profess to see no evidence in external Nature of the existence of a God, that they are deficient in the organs of certain highly important moral and intellectual faculties; to shew to the men who deny the existence of natural conscience, that their scepticism on this point arises from a palpable deficiency of an organ in their own brains; and to be able to prove to those who deny disinterested goodness in the human race, that this cold-hearted distrust owes its origin also to the imperfect development of a cerebral part? Phrenology does this, and no other philosophy of mind even pretends to accomplish as much.

"Amidst all the ruin that is within us," says Mr Sedgwick, "there are still the elements of what is good." As Mr Sedgwick is a philosophical and precise thinker, we regret that he has not favoured us, in some detail, with his notions of "the ruin that is within us." Correct conceptions on this point necessarily lie at the foundation of all sound natural theology and moral

philosophy. Mr Sedgwick has expounded the past records of creation, and gives us positive assurance that they reveal "strange and unlooked for changes in the forms and fashions of organic life, during each of the long periods he thus contemplates;" and that the structure and functions of each race of animals as it appeared on earth, were admirably adapted to its physical condition. Man, he says, was introduced only lately into the world, which had been the theatre of life, death, and change, for countless ages before he appeared. Does he mean to maintain that man, *such as we now see him*, is not as admirably adapted to the world such as it at present exists, as his predecessors among the animals were to their respective external circumstances? Does he intend us to believe that there are within us positively noxious and sinful principles, which have no legitimate sphere of activity? or, does he mean that all our powers are in themselves good, but only liable to abuse? He does not hint at any solution of these questions. He may plead that, in a single discourse, he could not discuss every topic of so extensive a subject; and we give due weight to this apology: but we revert to our proposition, that the solution of these questions lies at the very threshold of natural religion and moral philosophy; and we add, that, in general, modern writers on these subjects, except the phrenologists, studiously blink them.

Phrenology affords us evidence that man himself, such as we now see him with all his organs and faculties, is a being as evidently adapted to the existing state of the world as any of his predecessors were to the physical conditions under which they existed. His organs of nutrition and absorption imply growth, maturity, and decay; his organs of Amativeness and Philoprogenitiveness imply a succession of generations, or the death of individuals; his organs of Combativeness and Destructiveness indicate that he is constituted to move in a state in which he may encounter difficulty and death; his knowing and reflecting faculties proclaim that he is invested with power to improve himself and his condition by the exercise of his abilities; while his moral and religious sentiments indicate that he is destined to flourish in society, to practise virtue, and to adore his Creator, as the great ends of his existence.

The human constitution, in short, contains demonstrative evidence of its adaptation to a world such as that in which we now live, and to a progressive march of improvement by the exercise of our own powers. We do not exclude assistance to these powers from above; but we mean to say, that the exercise of the elementary faculties, according to the laws of their constitution, is absolutely indispensable to human improvement in this life.

Phrenology further informs us, that man has received no appetite, faculty, or function, which, when viewed in reference to his circumstances, can be truly pronounced to be in itself

bad ; that all his powers bear the marks of Divine wisdom and goodness ; and that there is no natural "ruin" in his frame. It shews that each faculty has a legitimate sphere of action, within which its manifestations are not sinful ; and that the actions, the existence of which has given rise to the doctrine of the "ruin," are mere abuses of powers in themselves useful and necessary. It also throws some light on the causes which render certain individuals particularly prone to abuse their faculties. The three following figures represent, 1. the form of brain in which the moral and intellectual organs preponderate over the animal organs, and which is accompanied by moral dispositions ; 2. the form of brain in which the animal, moral, and intellectual organs are in *æquilibrio*, and which gives rise to a character good or bad very much according to external circumstances ; and, 3. the form of brain in which the animal organs decidedly preponderate, and which has a constant tendency to vice.

The portion before the line AA (figure 3d) manifests the intellect, that above B the moral sentiments, and all the rest the animal propensities ; and each part acts with a degree of energy, *cæteris paribus*, corresponding to its size.

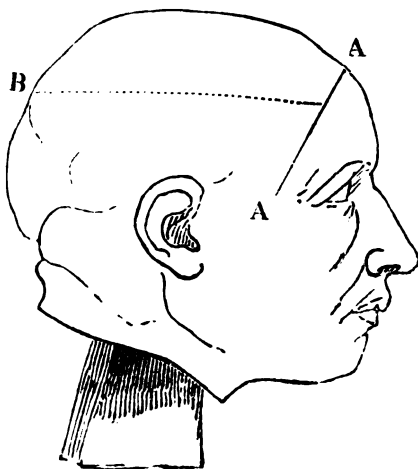
No. 1. MELANCTHON.



No. 2. MAXWELL.



No. 3. HARE, Murderer, the Associate of BURKE.



The differences in these forms are abundantly obvious ; and the phrenologists have appealed to numerous examples of each, and offered to prove that they are constantly attended by the respective qualities here described. They have, in particular, made one of the largest and most varied collection of skulls to be found in Britain, thrown them open to public scrutiny, and asserted most positively that they afford irrefragable evidence of the propositions here announced. Accident also has subjected their statements to several striking tests. The character of King Robert Bruce was well known by history, and, a few years ago, his grave was discovered, and a complete and authentic cast of his skull obtained ; and it accorded precisely with the character which he had manifested. The skull of the poet Burns was lately disinterred, and a cast taken. His character was strongly marked and well known, and again the skull presented precisely the form and size which corresponded to these qualities. The celebrated Rammohun Roy, certainly the most interesting character that India has produced in modern times, unexpectedly came to England and died, and a cast of his head was obtained. The phrenologists had previously collected a number of skulls of his countrymen, and published drawings and descriptions of them, and designated the character which they indicated. Rammohun Roy was in many respects very unlike his countrymen in mental qualities. Was his brain different from the national type ? It differed widely. In what respects ? It was much larger, indicating far higher power ; and it had a far superior development of the moral and intellectual organs. Are all these assertions to be treated by philosophers as mere fictions and fancies, unworthy of being put to the test, or even of a moment's consideration ? or, if true, ought they to be considered as of no philosophical importance ?

Many criminals have forfeited their lives on the scaffold, and their skulls, or casts of their heads, have been obtained, and likewise found to present the development corresponding to their dispositions. Time would fail us to enumerate all the kinds of evidence that have been presented ; and we again appeal to Mr Sedgwick, and every man possessed of moral and intellectual qualities like his, whether all these facts can justifiably, nay without blameworthiness, be disregarded by those who advocate the power, wisdom, and goodness of God in the creation ? In no department of science are truths at once so momentous and so easy of verification presented to the cognizance of man ; and it is little short of infatuation to treat them with the levity, contempt, and neglect, with which they have hitherto been received by many men pretending to be philosophers. If the facts here asserted be true, that every faculty is good in itself, that the folly and crime which disgrace human society spring from

abuses of the faculties, and that the tendency to abuse them originates in the disproportion of certain parts of the brain to each other, and in moral and intellectual ignorance of the proper mode of manifesting them, how completely do these considerations go to the root of theology and morals! At present the influence of organization in determining the natural dispositions is altogether neglected or denied by the common school of divines, moralists, and philosophers; yet it is of an importance exceeding all other terrestrial influences and considerations.

Mr Sedgwick says most truly: "I do affirm, that the moral government of God is by general laws; and that it is our bounden duty to study those laws, and, as far as we can, to turn them to our account." We honour him for announcing this truth boldly in the University of Cambridge; but we ask him whether he has ever heard of the principle started by the phrenologists, that the key to the true theory of the moral government of God is the independent, yet adjusted and harmonious, action of the different natural laws, and that these laws and that action cannot by possibility be understood, without taking into account the influence of organization on the mind, that influence being a fundamental fact in human nature? The phrenologists divide the laws of nature into three great classes,—physical, organic, and moral; and insist that these operate *independently of each other*; that each requires obedience to itself; that each, in its own specific way, rewards obedience and punishes disobedience; and that human beings are happy in proportion to the extent in which they place themselves in accordance with these divine institutions. For example, the most pious and benevolent missionaries sailing to civilize and christianize the heathen, if they embark in an unsound ship, will be drowned by disobeying a physical law, without their destruction being averted by their morality. On the other hand, if the greatest monsters of iniquity were embarked in a stanch and strong ship, and managed it well, they might, and, on the general principles of the government of the world, they would, escape drowning, in circumstances exactly similar to those which would send the missionaries to the bottom. There appears something inscrutable in these results, if only the *moral qualities* of the men are contemplated; but if the principle be adopted that ships float in virtue of a purely physical law,—that the physical and moral laws operate independently, each in its own sphere,—and that this arrangement is in the highest degree beneficial in preserving order and discipline in creation, and in offering rewards for the activity of the whole of the human faculties,—the consequences appear in a totally different light.

Again, the organic laws operate independently; and hence, one individual, who has inherited a fine bodily constitution from his parents, and observes the rules of temperance and

exercise, will enjoy robust health, although he may cheat, lie, blaspheme, and destroy his fellow-men; while another, if he have inherited a feeble constitution, and disregard the rules of temperance and exercise, will suffer pain and sickness, although he may be a paragon of every Christian virtue. These results are frequently observed to occur in the world, and, on every such occasion, the darkness and inscrutable perplexity of the ways of Providence are generally moralised upon; or a future life is called in as the scene in which these crooked paths are to be rendered straight. But if our views be correct, the Divine wisdom and goodness are abundantly conspicuous in these events; for again we perceive, that, by this distinct operation of the organic and moral laws, order is preserved in creation, and the means of discipline and improvement are afforded to all the human faculties.

The moral and intellectual laws also operate independently. The man who cultivates his intellect, and practically obeys the precepts of Christianity, will enjoy within himself a fountain of *moral and intellectual happiness*, which is the appropriate reward of that obedience. He will be rendered by these means more capable of studying, comprehending, and obeying, the physical and organic laws, of placing himself in harmony with the whole order of creation, and of attaining the highest degree of perfection, and reaping the highest degree of happiness of which human nature in this world is susceptible. In short, whenever we apply the principle of the *independent operation* of the natural laws, the apparent confusion of the moral government of the world disappears; and we ask, is this a discovery to be trifled with, to be concealed, or to be opposed? The authors of the Bridgewater Treatises were paid each L. 1000, and specially instructed to bring forward for public instruction the highest, and the best, and the most recently discovered views of the divine government on earth; and although the "Natural Laws" by Dr Spurzheim, and the "Constitution of Man" by Mr Combe, have been before the public since 1828, in the latter of which the principles now expounded are dwelt on at great length, one and all of these writers have disregarded them. If, in doing so, they have shut their eyes to the ways of the Creator, verily they will receive their reward.

If these principles be well founded, is it not obvious that a vast change in the topics of moral and religious instruction is awaiting mankind? At present, our moral and religious guides deliver extremely little precise information concerning the constitution of the human mind and the external world, and their mutual adaptations; and they teach still less of the doctrine that man must study and obey the natural laws before he can attain to the perfect action and enjoyment of his natural powers. On the contrary, many of the views presented are based on the

principle, that human nature is actually a "ruin," and life unavoidably a great scene of endurance, for which man is to be compensated by happiness in a future state; although, to a well-informed mind, many of the sufferings in question appear to be the direct consequences of ignorance and neglect of the natural institutions of the Creator.

In urging these views, we may be causing uneasiness to some pious, but timorous and ill-instructed individuals. We would willingly avoid doing so; but the imperative dictates of duty impel us to proclaim what we believe to be truths of divine authority and of the highest practical importance, and to protest against the spirit which designedly keeps them in obscurity, as if they were in themselves dangerous and pestilential.

But to return to Mr Sedgwick. He combats Paley's argument that expediency is the measure of right, and endeavours to shew, that, according to this principle, virtue and vice would have no longer any fixed relations to the moral condition of man, but would change with the fluctuations of opinion, and that every one would be entitled to claim the liberty of judging for himself. Christianity, he says, places the mainspring of every virtue in the affections; and Christian love becomes an efficient and abiding principle, not tested by the world, but above the world. "The utilitarian scheme starts, on the contrary, with an abrogation of the authority of conscience—a rejection of the moral feelings as the test of right and wrong. From first to last, it is in bondage to the world, measuring every act by a worldly standard, and estimating its value by worldly consequences." This conclusion "appears, indeed, not only to have been foreseen by Paley, but to have been accepted by him." (P. 66.)

Mr Sedgwick, with great truth, observes, that, as God is a moral governor of the world, "in the end, high principle and sound policy will be found in the strictest harmony with each other." "If," says he, "there be a superintending Providence, and if his will be manifested by general laws operating both on the physical and moral world, then must a violation of these laws be a violation of his will, and be pregnant with inevitable misery." "Nothing can, in the end, be expedient for man, except it be subordinate to those laws the Author of Nature has thought fit to impress on his moral and physical creation."

There is much profound truth in these remarks, but they imply the great importance of a knowledge of the natural laws; and as these cannot be accurately ascertained, in as far as regards man, without a knowledge of his constitution, and as Mr Sedgwick does not mention any system of the philosophy of man which he can recommend as worthy of our approbation, we again ask, why is Phrenology, which professes to be the very philosophy wanted, so completely disregarded? In the Appen-

dix to Mr Combe's System of Phrenology, 2d edition, an illustration is given of the application of the principles of Phrenology to the solution of questions of expediency, to which we refer. It shews to what a large extent the constitution of individual minds necessarily must enter as an element into our judgments on that subject, before they can become sound and consistent.

In the Appendix to his Discourse, Mr Sedgwick has added some valuable and instructive notes, in the last of which he reproves, with great eloquence and severity, the bigoted and ignorant individuals who "dare to affirm that the pursuits of natural science are hostile to religion." He offers a most successful defence of the study of geology, and chastises those writers who have endeavoured to falsify the facts and conclusions of that science, for the purpose of flattering the religious prejudices of the public. "There is another class of men," says he, "who pursue geology by a nearer road, and are guided by a different light. Well-intentioned they may be; but they have betrayed no small self-sufficiency, along with a shameful want of knowledge of the fundamental facts they presume to write about; hence they have dishonoured the literature of this country by *Mosaic geology*, *Scripture geology*, and other works of cosmogony with kindred titles, wherein they have overlooked the aim and end of revelation, tortured the book of life out of its proper meaning, and wantonly contrived to bring about a collision between natural phenomena and the word of God." (P. 150.)

The following observations are exceedingly just, and our readers will not fail to observe how completely applicable they are to Phrenology, as well as to Geology. "A Brahmin crushed with a stone the microscope that first shewed him living things among the vegetables of his daily food. The spirit of the Brahmin lives in Christendom. The bad principles of our nature are not bounded by *caste* or climate; and men are still to be found, who, if not restrained by the wise and humane laws of their country, would try to stifle by personal violence, and crush by brute force, every truth not hatched among their own conceits, and confined within the narrow fences of their own ignorance." (P. 151.)

"We are told by the wise man *not to answer a fool according to his folly*; and it would indeed be a vain and idle task to engage in controversy with this school of false philosophy—to waste our breath in the forms of exact reasoning, unfitted to the comprehension of our antagonists—to draw our weapons in a combat where victory could give no honour. Before a geologist can condescend to reason with such men, they must first learn geology. It is too much to call upon us to scatter our seed on a soil at once both barren and unreclaimed—it is folly to think, that we can in the same hour be stubbing up the thorns and reaping the harvest. All the writers of this school have

not indeed sinned against plain sense to the same degree. With some of them there is perhaps a perception of the light of natural truth, which may lead them after a time to follow it in the right road; but the case of others is beyond all hope from the powers of rational argument. Their position is impregnable while they remain within the fences of their ignorance, which is to them as a wall of brass; for (as was well said, if I remember right, by Bishop Warburton, of some bustling fanatics of his own day) there is no weak side of common sense whereat we may attack them. If cases like these yield at all, it must be to some treatment which suits the inveteracy of their nature, and not to the weapons of reason. As psychological phenomena, they are, however, well deserving of our study; teaching us, among other things, how prone man is to turn his best faculties to evil purposes—and how, at the suggestions of vanity and other bad principles of his heart, he can become so far deluded, as to fancy that he is doing honour to religion, while he is sacrificing the common charities of life, and arraiguing the very workmanship of God." (Pp. 151, 152.)

Why should this bigoted hostility to science coexist so extensively with pretensions to religious earnestness? and why should it be so generally received by the people as a proof of superior sanctity? Christianity itself is not to blame. It is in accordance with the best and profoundest interpretations of the divine workmanship exhibited in nature. The fault lies in the system of clerical instruction; which not only excludes all regular instruction in the constitution of the external world and its relations to human nature, (although these abound with the most delightful and impressive examples of God's power, wisdom, and goodness), but sedulously confines itself to the teaching of dogmas. These dogmas are in general merely the prominent tenets which distinguish the sect of the preacher; the great practical precepts of the New Testament being often allowed to sink into comparative obscurity. The consequence is, that individuals who confine themselves to religious studies are grossly and deplorably ignorant of at least one-half of divine revelation,—that which is addressed to the human faculties in the great book of Nature; and they entertain extremely contracted views even of Christianity itself. They are, therefore, the easy dupes of every ignorant zealot who desires to attract notoriety by defending Christianity from what he calls the inroads of infidelity; in other words, who is ambitious of gaining a name for himself at the expense of Divine truth and of the real welfare of the community. The proper education of the people is the only remedy for this disgraceful evil.

Our extracts present but an imperfect outline of the contents of Mr Sedgwick's volume. We wish that it had been printed in a cheap form, and that it were diffused over the whole kingdom.

We trust that no one will imagine, that by addressing so many of the foregoing remarks to Mr Sedgwick, we mean to shew him any personal disrespect. Our object is exactly the reverse. We perceive in him moral and intellectual qualities that place him in the higher class of minds, and set him above low and degrading prejudices. We discover in him moral intrepidity, as well as depth and comprehensiveness of intellect; and it is only on such men that we have the least chance of making an impression. Our science teaches us, that unless the higher qualities of mind are possessed by those to whom we address our arguments in favour of a new and despised system of truth, we may, in the words of Mr Sedgwick, "as well waste our breath on the stones of the wilderness."

ARTICLE II.

AFFECTION OF THE FACULTY OF LANGUAGE FROM
INJURY OF THE BRAIN.

A curious case of injury of the brain has been published in No. 117 of the Edinburgh Medical and Surgical Journal, by Professor Syme. It is worthy of the notice of phrenologists on account of the defect in the faculty of Language which accompanied it. The principal facts are as follows.

George Moodie, aged twenty-eight, was admitted into the Royal Infirmary on the 6th July 1833, on account of an injury of the head, which he had sustained nineteen months before, and from the effects of which he had not recovered. It was stated; that, on the 4th of January 1832, he had been found lying insensible at the foot of a high wall, from which he must have fallen. He remained unconscious of external circumstances for four days, during which he occasionally moved the different parts of his body, and expressed by cries and unconnected sentences that he was suffering uneasiness. At the end of this period he regained his intelligence, but was found to have lost the power of moving the left side of his body, and of articulating words, with the exception of one or two of the simplest monosyllables. He was, however, quite aware of his situation, and "understood all that was said within his hearing; while, at the same time, he retained hardly any recollection of written or printed words." This state having continued for some months, his head was carefully examined, and a slight semicircular ridge was perceived a little above the forehead, on the left side of the head, below which the bone seemed somewhat flattened. He then came to town to get the depressed portion of the skull re-

moved ; but Dr Abercrombie and Mr Syme considered an operation unadvisable—the former regarding the symptoms as “ indicative of a much more serious derangement of the brain than could be supposed to result from so very slight a depression.” On 6th July 1823 the patient, who had now become subject to epileptic fits, again came to town, with the determined resolution of having an opening made in the injured part of the bone ; and, after due consideration, it was resolved to remove a portion of the skull. The operation was performed on the 22d July, when it appeared that the internal table was not affected, and the *dura mater* presented a natural aspect. It was thought unnecessary to carry the operation farther, and the edges of the wound were brought together and stitched. The health of the patient improved, with little interruption, till the ninth day : he then had a severe fit ; after which he remained pale and almost comatose. In the evening he had two fits. On the following day he had four attacks in rapid succession ; and on the eleventh day he died.

“ On dissection, the cranium and *dura mater* were found to present nothing remarkable. When an opening was made into the *dura mater* of the injured side, three or four ounces of turbid serum gushed out, and the membrane collapsed upon the middle lobe of the brain,—the surface of which, instead of being convex, was concave, and very irregular, displaying a number of small elevations and depressions. A section being made through this part, it was observed that the entire substance of the middle lobe possessed an unusually tough consistence, and was, throughout its whole extent, from above downwards, converted into a cavernous structure, the interstices of which were occupied by serum. The lateral ventricles contained more fluid than usual ; and the inferior surface of the middle lobe was discoloured and soft. The only other morbid appearance observed, was a very distinct *ramollissement*, to the extent of about a shilling, but of little depth, on the inferior surface of the anterior lobes, corresponding with the bulbs of the olfactory nerves, and the cribriform plate of the ethmoid bone.

“ There can be little doubt that the morbid appearances which have been mentioned, with the exception of the softening, which may be referred to the effect of inflammation, depended upon the effusion of blood, which, being afterwards absorbed, had its place occupied by serum. It is certainly remarkable that so extensive a derangement of the cerebral structure should not have been attended with more imperfection of the bodily or mental faculties. Perhaps this may be accounted for in some measure by the integrity of the right side of the brain, which seemed to be perfectly sound every where, except the small part corresponding with the cribriform plate, where it was diseased on both sides.”

By the kindness of Professor Syme, we had an opportunity of examining this patient when in the Infirmary, and of observing the singular affection of language, which the Professor describes. The patient seemed to understand perfectly *whatever was said to him*, but had scarcely any recollection of *written or printed words*. The great puzzle in such cases has always been to explain how the patient could understand *what was said to him*, when, at the very same time, he could neither attach words to his own ideas, nor comprehend the meaning of *written or printed language*. We do not pretend to be able fully to solve the difficulty; but we think that Mr Syme's case admits, in one sense, of an easier explanation than most of the others.

The general intelligence which the patient manifested, is perfectly accounted for by the healthy state of *both* anterior lobes of the brain, which constitute the organs of the intellectual faculties. The only morbid appearance affecting them, was the softening on their inferior surface over the cribriform plate of the ethmoid bone, which must have implicated the convolutions belonging to the organ of Form on *both* sides. We were not present at the dissection, but were told by a phrenologist who witnessed it, that the softening extended to the organs of Language also. Professor Syme's description applies, however, almost exclusively to the organ of Form, which was undoubtedly diseased.

As spoken language was understood, while that which was written or printed and presented to the eyes was not, may not the disturbance of function in the organ of Form have been the real cause why the association between certain visible forms or letters and their meaning no longer existed? We believe that it may, but are far from affirming that even the proof of its being so would solve all our difficulties.—Considering that the chief disorganization had its seat in the *middle* lobe, containing the organs of propensities alone, and that those of intellect, with the single exception above stated, were uninjured, we see no reason for the surprise which the Professor expresses at the little disorder which prevailed in the mental faculties. At the same time, it is only by means of phrenology that the circumstance can be easily accounted for.

We take this opportunity to repeat a caution already given more than once in the pages of this Journal, on the subject of injuries of the brain. According to the ordinary way of speaking, a patient like Professor Syme's, who manifests no striking disorder of mind, is said to *retain all his faculties unimpaired*. But on what evidence is this strong assertion made? Moodie could not speak, so that no one could obtain any clew to the actual degree of intelligence which he retained. He *looked* intelligently when addressed, and answered connectedly by signs; but experience of this limited extent is far too imperfect to be

admitted as a philosophical proof of the FULL retention of former powers. Even a person in a state of mild delirium will become collected for a moment, and answer rationally when spoken to; but is that held to prove that the mind is unaffected? We observed, and heard it remarked by others, that Moodie's expression became vacant and null when he lay on his bed without any one addressing him; and we think it not unlikely, that had he been able to converse, those who knew him intimately would have recognised a change in the vigour of his mind. Are we not all conscious, in fact, of our mental powers being affected and our tempers rendered irritable by a feverish cold or fit of indigestion? and is this effect not to be held as a reality, merely because we still continue to act and speak as rational beings? It is time to attend to such distinctions, and no longer to propound vague generalities in the place of precise and accurate knowledge.

ARTICLE III.

CHARACTERISTICS OF THE CARIBS.

WE had occasion lately to look into an extremely well written book, entitled, "*Histoire Naturelle et Morale des Iles Antilles*," published at Rotterdam in 1658; and were much amused, as well as interested, by a very careful description of the Caribs, then inhabiting St Vincent's and several others of the West India Islands. The author seems to have taken great pains in observing and recording the manners and customs of these savages, and to have been unusually free from the prejudices so often attached to civilization. He evidently possessed an extensive acquaintance with the natural and civil history of man; and in noticing the prominent features and practices of Carib life, he makes his narrative doubly instructive, by constantly comparing them with similar traits and customs not only among contemporaneous savages in other parts of the world, but also among the rude inhabitants of Europe, as displayed in its earliest authentic records.

The race of Caribs having now almost disappeared, it is interesting to go back a hundred and seventy years to the pages of an author who gathered his information from persons who had lived amongst them while their numbers were still great, and their natural character comparatively pure. Even at that time, indeed, they had been driven from several of the islands by the fire-arms and superior intelligence of the whites; but they still abounded in St Vincent's and a few other places, in

each of which modifications of character were to be found. The author warns the reader that his description is applicable chiefly to the Caribs of St Vincent's.

Our readers are well acquainted with the flattened and unintellectual forehead presented by the Carib skull. The author says: "Admiration being the daughter of ignorance, we ought not to be surprised that the Caribs should be seized with a profound astonishment at every thing of which they cannot see the cause, and that they should be brought up in so much simplicity, that *in the greater number of this poor people, one would take it for brutal stupidity.*" "Most of them were persuaded that gunpowder was the seed of a plant, and many insisted on having some to sow in their gardens," where they thought it would grow like cabbage. They never could get over their astonishment at muskets, or conceive how they were discharged. They saw the match applied to the cannons, and thus accounted for their discharge; but believed that Matoya, their evil god, set fire to the muskets. The Caribs were as bad as those American Indians who, being employed by the Spaniards to carry letters and dispatches, could not conceive how the news contained in them was conveyed, and at last fancied the letters to have eyes and ears, and to tell what they saw. Acting on this belief, a party in charge of a letter, fearing its watchfulness, hid it below a stone, that it might not see them steal and eat some of their master's melons!

Our author notices the inability of the Caribs to count beyond the number of their fingers. Their extraordinary deficiency of Causality or reasoning power proved an insuperable obstacle to their forming any conception of an omnipotent and omnipresent God; and when the admirable arrangements of Providence were pointed out as proofs, they listened patiently, and answered, "*My friend, you are very eloquent; I wish I could speak like you;*" and then added, that it was the earth, and not God, that gave every thing. Monsieur de Montel, finding a Carib at work on a Sunday, told him that "the Being who made the heaven and the earth would be angry with him, as He had set apart that day for His own service." The Carib, unable to penetrate beyond what he saw with his eyes, replied coarsely, "I am angry at your God; you say he is the ruler of the world and of the seasons;—it is he, then, who has not sent rain in due season, and has caused my manioc and potatoes to die. Since he has used me so ill, I shall work all Sunday to vex him." This brutality, the author remarks, is like that of another savage, "who, when told that God was the author of thunder, remarked that he could not be good, since he took such pleasure in terrifying them with it." Remarks like these could proceed only from minds incapable of embracing general

principles, or following out a chain of reasoning to its proper results. They possess only that kind of acuteness which proceeds from active knowing faculties jumping to a visible conclusion. The Caribs were never able to comprehend the doctrines of Christianity, and although many were baptized as a means of protection against one of their own demons, they always considered Christianity as ridiculous and unworthy of men.

Justice was not publicly administered amongst them. Every one was his own avenger, and was held in contempt if he did not resent injuries. They almost never stole from each other ; so that when any thing was missing from their huts, their first exclamation was, "*A Christian has been here.*" After describing their diabolical treatment of their enemies and prisoners of war, and giving a horrid picture of atrocity and inhumanity, the author adds, "*I confess that the sun would be right in abandoning these barbarians, rather than assisting at such detestable solemnities ;* but, to act justly, he must also retire from many of the countries of the continent of America, and even from some of those of Africa and Asia, where like cruelties are perpetrated."

The Caribs were extremely fond of their children, and the mothers were tender and excellent nurses ; which trait corresponds with the great development of Philoprogenitiveness in all the Carib skulls without exception, of which the Phrenological Society possesses casts. They were scarcely less kind to the children of their neighbours, when the parents were absent in war. They left the infant the free use of its limbs, and allowed it to roll about on the ground ; and by this constant exercise most of them were able to walk at six months old, and all of them were finely formed,—deformity, except from wounds, being unknown amongst them. They were carefully taught the various qualifications of an able warrior ; to draw the bow, endure hunger and fatigue, and cherish revenge against their enemies. To fit them for the first of these duties, it was a common practice for the parents, almost as soon as the child was able to walk, to tie its breakfast by a thread to the branch of a tree, put a bow and arrow into its hands, and tell it to eat when it could bring it down ; and no pity was shewn them if it failed. As the children grew older, the breakfast was suspended from a higher and higher branch, till at last their dexterity in cutting the thread became almost incredibly great. This may serve as a hint in our systems of education.

In accordance with their deficient reasoning powers, the author remarks, that their language cannot express any relation "which does not fall under the notice of their five senses, except the names of some good and evil spirits ; but beyond this they have no word to express any thing spiritual, such as *understanding*,

memory, or will, and they have no comparatives or superlatives." They have names for only four colours, *white, black, yellow, and red.* Can this last have relation to a small development of the organ of Colouring? They are easily managed by kindness, but harshness totally fails. They have a strict regard for cleanliness, which, he says, is extraordinary in savages.

The *naïveté* of the author, in commenting on the omission of swaddling in the treatment of infants, as was the universal custom in Europe when he wrote, is very amusing. He says that the Carib mothers allow their infants to tumble about on beds of cotton or dried leaves, without either bandage or swaddling clothes; and that "*nevertheless (neantmoins)* they do not become deformed, but *grow marvellously well, and most of them become so robust that they can walk when six months old,*" and all of them are straight and well made!! This he seems to have considered a truly marvellous result, and it never once occurred to his simple and *civilized* understanding, that the savages were in this respect reaping the reward of fulfilling the intentions of Nature, while his deformed countrywomen were enjoying the necessary fruits of their own absurd aberrations. The modern Europeans may gather an useful lesson from the testimony now quoted, if they choose to avail themselves of it.

In a future number we shall probably describe the Carib character at greater length.

ARTICLE IV.

THE BOOK OF APHORISMS. By a MODERN PYTHAGOREAN. Glasgow: W. R. M'Phun. 1834. 12mo. Pp. 224.

THIS is a very entertaining and readable book, well fitted for the perusal of loungers who like to pick up knowledge where their aim is only to be amused. The title gives but an imperfect idea of its contents, for it contains much that can hardly be classed under the denomination of *Aphorisms*. Though of unequal merit, its contents display, in general, much humour, sagacity, and knowledge of human nature. The topics are extremely multifarious, but are mostly satirical, humorous, literary, pugilistic, and philosophical. The style of the Aphorisms is pithy and concise. There are among them some acute phrenological allusions and remarks; a very natural circumstance in a work from the pen of the "Modern Pythagorean,"—this personage being identical with the Philosopher of Sleep, whose work*, deeply tinged with Phrenology, was noticed in our 39th Number. We subjoin a few of the Aphorisms as a sample.

* The Philosophy of Sleep. By Robert Macnish.

"Never believe a man to be clever on the authority of any of his acquaintances. These reputed geniuses are very often block-heads."

"Those who are most ardently solicitous of obtaining praise, and make the greatest efforts to attain it, are generally less successful than those who give themselves no trouble about the matter. The latter often do unconsciously what procures this kind of incense; while the extreme care and anxiety of the former very often defeat the purpose they have in view,—so perversely do people refuse a man what he longs for, and give him what he is indifferent about."

"There are some persons whose wrath is felt to be formidable, and excites respect, even when grounded upon no rational provocation. There are others, in whom the display of this passion, though ever so justifiable, only gives rise to laughter, and is felt to be utterly ridiculous. Nor does this necessarily depend upon the appearance and physical strength of the individual,—for I have seen strong men whose anger, like that of a child, was matter of derision, and excited neither respect nor fear; while that of others, weak in body and insignificant in aspect, was at once acknowledged to impress the spectators with both feelings; and to inspire them with emotions of involuntary respect. All this depends upon the force of the individual's character. A dwarf with a great share of such energy may excite more respect than a giant who is destitute of it. Had Frederick the Great moved in ordinary life, the unimposing slightness of his appearance would not have stood in the way of making his resentments be powerfully felt. It is owing to such causes that there are some men whom people are indifferent about angering, and others whom they would not offend for almost any consideration."

"The most difficult thing in the world is to talk good nonsense. No person can do it but one of first-rate ability. The nonsense of a man of genius is better than other people's sense."

"I never knew a person with a badly developed head who was a believer in Phrenology."

"Great power of mind, and great elegance of manners, are nearly incompatible. It is difficult for a man of genius to be an adept in the graces of the drawing-room. Powerful minds have an originality and intractability about them, which render it extremely difficult for them to fall into that ease and conventional politeness, which are considered to constitute the finished gentleman. The politeness of a man of genius is more that of nature than of art."

"It was a good remark of Swift's, that a man was too proud to be vain. Vanity and pride are the moral antipodes of each other: there is not the slightest affinity between them. A really

proud man has such a high opinion of himself, as to be indifferent about what others think of him : a vain man has such misgivings about himself, that he is constantly on the *qui vive* for approbation, and for ever doing what he conceives will procure it."

"Great linguists are, for the most part, great blockheads. I say nothing of Sir William Jones, the Admirable Crichton, and other exceptions to the rule ; but, generally speaking, what I state holds true. To master a variety of languages, requires only one talent, and that by no means a high one, *viz.* a good verbal memory, which is sometimes possessed in great perfection even by simpletons and idiots. It is difficult for men of very strong and original minds to become good linguists ; they are so much taken up with substantialities, that they think little about words. *Res, non verba, quæso*, is their motto. The knowledge of a number of languages does not communicate a single new idea ; it only gives the power of expressing what you already know, in a variety of ways. 'I would rather,' as Spurzheim says, 'acquire one new idea than twenty ways of expressing an old one.' If men of great genius are occasionally formidable as linguists, they are so in spite of their genius, which rather stands in their way than assists them ; and they would have been still greater linguists, if they had possessed their powerful verbal memory accompanied with less original talent."

"If you hear a man pretending to be very stupid, depend upon it he thinks himself a very clever fellow."

"Persons with small, fine, compressed lips, have generally much sensitiveness of character, accompanied with great irritability, and a tendency to be finical and particular."

"Should you meet with a young man who is exceedingly sensible, and neither talks nor can relish nonsense, you may rely upon it he has no genius of any kind. If, in addition to his great load of sense, he is a theatrical critic, and bores the company about acting, actors, and such stuff, you may safely pronounce him a blockhead."

"Decision of character is often confounded with talent. This is particularly the case with the fair sex. A bold, masculine, active woman always gets the name of clever, although her intellect may be of an humble order, and her knowledge contemptible."

"Never judge of a man's honesty or talents by the certificates he produces. Such documents are just as likely—or rather much more so—to be false as true. The greatest knave can, at all times, obtain them in proof of his integrity ; and any illiterate blockhead may, by their means, make himself appear one of the most learned and accomplished men of the age. No de-

gree of knavery or stupidity is the least bar in the way of obtaining the most splendid and unqualified testimonials."

"The most obvious inferences often escape the observation of the most sensible men. Take the following as an example:—Sir William Hamilton thought he had the phrenologists by the heels when he discovered that Voltaire, who despised religion, had a large organ of Veneration. This was absurd. Voltaire was a notorious free-thinker. He did not believe in Christianity, and consequently could not venerate it."

"One of the greatest mysteries is the expression of the human eye. It depends upon something beyond mere organization, for I have seen the eyes of two persons which in their structure and colour were, apparently, quite the same, and yet the ocular expression of each individual was perfectly different. Some owe the expression of their countenance chiefly to the eyes, others to the mouth; nor is it, upon the whole, easy to say which feature is the most expressive. The intellect, I believe, is more especially communicated by the eyes, and the feelings by the mouth. I never knew a man of imaginative genius who had not fine eyes."

"It has been the occasion of surprise to many, that Switzerland, the most romantic country in Europe, has never produced a poet. They imagine that the scenery should generate poetry in the minds of the inhabitants; but this is confounding the cause with the effect. It is not the scenery which makes the poet, but the mind of the poet which makes poetry of the scenery. Holland, perhaps the tamest district in the world, has produced some good poets; and our own immortal Milton was born and brought up amid the smoke of London. Spenser, the most fanciful of poets, was also a Cockney."

"In the modern education of children, too much time is devoted to the cultivation of the mind, and too little to that of the body. What is the consequence? The intellect, from such premature and excessive exertion, and the body, from an opposite cause—a want of exertion—are both injured. The mind should never be forced on, but allowed to acquire strength with the growth of the body; and the invigoration of the latter, above all, ought to be encouraged, as upon it depends most materially the future health of the individual. Education should be made a pastime with children, and not a task. The young mind, when forcibly exerted, becomes weakened, and a premature decay of its energies takes place. It is scandalous, as well as absurd, to see the manner in which children are confined several hours together within the walls of a school-house. Some parents declare that they cannot bear to see their offspring idle; but when a child is enjoying itself in the open air, and acquir-

ing health, it cannot be said to be idle. With health comes strength of body, and with strength of body strength of mind.

"If you wish to impose upon stupid people, be very mysterious and unintelligible. The less you are understood, the more highly will you rise in their estimation. The great secret of the success of many popular preachers, consists in bamboozling their hearers. Sensible, intelligible preachers are seldom popular. This may be received as an uncontrovertible fact."

"When a man is offended at being called a blockhead, it is a proof that he is so in reality. Clever men only laugh at being so denominated."

"There are some people upon whom it is impossible to affix a nickname: there is a propriety or force of mind about them, which repels the *soubriquet*, and makes it recoil with shame upon the contriver. There is an essential want about a man upon whom a nickname is easily fastened; he is either very weak, or has some very absurd point in his character."

"If you see a man extremely and systematically grave, the chances are that he is a blockhead, who, conscious of his deficiencies, wishes to make his gravity pass for profound wisdom. None have less gravity than men of genius. They are not afraid to unbend and become playful and sportive, as is the case with the pompous and the stupid."

"Never praise or talk of your children to other people, for, depend upon it, no person except yourself cares a single farthing about them."

"Two servants who have much *Combativeness* and *Self-esteem* in their dispositions seldom agree together. A sharp colloquial fire, with a graceful touch of *Billingsgate*, may, in such a case, be expected between the parties. One servant, however, of this temperament, and one who is not, may not only live in the most perfect harmony, but come to like each other very much, the milder unconsciously giving way to, and acknowledging the supremacy of the stronger spirit."

"There is perhaps not an instance of a man of genius having had a dull woman for his mother, though many have had fathers stupid enough, in all conscience. Talent, therefore, is much more communicable to the offspring from the maternal side than from the other. If a man wishes to have clever children, this may perhaps serve him as an apology for marrying a woman of talent, should all other excuses be wanting."

"A story-teller, or dealer in anecdote, is an abomination that ought to be expelled from all well-regulated societies. A man of an original and truly powerful mind never deals in anecdotes, unless it be for the purpose of illustrating some general principle. Weak-minded people are all addicted to the vice. If a person of this description begins to annoy a company with his or her

twaddle, a good cure for it is to affect deafness—a very convenient infirmity at times. Another is—as soon as he begins to tell a story, pretend that you have already heard, and are familiar with all its particulars. A dose or two of this is a sickener.”

“*Cleverness* imposes much more upon an ordinary person than *talent*. The former is a light, smart, manageable commodity, and can shew to advantage in a hundred situations, where the latter cannot be brought to bear. A clever man is smart, lively, talkative, and self-conceited: a man of talent is seldom either the one or the other. The former is more popular with the million, because his intellect approaches more nearly to the caliber of their own.”

“The English have obtained the reputation of being the most suicidal nation in Europe. This is inaccurate: our neighbours, the French, are infinitely more addicted to the crime of self-murder. Let any one who doubts this visit the *Morgue* in Paris.”

ARTICLE V.

NECESSITY OF POPULAR EDUCATION, AS A NATIONAL OBJECT; WITH HINTS ON THE TREATMENT OF CRIMINALS, AND OBSERVATIONS ON HOMICIDAL INSANITY. BY JAMES SIMPSON, Advocate. Edinburgh: A. & C. Black; and Longman & Co. London. 1834. 12mo. pp. 402.

EDUCATION has for many years been a favourite study with Mr Simpson: it is a subject on which he has read, and thought, and written much; while, at the same time, as attractive Director of the Edinburgh Infant School, and the father of a family, he has had ample opportunity of submitting his opinions to the ordeal of experience. It was Phrenology which first directed Mr Simpson's attention in a particular manner to education; and from that science have been derived his most important views. The present work is phrenological throughout; but the author has carefully refrained from alluding to Gall and Spurzheim, and from employing technical terms,—in order that the phrenological notions might find their way without obstruction into quarters from which prejudice would otherwise have completely debarred them. He lays no claim to originality of thought, but only to the merit of arranging and putting together scattered materials previously in existence. “The reader,” says he, “who is familiar with works on education, will scarcely discover in these pages a thought which in substance he has not met with before; but if he shall find known thoughts in combinations different from any in which he may hitherto have recognised them, and better adapted to the great end to which

they were directed, the utmost success for which the author dares to look, will have attended his humble labours. A new combination, for a beneficial end, of existing constructions, is an invention entitling to the royal patent. Every one is welcome to claim for himself, or any one else, any such stray idea, if he detects it in the following work; all the author asks is the use of it." Notwithstanding this modest declaration, many valuable original suggestions are to be found in the work.

In the first chapter Mr Simpson discusses the effects of ignorance on the condition of the labouring population. Of this class he describes successively the physical, intellectual, moral, and religious condition. "The *physical* condition of the whole class of manual labourers," he truly observes, "is much worse than it might be rendered, and rendered by themselves, if they were more enlightened than they are." By neglecting ventilation, cleanliness, and properly regulated exercise, their health is seriously injured, and their enjoyment of life diminished; and when to all this, says Mr Simpson, is superadded the curse of ardent spirits, "the physical degradation of the manual labourer is complete." To crown the evil, the ruined constitutions of parents descend to their children, whose treatment during infancy, being dictated by ignorance, is eminently calculated still farther to destroy their health.

The *intellectual* condition of the working classes is next described. This, says Mr Simpson, "we can scarcely expect, after what has been said of their physical, to find much more advanced; it is in truth very low, and this I fear with fewer exceptions of importance. Who has not felt and deplored, in his intercourse with nearly the whole class, even what are deemed the most 'decent' and respectable, the mass of prejudice, superstition, and general ignorance, which he is doomed to encounter? The working man rarely knows how to better his lot in life, by rational reflection on causes and consequences, founded on early acquaintance with the simpler principles of trade; the state of particular employments, the legitimate relation between labour and capital and between labourer and employer, the best employment of surplus earnings, the value of character, the marketable importance, to say no more, of sober and moral habits and intelligence, in short, on any practical views of the circumstances which influence his condition. On the contrary, he is the creature of impressions and impulses, the unresisting slave of sensual appetites, the ready dupe of the quack, the thrall of the fanatic, and, above all, the passive instrument of the political agitator, whose sinister views and falsehoods he is unable to detect, and who, by flattering his passions and prejudices, has power to sway him, like an overgrown child, to his purposes of injustice, violence, and destruction. He is told in

the harangue from the waggon, and he believes the demagogue's hypocritical slang, that his class, because the most numerous, are the most enlightened, and generous, and noble,—that they ought to make the laws, and rule the state; nay that their will ought to be law, as their judgment is absolute wisdom. The poor man who believes this, will believe any thing, and will act on his belief as a ready instrument of violence. Witness the peril of the merely accused, but yet untried and unconvicted, who chance to fall into his hands, and a single hint in the street will raise the mob against an innocent person; witness, too, the eager destruction of machinery and property, and the mad burning of food. Can we forget, moreover, the fury and violence with which benevolently offered medical aid in the cholera was repelled, under the impression that the doctors intended the disease to obtain subjects for dissection, and went the length of poisoning the water!

Though we readily grant that this may be an accurate picture of the state of the mere rabble or scum of the working population in every part of the country, we cannot but regard it as much overcharged in relation to the great body of operatives in Britain. We believe it to apply literally to many of the cotton-spinners in large manufacturing towns, such as Manchester and Glasgow; but, on surveying the tradesmen and mechanics of Scotland—and, we are inclined to add, of England too—it will be found that they have a much larger proportion of shrewdness and sagacity, and are by no means so much the creatures of impressions and impulses, the unresisting slaves of sensual appetites, and the passive tools of every political quack, as Mr Simpson represents them to be. He admits, indeed, the existence of numerous exceptions; but if we know the condition of the labouring population, he mistakes the exceptions for the general rule. In describing the moral and religious degradation of this class, he seems to us to fall into the same error. There can be no doubt, however, that in religion and morality, the lower as well as the higher orders are still lamentably deficient, and that the improvement of their education is loudly called for.—The inefficiency of the labours of the clergy is well commented on in the following sentences:

“For none of our wants is so much provision made as for our religious. There is error somewhere. Far indeed is it from my thoughts to impute blame to the excellent men who are labouring to ‘excavate the people from the mass of heathenism in which they are so firmly imbedded.’ They have no power over an erroneous system, and one not of their own creating. But the application of their part of the process is premature. It is as if the metallurgist were to attempt to melt the gold before it is worked out of the vein; education is the only excavat-

ing process ; preaching, in its utmost conceivable perfection, is a defective engine for the purpose ; purely doctrinal preaching is utterly impotent.

" If education shall elevate, as it will be shewn that education alone can, the intellectual and moral, and, by necessary consequence, improve the physical, condition of man, education is the human means which must greatly aid in preparing him to receive religious impressions in their genuine spirit, and to apply them to their intended practical ends. *Before the sower went forth to sow, the soil was prepared.* This previous preparation is so plainly pointed out in the parable, that it is surprising that any one can lose sight of it. He was on his way to prepared ground, when some seed fell by the uncultivated way-side. He did not expect to prepare the soil, by the act of sowing the seed, else the seed would have taken root by its own virtue on the bare wayside, and risen and ripened even among the thorns. I shall have occasion to return to the important subject of a legitimate use of human means, these are, in truth, God's means, for they are the working of the faculties which He hath bestowed that they may be employed, and as such must be perfectly reconcileable with a rational and scriptural view of spiritual influences, which some sincere but over-exercised Christians regard as direct miracles. Alas ! that their effects should be so little visible, and so limited ! What the desiderated educational preparation shall be which will aid in furnishing the impulses to Christianity, not only for Sunday, but for every day of the week, will appear when I come to treat of Infant Education."

The author then adverts to the glaring deficiencies of the present course of instruction, and to the grievous error of those who regard knowledge of reading, writing, and ciphering, as of themselves the marks of a well-educated man. We cannot follow his excellent remarks in detail, and shall simply mention the conclusion at which he arrives ; which is, that " if a national system of education is to stop at reading, writing, and ciphering, it would save much trouble, and often disappointment, not to attempt it at all." In this sentiment we fully concur.

Having discussed, in the first chapter, the condition of the " manual-labour class," Mr. Simpson proceeds, in chapter second, to shew the effects of imperfect education on the condition of what are generally regarded as the " educated classes." The moderate amount of really useful and practical knowledge which ostensibly well-educated individuals most frequently possess, and the selfishness, pride, and intolerance which prevail amongst them, are strongly remarked upon ; after which the author notices, in his usual happy style, various other signs of barbarism yet existing around us. " A catalogue of our social defects," says he, " all referable to the education wherewith we are mocked, might

be expatiated upon to the extent of a volume; the remnants these, of barbarism which still clings to us and our institutions, customs, habits, and manners. I will venture to enumerate a few of these. We direct yet, for example, an evil eye to our fellow-men in other communities, and speak of our 'natural enemies!' We are disgraced by national jealousies, national antipathies, commercial restrictions, and often offensive war. We have our game laws and criminal code also to account for. Brought to the standard of sound ethics and reason, there are many of our customs that have as little chance as these of escaping the reproach of barbarisms, which an educated people would disown; cruel rural sports, for example, fox-hunting, horse-racing, betting, gambling, prize-fighting, duelling, and excessive conviviality. The character and engrossing claims of rural sports, as they are called, will astonish a future better educated age.* Such an age will scarcely believe 'the butcher work that then befell' the unsparring slaughter of all that is furred and feathered and finned, in field and flood, 'on mountain, moss, and moor;' they will discredit the graft of the hunting stage of the race upon a civilization, at its lowest, immensely in advance of that stage; they will reject the story that the boast of the Iroquois and the Esquimaux was also the distinction of the most polished ornaments of our drawing-rooms,—namely the havoc of their unerring aim, the life they have extinguished, the blood they have shed, the 'head of game' they have gloried over as trophies spread out dead before them, and the larders which they have outdone the butcher in stocking! All is not right in our habits of thinking,—in other words in our education,—when our 'elite' can claim, and multitudes can accord, a certain distinction to a 'capital shot,' the victor in what the Olympics knew not—'a steeple chase,' or the proprietor of a pony which can trot sixteen miles an hour!"

In the same chapter Mr Simpson points out the effects of ignorance in producing bad health, and in leading to false views of the aim of life. Its operation in the latter case he exemplifies by referring to the pursuits of young men born to large fortunes, who have succeeded in minority to their paternal estates, and, on attaining majority, are entitled to pursue happiness in their own way. "It is quite lamentable," says he, "to observe the humbling, the debasing course they almost always adopt. Rational views of themselves, of human nature, and of the institutions of society, would be invaluable to such individuals; but they have no adequate means of obtaining them, while posi-

* "I say *engrossing* claims; for I grant that killing game is as legitimate as killing mutton, and do not quarrel with a subordinate and moderate resort to the field by those whose main avocations are more useful and dignified. It is a healthful exercise; I cannot concede to it a higher merit."

tively false views have been implanted in their minds by a perverted education." A very instructive case of a young man of this description is then detailed, but to this we have room only to allude.

Among the causes of the evils which afflict the upper ranks, the author rightly considers the absence of any thing like adequate moral training as one of the most prominent. He shews that moral education has long been appreciated and recommended by philosophers, though it is only now that their advice is beginning to be followed. Milton and Locke both advocated moral training. The latter, in his "Thoughts concerning Education," says: "Learning must be had but in the second place, as subservient only to greater qualities. Seek out somebody (as your son's tutor,) that may know how discreetly to form his manners: place him in hands where you may as much as possible secure his innocence, cherish and nurse up the good, and gently correct and weed out any bad inclinations, and settle him in good habits. This is the main point, and this being provided for, learning may be had into the bargain." Lord Kames also has the following excellent remarks: "It appears unaccountable that our teachers generally have directed their instructions to the head, with very little attention to the heart. From Aristotle down to Locke, books without number have been composed for cultivating and improving the understanding: few in proportion for cultivating and improving the affections. Yet surely, as man is intended to be more an active than a contemplative being; the educating of a young man to behave properly in society, is of still greater importance than the making him even a Solomon for knowledge."

Mr Simpson is a decided opponent of the sacrifice of so many years to classical education as are generally devoted to it. He fully discusses the advantages claimed for it by its advocates, and successfully points out its bad effects in a moral point of view. Of his remarks on this subject our space will admit only a short specimen:—"The advocates of the dead languages uniformly avoid, or at least mistake, the true ground of the controversy. They expatiate on the absolute merits of classical literature, but never dream of comparing it with the education which it excludes. When the question, however, is set on this latter ground, it is capable of great abridgment; for, though we should grant much of absolute value to the actual attainment of classical accomplishment, the experience of centuries has demonstrated that it is of value to so few of those who are forced to pursue it, that the patient repetition of the error from generation to generation,—the unquestioned duty of each oblivious father to enter his son in the classical curriculum, as he was entered by his son's grandfather, in which he is to devote years to what is ex-

pected to be faithfully forgotten, *more majorum*,—affords a striking proof of the force of an ignorant custom enthralling an imperfectly educated people. Were the actual value, then, of classical study tenfold what it is, if it be true that ninety-nine in every hundred who engage in it fail, and for centuries have failed, of attaining to that degree of proficiency which is of any value at all, then classical study is not the proper education for ninety-nine in every hundred of those who at present lose their time in the pursuit of it; and who, as there is no substitute, are left uneducated to all useful practical ends and purposes. What is therefore wanted, is to abolish the *exclusiveness* of the dead languages; to allot them their proper place as subjects of study; to render them easily accessible to all who seek them, either as necessary to a learned profession, as a direct gratification of taste, or as an elegant accomplishment; and at the same time to substitute in early and general education, objects of study more practically useful, which, from their nature, will be better remembered, and will furnish the substantial power of knowledge and resource for life. All the *real* benefit to society from the classics, will thus be preserved; it being obvious that no benefit accrues in any way whatever, either to the student or the community, from their stated oblivion.” The author supports his opinions by the high authority of Milton and Locke.

In chapter third is given a succinct, clear, and comprehensive view of the faculties of man, and their relative objects. “If the being to be educated,” says he, “is man, some knowledge of his nature would seem to be a requisite preliminary to his actual education. Treatises abound in which we are told that man ought to be trained according to his nature, in harmony with his faculties; but, with a few recent exceptions, no educational writer has made an attempt which deserves the name of systematic, to inquire what that nature is, or those faculties are. The trainers of horses and dogs proceed much more philosophically; they leave nothing to hazard, but study, with the utmost care, the distinguishing qualities of the animals, and apply the best treatment to those qualities. But any kind of training is held good enough for the human animal, and moreover any kind of trainer who professes to undertake the office. When the principles which ought to regulate education are understood, this grievous error will be corrected. It will then be known, and the knowledge acted upon, that *education is a process calculated to qualify man to think, feel and act, in a manner most productive of happiness*. It will be known that he has a certain constitution of body and mind, having certain definite relations to beings and things external to itself, and that in these relations are the conditions of his weal or woe. *Education will then be seen to have three essentials,—first, by early exercise to improve*

the powers and faculties, bodily and mental ;—secondly, to impart a knowledge of the nature and purposes of these powers and faculties ;—and, thirdly, to convey as extensive a knowledge as possible of the nature of external beings and things, and the relations of these to the human constitution."

Now, as it is Phrenology alone that furnishes a practical analysis of the human mind, and makes known the faculties to be improved, education must continue to be vague, misdirected, and inefficient; as it has hitherto been; unless the aid of the new philosophy be called in. Mr Simpson has accordingly introduced with much skill an account of the human faculties as revealed by Phrenology, in such a way as to avoid collision with the prejudices of unphrenological readers. His mode of proving to such readers the existence of the faculties established by Phrenology is to describe them in succession, and to challenge the reader to deny their existence. "I feel so confident," says he, "that all my postulates as to human powers, impulses, instincts, or faculties,—for we need not dispute about names,—will be conceded to me, from the impossibility, as I humbly view it, of refusing the concession, that I am content to peril the whole argument, upon the admission by every educated person—First, that the impulses now to be enumerated form constituent parts of man; and, Secondly, that, as is true of the physical structure and organic functions, each is related to some object or objects in nature, moral or physical, external to itself, but directly pointing to it, upon which it is exercised. I wish it, however, to be distinctly understood, that I do not found upon physiological evidence of the truth of the analysis of faculties which I am humbly to offer, because that evidence is not generally admitted; I do not require to trace each faculty to a disputed cerebral origin; the faculties shall be merely metaphysically submitted *seriatim* to the reader's judgment, and his own experience appealed to; and any one which he does not recognise in man, I am quite contented that he shall reject. If, too, he does not think the relative object correctly added to each faculty as we advance, that too he is at perfect liberty to disallow." A luminous and accurate description of the faculties is then given; this is followed by some useful general observations applicable to them all; and the chapter is concluded by a short dissertation on what has been accomplished by Mr Combe in throwing light upon the Deity's moral government of the world.

The fourth chapter is entitled "On Education, as adapted to the faculties—Infant Education." In this chapter the author expounds at considerable length the principle that each faculty must be exercised directly on its own objects,—explains the nature of physical, moral, and intellectual education,—and discusses in detail the manner in which infant training ought to be conduct-

ed. There are also some very just observations on the religious instruction of children, and on the employment of medals and prizes as a stimulus to exertion: and, finally, the objections urged against infant schools by persons ignorant of the principles by which they are regulated, are successfully demolished.

The education of children after the sixth year forms the subject of chapter fifth. Lessons from objects, according to the Pestalozzian system, are now to be more extensively given than at the infant school; by which means the pupils will acquire considerable knowledge of the external world. After this, Mr Simpson proposes to give them some acquaintance with their own nature. "Why," he asks, "should not the pupil, who has reached nine or ten years of age, begin to know the faculties of his mind? Is there any thing in those, for example, which have been detailed in this treatise, which may not be made as plain to him as the lessons on objects and their qualities? There is no need for leading him deeply into metaphysical inquiry on the functions of his faculties: a simple elementary knowledge of them and their every-day modes of operation, above all, their inseparable connexion with their related objects, might be impressed on his mind in such a manner as not only to be perfectly comprehended by him, but firmly impressed on his memory, and applied in his ordinary experience. This branch should constitute a paramount object of concern with the teacher; he should spare no pains to put his pupils completely and intelligently in possession of it. The transition will be easy from the analysis of the faculties to their ethical combination, made plain to the young in their daily intercourse. I have seen the experiment tried on children under twelve years of age with the most flattering success; they have manifested a knowledge and estimate of motives, and a readiness in appreciating, and even regulating conduct, far above what the great mass of the 'educated' ever dreamed of being necessary to intelligent existence." He thinks also that the pupils may "with great ease and advantage be familiarized with the *general* structure of their own bodies, and with the functions of the digestive and other organs, which bear the most obvious relation to the preservation of health and strength; while uncleanly and unwholesome habits may be set prominently before their eyes, with their effects on health and life fully spread out to their view." Geography, Astronomy, History, Geometry, Mechanics, Natural History, and Natural Theology, as branches of education, are next treated of; but we pass on to what is said about political instruction, with Mr Simpson's views on which subject we completely agree.

"Incidentally," says he, "throughout the whole time of the pupil in the school, and particularly in the latter years of his attendance, he should receive much and anxious instruction on

the subject of his political state, and his position as a member of the social system. There is no greater novelty in education than this; hitherto there has been an utter blank here. The elder pupils should be perfectly familiar with their social rights and duties, the principles and simpler practice of the constitution and government, the functions of representatives and of electors, the nature and powers of judicial establishments, the trial by jury, and the functions of magistrates, justices of the peace, and officers of the law, of all ranks and degrees. There is nothing in all this that a boy of twelve years of age may not comprehend and store up as knowledge, as easily as he would translate *Cæsar*. The knowledge should be given him in a series of lessons, and his progress ascertained by repeated examinations; and when he shall come to exercise his rights as a citizen, his early elementary training will be of great value to him.

“Lessons on political economy, the nature and principles of trade, commerce, manufactures, and money, will follow elementary views of political condition. Liberal relations may then be inculcated, and all the self-defeating prejudice and selfishness of dealing among nations and individuals anticipated and prevented. National antipathies ought to be especially reprobated. There are a few plain principles of political economy of which no individual ought to be ignorant, such as the balance of demand and supply, the doctrine of wages, of employer and workman, the economy of labour, the division of labour, the effect of competition, of overtrading, of machinery, of poor-laws, and pauperism, with all its degradation when not induced by unavoidable misfortune, &c.”

The sixth chapter is devoted to the consideration of Civil History as a study for youth. The following extract will give the reader some idea of Mr Simpson's opinions:—

“Before history can be properly taught, it must be properly written. It must be written under the direction of an enlightened philosophy of mind and human nature, and the sound ethics of the supremacy of the moral sentiments and intellect. It ought to be viewed as a record of the manifestations of the faculties of man, and—the distinction of the animal from the moral faculties, the truth that creation is arranged on the principle of favouring virtue, being kept in view—its events should be classed according to their relation to the higher or lower feelings of humanity; exalting the former as worthy of approbation and imitation; and reprobating the latter according to their place in the scale of vice or crime, to which, in abuse, they essentially belong. The historian thus guided would not worship the false splendour of the Greeks and Romans,—a worship too unequivocally indicative of a sympathy in ourselves with the lower feelings, out of which that false splendour arose;—but

tracing through all their ramifications and tortuosities, to their ultimate inevitable retribution, acts fundamentally immoral or criminal, would sternly refuse to them the slightest shelter from universal execration, in the most dazzling feats of heroism, the most munificent dispensation of plunder, the finest taste, or most gorgeous magnificence. The same guiding principles would impart to history a philosophical character, which would give it the highest practical value, and instead of an unedifying monotony of vice and crime, would render it a continued illustration of principle, and an instructive guide to national practice."

The details of a national plan of popular education are suggested in chapter seventh, which is one of great interest. The author contends for the institution of *free* schools by the nation; because experience proves that even the most trifling fees have the effect of preventing attendance,—that private benevolence is of little avail in establishing and upholding schools,—and that popular ignorance is a great national evil, peopling our prisons and our hospitals, desolating the land with pauperism, taxing us for the costly machinery of political establishments and criminal judicature, and, at the same time, deducting from the happiness of every feeling man, by making him witness and live surrounded by the numberless sufferings which it entails upon an immense body of the community. "Pay for it who may," says Mr Simpson, "the education of the working classes never has been, nor ever will, for it cannot, be paid by themselves. Besides inability, there is another obstacle to any thing like effort by that class to obtain education for their children, and that is, their utter indifference to it, arising from ignorance of its advantages. The very ignorance which we deplore is a mountainous barrier in the way of its own removal. The road must be levelled and smoothed, and almost strewn with flowers, to tempt the prevailing apathy to move in it. It is proverbial, but erroneous, that a thing must be paid for *before* it is valued, and many will tell us that the working class will not care to send their children to our *gratis* schools. Now that has not yet been tried; but it has, on trial, been found to be most certainly true that the maxim reversed holds good, namely, that a thing must be valued *before* it is paid for; and hence the empty halls of the pence-exacting schools. It seems an experiment well worth the while of the Government, who *must* have ultimately to deal with the great question, to guarantee, for a year or two, the loss to two or three infant schools, that shall arrange to open their door gratis. From many indications, and from inquiries made by them among the poorer classes, Mr Dun and Mr Milne, the teachers of the Edinburgh Lancasterian and Model Infant schools, have informed the author that they entertain no doubt

that their schools would be quite full in a few days on that footing.* This might be expected by attention to the most obvious human motives. The parent must be depraved indeed, or insane, who should prefer being annoyed with wretchedly cared for children at home, or seeing them playing in the kennels of the streets, in filth and wickedness, to placing them in the safety, comfort, and, to them, luxury, of an infant school. If they could be tempted only to *bring* them there, the children themselves would most certainly come back again; if so, would the parents—could they, *hinder* them? Let us once get hold of the children, and we are sure of *them*; they will make no demand on their parents on Monday morning for the non-existing two-pence, which has gone for whisky on Saturday night or Sunday; the poor child is probably sent or driven out of doors at any rate; he will infallibly find his way to the infant school; and when once there, he may in most cases be counted upon, not only for the whole period of that first school, but for transference to the more advanced school, of our fifth chapter, also opened to him gratis; and there also he will make out the total term."

As a commencement to the great measure of national education, the author suggests that its merits should be discussed fully and freely in both Houses of Parliament, and resolutions voted in its favour.† Petitions, he thinks, will not be wanting, when the subject is "agitated" by the legislature and the press, both combining to enlighten the public, and render it popular. "When the legislature," he proceeds, "have recognised by resolutions, the principles, first, *That the education of the people, from two years of age to fourteen, ought to be furnished at the national expense*; and, secondly, *That the national system should be directed by the Government, the way will be paved for the first act of Parliament which will empower his Majesty to name Commissioners, under the superintendence of his Secretary of State for the Home Department,‡ to constitute a Board*

* "Both these teachers declare that their school-fees are irregularly paid. In the Lancasterian scarcely one-half are paid when due, and a great proportion is never recovered. In the Infant school it is better, though there likewise irregular. Mr Dun knows when a pupil will cease to come back; it is after running some weeks in arrear. He has often made the experiment of seeing the parents, whom he generally found drunk, and on wiping off the score the pupil was sure to come back again. Mr Dun and Mr Milne state, that the opinion in favour of gratis teaching is from experience general among the teachers themselves. The boys in the Lancasterian School are about 300,—they used to be 500. If the doors were opened gratis, a larger number than 500 would attend with alacrity. There are about 300 girls."

† A Parliamentary Committee on education has been appointed since the publication of Mr Simpson's book.

‡ "Prussia and France have each a Minister of Public Instruction, and the magnitude of the national object would warrant a similar appointment in this country. In this proposition I am anticipated by the Edinburgh Review,

of Public Education, whose duty, under the responsibility of a minute report to Parliament, it shall be, *First*, after the most extensive inquiries into existing improvements, not merely in this country, where there is yet but little to boast of, but in countries which have made and are making popular education a grand national object, such as Prussia and France, and guided by sound philosophical principle, to prepare a system of primary education—a Code or directory for the teacher's guidance, adapted to *all* classes of the community, and with a special eye to the education of the manual labour class, physical, moral, and intellectual. The vital importance of such a book needs no illustration. On the table of every school in the country, it would be the teacher's rule, guide, warrant, and limit, and secure to the pupil education on an enlightened plan, and that uniform from one end of the empire to the other. This is of immense moment. There is a vague talk on the subject of popular education, even among its zealous friends, which appears never to get beyond the machinery, the multiplication of schools, and the methods of teaching; but few seem to think it at all necessary to settle the point, *WHAT* is to be taught. In *this*, we of this country have the course clear for us to shoot a-head immeasurably of both Prussia and France. It would occupy too much space to detail here the *WHAT* of education in those countries on their new popular system. Those who have read their reports must have been struck with the preponderating, the almost exclusive importance allotted to the machinery,—to the minister of public instruction, the boards, the normal schools, the primary schools, the control and visitation, the uniformity, borrowed from the very war-office and the barracks. This is all very right, so far as it goes; but the education conveyed by all these appliances appears to rise very little above the old routine; and this evidently because it is not suspected in Prussia and France that there exists any thing better. We miss, in the very front of the system, a provision for infant education, for the chief object of all education, to which every thing else ought to be subservient, early practical moral training. We find no provision made for imparting to the pupil a knowledge of himself, and of creation as related to him. Languages, geography, mathematics, history, music, drawing, penmanship, are all excellent branches, but they are too apt to be thought the whole of school objects. The desiderated British Code of the substance

No. 117, p. 30.—'In England, where almost every thing is to do, and a great deal to be undone, we doubt whether any thing can be effected of permanent utility, without a Minister of Public Instruction. The duties of the Home Office are already too heavy. The only way to secure unity, promptitude, energy, and, we may add, impartiality, in any organized system of national education, is to lodge the undivided responsibility in the hands of a public officer, and to limit his duties to that great object.'

of education may be made to exceed any thing yet known ; and, borrowed, as it would be, by the very countries from which we have copied the machinery, will overpay the boon."

Mr Simpson offers some judicious and valuable suggestions as to the other duties of the proposed Board ; but for these we must refer the reader to his pages. The great importance of training teachers in what are termed normal schools is justly and strongly insisted on ; and the necessity that schools should be under proper superintendence is also pointed out. " The Board," says Mr Simpson, " will exercise the most rigid surveillance over the schools for teachers, and subsequent parish schools. The teacher ought to be liberally paid, quite as liberally as the parish minister, while his attainments will secure to him an elevation in society, far beyond what the ' schoolmaster ' has yet enjoyed. But to keep up zeal, and prevent the sedative effect of endowment, all the national school teachers should be appointed triennially ; when reappointment will depend upon previous conduct. The Board ought to have the sole appointment of the teachers, and the power of dismissal for sufficient reason. Returns at stated periods should be made to the Board, by the teachers, of the condition and progress of their schools ; and these should be countersigned by the Justices of the Peace and Clergy in the parish, who should have power, and be enjoined, to visit the school at all times, and examine it once or twice a-year. Occasional inspections by members of the Board, or by qualified persons appointed by them, going in circuit, so that the whole schools may be inspected in the course of a certain number of years, and their state published, would furnish a motive to teachers, justices, and ministers, alike to do their duty."

In the eighth and concluding chapter, Mr Simpson adverts to the difficulties and obstacles to be overcome in educating the people, and the encouragements which the friends of education have before them. We have room to notice only one of the " obstacles,"—sectarian zeal. This, says Mr Simpson, " has hitherto been, and will yet be, the most formidable obstacle with which a NATIONAL system of popular education will have to contend. There exist between seventy and eighty sects of Christians. The zealots of every sect most conscientiously entertain the opinion that the only chance for the youth of the country obtaining what it calls a religious education, is to place the sole direction of education, secular and religious, in its peculiar hands. Most sects, so empowered, would then proceed to instil into the young, nay, even the infant mind, *theology* almost exclusively. This is the only idea the sects, if zealous, attach to education on a religious basis. It must *begin* with the creed and catechism of the sect, and never for a moment be permitted to lose sight of either. The consequence is, that *both*

become objects of tedium and disgust, and neither religious nor secular knowledge is attained. No one can have read this treatise without observing that religious education, or, what is the same thing, education on a religious basis, is strenuously advocated in it; only a different mode, and a different *order* of inculcation are recommended, because of the signal failure of the prevailing method. While, in the order proposed, secular education *precedes* the inculcation of Revelation, it cannot be said by the most scrupulous that it *excludes* it. By secular education the pupil is introduced to the God of Nature. He desiderates a Creator as the author of the wonders unfolded to him in creation, and, as it were, *discovers* him in his works. Thus prepared, he proceeds to find that the God of Nature is the God of Revelation. Is it wise to reverse this order? Is it not impious to exclude one-half of it?"

At page 254, Mr Simpson does injustice to Dr Bell, as the inventor of the monitorial system of education, or method of mutual instruction. He represents Joseph Lancaster as the original discoverer of that system; and states that the English chutchmen, alarmed by the progress which the dissenters were making with it in educating the people, hastily brought home Dr Bell from India, identified him with the new method, established national schools in accordance with it, and refused to acknowledge Lancaster as its inventor. Now, the fact is, that Dr Bell invented the system towards the end of last century, in India, where he practised it for years with the most gratifying success. He returned to Europe in 1797, and published in that year a full account of his method, in a pamphlet entitled, "An Experiment in Education, made at the Male Asylum of Madras; suggesting a system by which a school or family may teach itself under the superintendence of the master or parent." In 1798, the system was successfully introduced into various seminaries in England, particularly the charity school of St Botolph, Aldgate, and the Kendal schools of industry. It was not till 1803 that Joseph Lancaster first appeared before the public. In the pamphlet which he then published, called, "Improvements in Education," &c. he states that his school was begun in the year 1798, that "during several years" he failed in every attempt "to introduce a better system of tuition" than the common one, and that afterwards "the internal organization of the school was gradually and materially altered for the better." In his third edition, he admits that when he opened school in 1798, he "knew of no modes of tuition but those usually in practice." His first edition contains a fair acknowledgment of the priority of Dr Bell's discovery, in the following words:—"I ought not to close my account without acknowledging the obligation I lie under to Dr Bell, of the Male Asylum at Madras,

who so nobly gave up his time and liberal salary, that he might perfect that institution, which flourished greatly under his fostering care. He published a tract in 1798, [the true date is 1797], entitled, 'An Experiment in Education,' &c. From this publication I have adopted several useful hints. I beg leave to recommend it to the attentive perusal of the friends of education and youth." In the second edition of Lancaster's book, this farther acknowledgment was added:—"Dr Bell was fully sensible of the waste of time in schools, and his method to remedy the evil was crowned with complete success. I have been endeavouring to walk in his footsteps in the method about to be detailed;" p. 78. It was only when his school attracted a high degree of public attention, that Lancaster claimed the merit of having invented the system of mutual instruction; and at length, he went so far as to write, in the *Morning Post* of 4th September 1811, "I stand forward before the public, at the bar of mankind, to the present and for future ages; avowing myself the inventor of the British or Royal Lancasterian system." Dr Bell, then, was undoubtedly the sole inventor of the monitorial system; but Lancaster, who "walked in his footsteps," had certainly the great merit of introducing it generally into practice. Dr Bell, however, had been residing in England for years, when he was called on by the churchmen to assist them in establishing schools to compete with those of Lancaster.

Mr Simpson has appended to his work "Hints on the necessity of a change of principle in our Legislation for the efficient protection of Society from Crime;"—"Observations on the degree of Knowledge yet applied to the investigation of Insanity in Trials for Crime, chiefly Violence and Homicide;"—"Extract from Report of the Edinburgh Infant School Society;"—"Summary of the Proceedings of the Edinburgh Association for procuring Instruction in useful and entertaining Science;" and several other documents,—all containing much interesting and instructive matter. Our limits, however, are now exhausted, so that the appendix, like much of what is contained in the body of the treatise, must be passed over in silence. We anticipate the best effects to the cause of education from Mr Simpson's work. Independently of other merits, the animated and popular style in which it is written, will go far to ensure a wide circulation. The extracts given above will so fully enable the reader to judge of its merits that they render quite unnecessary any farther expression of our own opinion.

ARTICLE VI.

PAUPER LUNATIC ASYLUM AT HANWELL, NEAR LONDON *.

THE principles acted on at the Asylum at Hanwell are nearly these:—

1. It is the conviction of its active, intelligent, and truly benevolent superintendent Dr Ellis, that insanity is almost always a *partial*, not a *total*, aberration of reason:—and, consequently, that in all cases alleviation, and in many cure, may be effected by temperately, yet steadily, exercising the sane faculties, and soothing the insane to repose.

2. He is therefore very careful so to arrange and distribute his patients, that those may not be together whose weaknesses are likely to conflict, at the same time that all enjoy the benefit of company and society. To this latter condition he attaches extreme value; attributing the small number of cures effected in the higher circles almost entirely to the seclusion in which such patients are usually kept. And his greatest ambition, he says, is to be able to bring this principle so far into evidence, as to see a similar institution to that which he conducts founded for the upper ranks, surrounded with all the luxury and indulgence to which they are accustomed, and with the necessary restraint as much as possible unseen and unfelt.

3. In classifying his patients, Dr Ellis professes to be much assisted by studying the minute indications of character furnished by the modern science of Phrenology, in which he implicitly believes; and whatever may be thought of this guide in the abstract, his tact at least seems unerring, for he has few quarrels; and in twenty years has had no accident. It is obvious, however, that this is not so much a principle as a mere method,—a means by which he attains, or supposes that he attains, a particular end.

4. He is next careful constantly to occupy his patients' minds by light, *useful* labour, in the open air as much as possible, and otherwise in warm but well ventilated apartments. It is a remarkable gleam of sanity which appears in all, that they will tolerate, and even court, work which appears to them *useful*, but no other; and Dr Ellis finds a medical benefit in indulging

* Extracted from the *Athenaeum* of 3d May 1834, by the editor of which the following note is prefixed:—"We are indebted for the following interesting paper to a friend, who was led accidentally the other day to visit this asylum; and who is anxious to give publicity to the system of management observed in it, and the admirable results of that system." We have ascertained the name of the writer,—but shall merely state, that he is a man of science, and a Professor in an English University.

this preference, as strengthening in their estimation the tie which yet connects them with the sane and usefully employed world.

5. For the same reason he encourages them to undertake long consecutive tasks, that their minds may be occupied steadily, for at least some days, with the same object. The acquisition and practice of a trade he thus finds eminently beneficial, provided that neither is urged too fast or far, beyond the strength of mind of the patient set to them.

6. His last rule is undeviating kindness, and even affectionate familiarity of manner towards them:—on which head, however, his difficulties are infinite with the sane part of his establishment. He complains much of a hard-hearted abruptness and unkindness, which seem, in this country and district particularly, to pervade the minds even of those, otherwise gentle enough, when they are brought in contact with patients of this description; the effect of which, on those recovering, is especially disadvantageous. They are extremely jealous of indignity or contempt,

Such are the leading principles on which this admirable Institution is conducted; and I must say, that in all my experience, I have never seen more interesting or affecting results brought out. The number of patients approaches to six hundred, for whose efficient guard, protection, and service, about forty sane servants, of all kinds, are sufficient. At the head of every department of work in the house, whether cooking, baking, brewing, washing, carpentering, shoemaking, tailoring, straw-hat making, bricklaying, gardening, dairying, or what it may, one of these sane individuals is placed; but the labourers under them are all patients. About sixty acres of ground are annexed to the premises, over which these poor creatures are thus distributed. The fences are by no means everywhere secure, yet no attempt is made to escape. And the affectionate attachment of all to Dr Ellis, and, if possible, even more obviously, to his admirable wife, appears unbounded; it is, indeed, almost distressing, for in some of the worst cases it is more like the affection of a brute than of a human being, and is, in truth, no more.

Lords Jersey, Howe, Chichester, and other gentlemen about the Court, have visited the establishment with feelings similar to mine, (as appears from their observations written in the visitors' book); and it has been intimated, in consequence, that their Majesties will shortly examine it. A very celebrated lady also, (on such an occasion, I think I may name her—I mean Miss Martineau),—who was in the same party with myself the other day, has since returned *alone*, and passed a whole day in it, that she might study it at leisure, and undisturbed*. I mention these

* This lady has published in Tait's Edinburgh Magazine for June 1834, a very interesting account of her observations at Hanwell; with some excel-

circumstances partly to prove, that I have not been unduly excited by what I saw,—partly to show that there is nothing painful or oppressive in its examination, but, on the contrary, much that is delightful, while it is improving. How is it that it is generally so little known, or talked of? There is no difficulty, I believe, in obtaining admission: it is only wished that parties going should not be numerous or imposing, otherwise the patients are agitated by their presence.

A few anecdotes may, however, further illustrate the kind of reflections which a visit to this place excites. One poor woman whom we saw working in the garden, was ten years in chains, furiously mad. She has been only fifteen months here, never in chains, and now under as little restraint as the others. Her delight is the garden; and she fancies that she has almost the exclusive charge of it. Another woman was fifteen years in the strictest confinement, and has been two years here. We saw her occupied in the pleasure-grounds; and her delight on seeing Mrs Ellis, who accompanied us, was ecstatic. She kissed her hand, leaped about and around her, shewed what she was engaged in, and so forth, with a glee which seemed infantine, but was neither offensive nor alarming. The man who shot Mr Mellish last year, and who was acquitted on the ground of insanity, is also here. He came moody and dissatisfied, as fancying that he had cause for his act, and was therefore ill-treated; but he is now comparatively cheerful and contented, working, by his own desire, among the shoemakers, where we saw him. Lastly, a lady of fortune has been treated for the last eighteen months, as much as possible, in a private house, on Dr Ellis's system, after having been many years in the strictest confinement, even to a strait-waistcoat. She now goes out in her carriage without a keeper; and so much is her intellect strengthened by being judiciously appealed to whenever possible, that when consulted, at the beginning of last winter, as to the prudence of dispensing with a guard to her fire, her reply was, that she hoped it was not necessary, yet, as a measure of precaution, she would recommend its adoption.

The great majority of cases have been preceded by habits of vicious indulgence, especially intemperance and violent passion. This deplorable malady is also a frequent termination of the unhappy fate of women of the town, especially when their *maternal*, as well as other affections, have been severely lacerated. The majority of cases here (it is the Pauper Asylum) are among the uneducated; but this is not, I believe, a general fact.

lent remarks on the irrational treatment generally received by the insane, and the hurtful prejudices which prevail in society on the subject of mental derangement. The article is written in a most pleasing strain of philanthropy, and doubtless will powerfully aid in rousing the public from their apathy and ignorance.—ED. P. J.

In almost every instance the extreme crisis may be traced to injudicious and generally *cruel* treatment, when reason was tottering, but not yet gone. Without altogether denying the doctrine of hereditary tendencies, Dr Ellis is persuaded that, if taken in time, these may almost always be overcome; and that their effect would be comparatively trifling if unaided by moral causes.

In the whole compass of moral statistics, perhaps, no subject is more interesting than this. It is interesting in itself, as relating to beings of themselves utterly helpless; and it is, if possible, still more interesting in its ulterior application. For may we not assume that the treatment which is eminently successful in the extreme case of mental disease, must contain within itself the principles on which all mental training ought to be founded? In our schools, therefore, as in our lunatic asylums, may we not infer, from this example, that not less value should be set on the *indirect* than on the *direct* culture of the yet imperfect mind; that the *leisure* of pupils should be improved, as well as their school hours; that their temper and affections, as well as their intellect, should be nurtured; their active, as well as sedentary, pursuits be such as to give habits of industry and consecutive labour, &c.? Instead of this, it is to be feared that in most of our English schools our boys are dismissed from their tasks to idleness at best, but to mischief and vice much more commonly; the weak are overborne by the strong; the strong are spoiled by their superiority; the tempers of all are injured, and their affections only brought out during their brief holidays. Ought we to wonder, then, that a fitful manhood should so often succeed an unruly youth, and that both should so frequently disappoint the fairest promise of opening childhood? The subject can be here only hinted at; but its development well deserves the attention of every friend to national education, national happiness, character, and virtue.

In saying this much respecting Hanwell Asylum, I could wish to be understood as far from meaning to intimate that it stands alone in the interesting experiment making in it. On the contrary, I believe that similar attempts are in progress in several other places; but I wish to testify to the almost complete success here. In conclusion, one of the most striking *physical* effects of his system Dr Ellis states to be the uninterrupted sleep of his whole establishment during the night. His patients are not lodged in separate apartments, but together, in wards: yet is he not disturbed by them three times a-year. This he attributes both to their occupation through the day and their general tranquillity of mind.

A. M.

ARTICLE VII.

OPINIONS OF TIEDEMANN AND ARNOLD RESPECTING
PHRENOLOGY—INCONSISTENCY OF THE ANTIPHRE-
NOLOGISTS.

OUR readers will be amused, if they will take the trouble to contrast the *sayings* and *opinions* of the antiphrenologists with each other, and see how much each admits, which the other denies. In the article on Temperament, by Dr Prichard, to which we alluded in last Number, that learned opponent gives sundry weighty reasons for believing *the cerebellum to be the seat, not of Amativeness, but of the intellect!* and, as a proof, he avers, that many Cretins with small cerebella manifest strong sexual desire, but little or no intellectual power,—facts which he says he can reconcile with the above theory, but not with Phrenology. Tiedemann, the celebrated professor at Heidelberg, propounds a different view of the matter; and while he is equally hostile to Phrenology, and to the connection of Amativeness with the cerebellum, he chooses a more dignified habitation for the intellect, and declares in his lectures to his wondering students, “*that persons with large foreheads are endowed with superior intellects, and that individuals with small heads have inferior intellects. The brain of Cuvier, which was unusually large, will illustrate the first, and the skull of this idiot (shewing one) the second.*” This is not amiss for a great antiphrenologist like our friend Tiedemann; but what says Dr Prichard on the same subject? He disapproves altogether of this doctrine, and gives the palm to the head of moderate or smallish size. “It would rather seem probable,” says he, “that the state of interior organization, from which the highest degree of energy in its” (the understanding’s) “appropriate action may be supposed to result, would be found in a brain, the volume of which, both generally and in its parts, has the medium degree of development, or is neither greater nor less than the average dimension. As far as our experience and observation reaches, it bears out this presumption: the individuals whom we have known possessed of the greatest intellectual powers have been those in the form and size of whose heads, compact and of moderate volume, nothing remarkable presented itself.”*

It would be curious to discover whether Dr Prichard has a moderate-sized head, and Tiedemann rather a big one! The result might enable us more easily to reconcile them to each other. In the mean time, it is not too much to conjecture, that the intellectual

* Cyclopædia of Practical Medicine, article TEMPERAMENT, No. xxi. p. 174.

persons known to Dr Prichard are somewhat inferior to such men as Napoleon, Sully, Chatham, Franklin, and Washington; and, moreover, that possibly he is not an adept in the art of distinguishing the signs of intellectual talent.

We cannot help thinking that Dr Prichard has examined the Cretins very imperfectly, when he speaks of their intellects, and not their appetites, bearing a relation to the size of the cerebellum. We have seen numbers of them with unusually large cerebella, in whom reason was but a ray, compared to the energy of the sexual passion which they manifested; and we can state, as an additional fact, that, in such cases, the forehead is either unusually small and contracted, or presents the appearance of *morbid* distention. In a very few instances, nothing remarkable appears in its external configuration, but the whole expression and aspect of the body indicate structural disease in the brain itself.

But to return to Tiedemann. "This," he continues, "would appear to shew that there is some truth in the doctrines of Gall and Spurzheim, and it would be well if the heads of individuals intended for an intellectual or studious life were measured before they commenced their studies, as many disappointments would be avoided. The assertion, however, that in one part of the brain resides this faculty, and in another that, I cannot believe. In dissection of intellectual persons, the convolutions are found more numerous than usual, and the anfractuosities deeper. In women the sulci are less deep than in men."

We are glad to perceive that Dr Tiedemann is a man of the practical understanding which the above quotation betokens. No doubt, a statement of facts like his *does* "appear" to support Phrenology, but it is Nature and not Tiedemann that must be blamed for the coincidence. It is evident that he would have avoided every appearance of supporting such doctrines, if truth would have allowed him. As it is, we suspect that he is a sounder Phrenologist than many who arrogate the title. He distinctly, although by implication, admits the fundamental principle of size of brain being an index of mental power; and he farther admits, that intellect has a direct relation to the cerebral convolutions situated in the anterior lobes. If, after these admissions, he differs as to the functions of other parts of the brain, it is a difference only as to details; and when *principles* are once established, details can be easily verified and corrected. We are bound, indeed, to declare, that the learned Professor is not conscious of being a phrenologist; but his evidence in its favour is only the more valuable on that account, and whatever he may now do or say about the cerebellum is of little consequence, as time and farther progress in his new field of study will ultimately remove all his present difficulties.

Having noticed the opinion of one of the Heidelberg professors respecting Phrenology, we take the opportunity of advertising to those of another. We learn from excellent authority, that Professor Arnold stated in his lectures last summer, that he agrees with Gall in thinking that the cerebellum is the organ of Amativeness; though he believes it—for what reason we know not—to be also in some way connected with involuntary motion. Personal observation has satisfied him that the animal, moral, and intellectual faculties are connected with different regions of the brain; and he entirely concurs with Gall as to the individual regions occupied by each class of faculties, but, like Tiedemann, thinks that Gall has gone too far in asserting that these regions consist of a number of smaller organs. Arnold, then, admits, *from observation*, the grand fundamental principle, that different parts of the brain perform different functions; and, in particular, that on the basilar and occipital regions depend the propensities, on the coronal region the moral sentiments, and on the forehead the intellect. As a commentary on his and Tiedemann's refusal to admit the existence of organs of individual faculties—in other words to assent to the details of Phrenology—we shall extract, but without meaning to apply the whole of it to the two professors, a lively and forcible passage from a work published in 1829 by Dr Caldwell of Lexington.

"Nothing is more common," says Dr Caldwell, "than for physicians and others, who ought to be better informed, to observe very gravely, and, as some may think, *very knowingly*, 'We believe in the *general* principles of Phrenology, but not in its details.' But a few years ago those same sage and cautious gentlemen denounced it, 'by the lump,' 'principles,' and all. This they will not deny. But times have changed, and they have changed their creed and their tone. Phrenology has gained *strength*, and, in the same ratio, have their opposition and hostility to it gained *weakness*. They think *by fashion*, as they shape their apparel. They feel the breeze of popular sentiment with as much attention and accuracy as they do their patients' pulses, or as they examine the state of respiration by means of the stethoscope, and 'turn and turn' as it turns, yet 'still go on.' Thus do they completely verify the common adage, that those who 'talk at random should have good memories.' Although *they* may forget, the *world* will remember.

"But let them occupy their new ground undisturbed. What have they gained by it? What are the meaning and force of their objection to Phrenology? Literally nothing. In the 'general principles' of the science they avow their belief; and in that avowal they concede every thing. What are 'principles'? Generalizations of 'details,' and nothing more. They are but aggregates or classifications of recognised facts. 'Details' are

parts,—‘principles’ the whole. Of Phrenology, this is proverbially true. By those who know the history of it, it is perfectly understood, that, in all his discoveries, in developing the science, the march of Gall was from ‘details’ to ‘principles,’—from individuals to generals—not the reverse. His method, like that of Bacon, was strictly inductive. In this consisted his chief merit as a discoverer and a philosopher. Could he, then, out of *false* ‘details’ construct *true* ‘principles?’ No antiphrenologist will answer in the affirmative. No such alchemy pertained to Gall or any of his followers. Nor did they ever profess it. It is by their *opponents* that it is *virtually* professed; and to them belongs the task to reconcile the inconsistency, or to bear the burden of it.

“But they cannot reconcile it. As well may they attempt any other impossibility; and as soon will they succeed in it. If the ‘general principles’ of Phrenology are true, so are its ‘details.’ If the *parts* be corrupt, the *whole* cannot be sound. The enemies of the science, then, have but one alternative; to reject or receive it *in toto*.

“But wherefore is it that the opponents of Phrenology do not believe in its ‘details?’ The reply is easy. They have not studied them, and *do not, therefore, understand them*. It is praise enough for any one, to say of him, that he thoroughly understands what he *has* carefully studied. What he has not thus studied, no man ever yet understood, nor ever can. But to pursue ‘details’ is much more troublesome and laborious, than to comprehend ‘principles’ when completely established and clearly enunciated. Hence the reason why, as relates to Phrenology, gentlemen profess a belief in the latter and not in the former. Let them first acquire a correct and thorough knowledge of the latter, and then deny and subvert them, if they can. As soon would they dream of denying, or attempting to subvert, the facts of the descent of ponderous bodies, the reflexion of light, or the pressure of the atmosphere. Why did the prince of Ceylon disbelieve in the consolidation of water by cold? He was ignorant of ‘details.’ Why have the Chinese denied the possibility of throwing balls to a great distance, and with a destructive force, by means of water acted on by fire? For the same reason, an ignorance of ‘details.’ Why did the world remain so long incredulous of the identity of electricity and lightning, and of the compressibility of water? Franklin and Perkins had not yet instructed them in the requisite ‘details.’ Away, then, with such idle affectation of sagacity and wisdom! It is but a tattered covering for a want of information; a hackneyed apology for a neglect to inquire. In truth, with men who make a *pretence* to knowledge, a ‘disbelief in details,’ and an entire ignorance of them, are too frequently synonymous

expressions. As relates to the opponents of Phrenology, this is certainly true. To know the 'details' of that science, and to believe in them, are the same. No one has ever thoroughly studied them; by a faithful examination of ~~man~~ as he is, without arriving at a conviction of their truth. If such an instance has ever occurred, it has been in some individual whose cerebral developments were unfavourable; in plainer English, *whose head was badly formed*. Neither Homer's Thersites, whose cranium was "misshapen," nor any of Shakspeare's personages, with 'foreheads villanously low,' could have been easily proselyted to the doctrines of Phrenology. The reason is obvious. Their own heads would not have "passed muster." Their belief, therefore, would have been *self-condemnatory*. And as no man is bound, in common-law, to give evidence against himself, neither is it very consistent with the laws of human nature, for any one to believe, more especially to avow his belief, to his own disparagement. As the hump-backed, knock-kneed, and bandy-legged have an instinctive hostility to the science of gymnastics, it is scarcely to be expected that the flat-heads, apple-heads, and sugar-loaf-heads will be favourably disposed to that of Phrenology. Nor will those whose brains are so ponderous behind and light before, that their heads seem in danger of sitting backward*."

We have no doubt that, on widening the sphere of his observations, Arnold will become satisfied with respect to the *details*, as well as the *principles* of Phrenology. Should he ultimately declare himself a phrenologist, of which we have little doubt, the cause of the science will be greatly forwarded in Germany; for he is there universally known; and it is all but certain that he will succeed Tiedemann as Professor of Anatomy and Physiology in the University of Heidelberg.

ARTICLE VIII.

AN ESSAY ON THE CHARACTER AND CEREBRAL DEVELOPMENT OF ROBERT BURNS. Read, on 5th May 1834, before The Edinburgh Ethical Society for the Study and Practical Application of Phrenology. By Mr ~~Robert~~ Cox.

It may be affirmed without fear of contradiction, that there is no individual whose character and history are better known in Scotland than those of Robert Burns. To Scotchmen, even in the most distant parts of the world, his works are hardly

* Caldwell's New Views of Penitentiary Discipline, &c. Philadelphia, 1829. Preface, pp. 5 and 6.

less familiar than the sacred writings themselves. The minutest incidents of his life have been recorded, commented on, and repeated almost to satiety, by a succession of talented biographers; and his career is in itself pregnant with interest and instruction to every student of the nature of man. For these reasons, the Edinburgh phrenologists have long been anxious to ascertain the cerebral development of Burns; and they consider themselves highly indebted to those gentlemen in Dumfries, through whose exertions there is now before us an accurate and authentic representation of the poet's skull*.

The circumstances in which the cast was procured are fully stated in the following narrative, from the pen of Mr Blacklock, surgeon, originally published in the Dumfries Courier.

"On Monday night, 31st March 1834, Mr John M'Diarmid, Mr Adam Rankine, Mr James Kerr, Mr James Bogie, Mr Andrew Crombie, and the subscriber, descended into the vault of the mausoleum for the purpose of examining the remains of Burns, and, if possible, procuring a cast of his skull. Mr Crombie having witnessed the exhumation of the bard's remains in 1815, and seen them deposited in their present resting place, at once pointed out the exact spot where the head would be found, and a few spadefuls of loose sandy soil being removed, the skull was brought into view, and carefully lifted.

"The cranial bones were perfect in every respect, if we except a little erosion of their external table, and firmly held together by their sutures; even the delicate bones of the orbits, with the trifling exception of the *os unguis* in the left, were sound and uninjured by death and the grave. The superior maxillary bones still retained the four most posterior teeth on each side, including the *dentes sapientiae*, and all without spot or blemish; the *incisores*, *cuspidati*, &c. had, in all probability, recently dropt from the jaw, for the alveoli were but little decayed. The bones of the face and palate were also sound. Some small portions of black hair, with a very few grey hairs intermixed, were observed while detaching some extraneous matter from the occiput. Indeed nothing could exceed the high state of preservation in which we found the bones of the cranium, or offer a fairer opportunity of supplying what has so long been desiderated by phrenologists—a correct model of our immortal poet's head: and in order to accomplish this in the most

* A report has been widely circulated, that, long before the present cast was obtained, the phrenologists had made an imaginary bust of Burns, and adduced it in support of their doctrines. *Nothing can be more unfounded.* The report has been contradicted in a number of the Scotch newspapers: but the English press, which widely copied the story as an excellent joke against the phrenologists, has not in general been so candid as to insert the contradiction. Many of our friends, as well as enemies, are consequently full of astonishment at the folly and bad faith of the Scotch phrenologists!

accurate and satisfactory manner, every particle of sand, or other foreign body, was carefully washed off, and the plaster of Paris applied with all the tact and accuracy of an experienced artist. The cast is admirably taken, and cannot fail to prove highly interesting to phrenologists and others.

"Having completed our intention, the skull, securely enclosed in a leaden case, was again committed to the earth precisely where we found it.

ARCHD. BLACKLOCK.

"DUMFRIES, 1st April 1834."

Before considering the particular faculties by which Burns was distinguished, it may be useful to offer a few observations on his head and character generally. In these preliminary remarks I shall advert, 1st, To the *general size* of his brain; 2dly, To its *quality and activity*; and, 3dly, To the *relative development of the three great divisions of the cerebral organs*—those of the animal, moral, and intellectual powers.

1. In GENERAL SIZE, the skull of Burns considerably surpasses the majority of Scottish crania; heads which, even undivested of the integuments, equal it in volume, being regarded by phrenologists as large. The following are the dimensions of the skull of Burns:

	Inches.		Inches.
Greatest circumference,	22½	From Ear to Firmness,	5½
From Occipital Spine to Individuality, over top of skull,	14	From Destructiveness to } Destructiveness,	5½
From Ear to Ear vertically over top of skull,	13	From Secretiveness to Secretiveness (greatest breadth),	5½
From Philoprogenitiveness to Individuality (greatest length)	8	From Cautiousness to Cautiousness,	5½
From Concentrativeness to Comparison,	7½	From Ideality to Ideality,	4½
From Ear to Philoprogenitiveness,	4½	From Constructiveness to Constructiveness,	4½
From Ear to Individuality,	4½	From Mastoid process to Mastoid process,	4½
From Ear to Benevolence,	5½		

During life, the circumference of Burns's head must have been about 24 inches, the length 8½, and the breadth 6½.

2. The QUALITY of the poet's brain was still more pre-eminent than its size. Its activity and intensity of action were indeed very remarkable. His temperament appears, from Nasmyth's portrait, but more particularly from the descriptions given of his person and the expression of his countenance, to have been bilious-sanguine or bilious-nervous (bilious predominating); both of which are accompaniments of great cerebral and muscular activity. "His form," says Dr Currie, "was one that indicated agility as well as strength. His well-raised forehead, shaded with black curling hair, indicated extensive capacity. His eyes were large, dark, full of ardour and intelligence.

His face was well formed, and his countenance uncommonly interesting and expressive. He was very muscular, and possessed extraordinary strength of body." Sir Walter Scott, who had the fortune to see Burns, gives the following account of the natural language of his features: "There was a strong expression of sense and shrewdness in all his lineaments; the eye alone, I think, indicated the poetical character and temperament. It was large and of a dark cast, which glowed (I say literally *glowed*) when he spoke with feeling or interest. I never saw such another eye in a human head, though I have seen the most distinguished men of my time*." Independently of temperament and expression, however, there is a sufficiency of direct evidence of the intense vivacity with which Burns's brain was capable of performing its functions. "Burns," says Currie, "had in his constitution the peculiarities and the delicacies that belong to the temperament of genius." "Endowed by nature with great sensibility of nerves, he was, in his corporeal as well as in his mental system, liable to inordinate impressions; to fever of body as well as of mind." To the same effect are the following remarks, from the pen of a female writer (understood to be Mrs Riddell), who knew him well. "I believe no man was ever gifted with a larger portion of the *vivida vis animi*: the animated expression of his countenance was almost peculiar to himself. The rapid lightnings of his eye were always the harbinger of some flash of genius, whether they darted the fiery glances of insulted and indignant superiority, or beamed with the impassionate sentiment of fervent and impetuous affections†." Burns, then, had a brain both large and active; and hence the *vivida vis*, in other words the activity and power, of his mind.

3. With respect to the RELATIVE DEVELOPMENT OF THE THREE GREAT DIVISIONS of the poet's brain. Heads, as is well known, are generally divided by phrenologists into three classes. The *first* includes those in which the organs of the propensities and lower sentiments predominate over the organs of the faculties peculiar to man; that is to say, where Amativeness, Combativeness, Destructiveness, Secretiveness, Acquisitiveness, Self-Esteem, Love of Approbation, and Cautiousness, or most of them, are larger than Benevolence, Conscientiousness, Veneration, Ideality, and the organs of Reflection. Heads in the *second* class are of an exactly opposite description, and indicate a preponderance of the moral feelings and reflective intellect. The *third* is composed of heads in which the two orders of organs are pretty equally balanced. A man whose head belongs to the

* Lockhart's Life of Burns, p. 114.

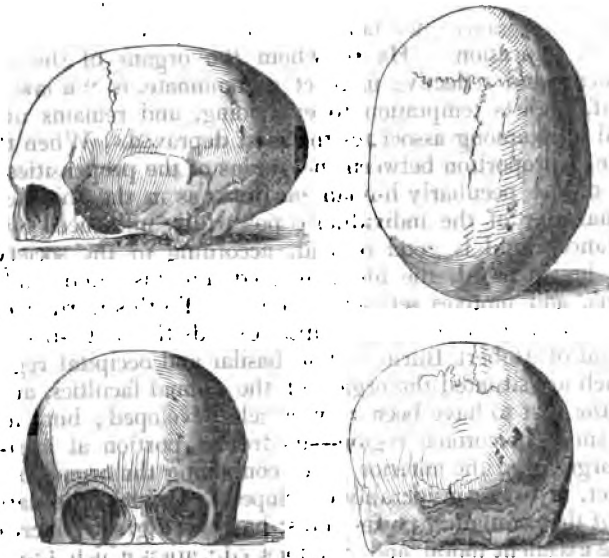
† Article originally published in the Dumfries Journal, and inserted in Currie's Life of Burns.

first of these classes is naturally endowed with base, selfish, and violent dispositions, and falls into vicious practices in spite of the best education. He in whom the organs of the moral sentiments and reflective intellect predominate, is "a law unto himself," resists temptation to evil doing, and remains uncorrupted even among associates the most depraved. When there is little disproportion between the organs of the propensities and those of the peculiarly human faculties, as in the third class, the character of the individual is powerfully influenced by circumstances, and is good or bad, according to the society in which he is trained, the ideas instilled into his mind, and the example and motives set before him*. To this third class—but with a slight leaning, perhaps, towards the first—belonged the head of Robert Burns. The basilar and occipital regions, in which are situated the organs of the animal faculties, appear from the cast to have been very largely developed; but, at the same time, the coronal region—its frontal portion at least—is also large; and the anterior lobe, containing the organs of the intellect, is very considerably developed. Besides, the natural force of the regulating powers must have been greatly increased by the excellent moral and religious education which the poet received. The following statement of the cerebral development indicated by the skull, shews the relative size of the individual organs; and the four views, though not perfectly accurate, will convey to the reader a sufficiently correct notion of the general appearance of the skull.

DEVELOPMENT OF THE ORGANS.

	Scale.		Scale.
1. Amativeness, rather large, . . .	16	18. Wonder, large, . . .	18
2. Philoprogenitiveness, very large, . . .	20	19. Ideality, large, . . .	18
3. Concentrativeness, large, . . .	18	20. Wit, or Mirthfulness, full, . . .	16
4. Adhesiveness, very large, . . .	20	21. Imitation, large, . . .	19
5. Combativeness, very large, . . .	20	22. Individuality, large, . . .	19
6. Destructiveness, large, . . .	18	23. Form, rather large, . . .	16
7. Secretiveness, large, . . .	19	24. Size, rather large, . . .	17
8. Acquisitiveness, rather large, . . .	16	25. Weight, rather large, . . .	16
9. Constructiveness, full, . . .	15	26. Colouring, rather large, . . .	16
10. Self-Esteem, large, . . .	18	27. Locality, large, . . .	18
11. Love of Approbation, very large, . . .	20	28. Number, rather full, . . .	12
12. Cautiousness, large, . . .	19	29. Order, full, . . .	14
13. Benevolence, very large, . . .	20	30. Eventuality, large, . . .	18
14. Veneration, large, . . .	18	31. Time, rather large, . . .	16
15. Firmness, full, . . .	15	32. Tune, full, . . .	14
16. Conscientiousness, full, . . .	15	33. Language, uncertain, . . .	
17. Hope, full, . . .	14	34. Comparison, rather large, . . .	17
		35. Causality, large, . . .	18

* It may be necessary to apologize for the frequency with which this classification of heads is repeated in our pages. Without such repetition, many of our occasional readers would find the meaning obscure.—Ed.



It is in cases like the present that those apparent contradictions of character, which were so puzzling before the discovery of Phrenology, occur. Individuals so constituted exhibit opposite phases of disposition, according as the animal or the human faculties happen to have the ascendancy. In the heat of passion they do acts which the higher powers afterwards loudly disapprove, and may truly be said to pass their days in alternate sinning and repenting. With them the spirit is often willing, but the flesh is weak. Their lives are embittered by the continual struggle between passion and morality; and while, on the one hand, they have qualities which inspire love and respect, they are, on the other, not unfrequently regarded, even by their friends and admirers, with some degree of suspicion and fear. In treating of this species of character, in an essay read to the Edinburgh Ethical Society last winter, I adduced, as illustrations of it, the cases of Samuel Johnson and Robert Burns; and the cast now under consideration shews that, with respect to the latter, my estimate was not at fault. The mind of Burns was indeed a strange compound of noble and debasing qualities. "In large and mixed parties," says Dr Currie, "he was often silent and dark, sometimes fierce and overbearing; he was jealous of the proud man's scorn, jealous to an extreme of the insolence of wealth, and prone to avenge, even on its innocent possessor, the partiality of fortune. By nature kind, brave, sincere, and in a singular degree compassionate, he was, on the other hand, proud, irascible, and vindictive. His virtues and his failings

had their origin in the extraordinary sensibility of his mind,* and equally partook of the chills and glows of sentiment. His friendships were liable to interruption from jealousy or disgust, and his enmities died away under the influence of pity or self-accusation."

Throughout the correspondence of Burns, as well as in his poems, many allusions to the internal struggle in his mind are to be found. In a prayer written in the prospect of death, the strength of his passions is thus adverted to:—

" O Thou, Great Governor of all below !
If I may dare a lifted eye to Thee,
Thy nod can make the tempest cease to blow,
Or still the tumult of the raging sea ;
With that controlling pow'r assist ev'n me,
Those headlong furious passions to confine ;
For all unfit I feel my power to be,
To rule their torrent in th' allowed line :
O, aid me with thy help, Omnipotence Divine !"

It appears, then, that none of the regions of Burns's brain was, in relation to the others, deficient ; its total size, we have also seen, was great, and its activity was very extraordinary. Hence the force of character for which he was remarkable ; the respect which men instinctively paid him ; the strong impression which he has made upon the public mind ; the impressiveness and originality of his conversation ; the dread which his resentment inspired ; and the native dignity with which he took his place among the more learned and polished, but less gifted, literary men of his day. With a small or lymphatic brain, such things would have been altogether impossible. " In conversation," says Professor Walker, " he was powerful. His conceptions and expression were of corresponding vigour, and on all subjects were as remote as possible from common places." The same author relates a very characteristic incident, which took place before Burns had come before the public. " Though Burns," says he, " was still unknown as a poet, he already numbered several clergymen among his acquaintance : one of these communicated to me a circumstance which conveyed more forcibly than many words, an idea of the impression made upon his mind by the powers of the poet. This gentleman had repeatedly met Burns in company, when the acuteness and originality displayed by the latter, the depth of his discernment, the force of his expressions, and the authoritative energy of his understanding, had created in the former a sense of his power, of the extent

* This is a good specimen of the old method of accounting for mental phenomena. Sensibility only adds to the activity of existing faculties ; and from these faculties it is that virtues and vices take their origin. Sensibility is sometimes accompanied by eminent virtue, sometimes by strong passions, and sometimes, as in the case of Burns, by a mixture of both. Hence, some other cause than sensibility must be looked for.

of which he was unconscious till it was revealed to him by accident. The second time that he appeared in the pulpit, he came with an assured and tranquil mind; and though a few persons of education were present, he advanced some length in the service, with his confidence and self-possession unimpaired. But when he observed Burns, who was of a different parish, unexpectedly enter the church, he was instantly affected with a tremor and embarrassment, which apprized him of the impression his mind, unknown to himself, had previously received.* The Professor adds that this preacher was not only a man of good talents and education, but "remarkable for a more than ordinary portion of constitutional firmness."

Professor Dugald Stewart has thus recorded the impression made by Burns upon him. "The idea which his conversation conveyed of the powers of his mind exceeded, if possible, that which is suggested by his writings. Among the poets whom I have happened to know, I have been struck in more than one instance with the unaccountable disparity between their general talents and the occasional inspirations of their more favoured moments. But all the faculties of Burns's mind were, as far as I could judge, equally vigorous; and his predilection for poetry was rather the result of his enthusiastic and impassioned temper, than of a genius exclusively adapted to that species of composition. From his conversation, I should have pronounced him to be fitted to excel in whatever walk of ambition he had chosen to exert his abilities."

I now proceed to compare the development of the individual organs with the strength of the corresponding faculties.

Amativeness is well developed. The cerebellum appears to have had considerable latitudinal and longitudinal dimensions; but as it does not seem to have been proportionally deep, I estimate the size of the organ at "rather large." Adhesiveness is superior to it, and is stated as "very large." Ideality also is great. If to all this we add the extreme susceptibility of the poet's brain, we shall have no difficulty in perceiving the source of the strong attachments which he formed, especially to individuals of the other sex,—his enthusiastic admiration of the latter,—his ardent patriotism,—and the tenderness and affection embodied in his songs. "Notwithstanding," says he, "all that has been said against love, respecting the folly and weakness it leads a young inexperienced mind into, still I think it in a great measure deserves the highest encomiums that have been passed upon it. If any thing on earth deserves the name of rapture and transport, it is the feelings of green eighteen in the company of the mistress of his heart, when she repays him with an equal

* Life prefixed to Morrison's Burns, p. 45.

return of affection." Gilbert Burns states, that in early youth Robert was bashful and awkward in his intercourse with women, but that "when he approached manhood his attachment to their society became very strong, and he was constantly the victim of some fair enslaver. The symptoms of his passion," adds Gilbert, "were often such as nearly to equal those of the celebrated Sappho. I never, indeed, knew that he *fainted, sank, and died away*; but the agitations of his mind and body exceeded any thing of the kind I ever knew in real life."

In conformity with the views of Mr William Scott*, who regards Adhesiveness as "the centre of true affection," and Amativeness as an auxiliary though indispensable element in the passion of love, I conceive that, in the loves of Burns, Adhesiveness was a stronger ingredient than Amativeness—the influence of which also, however, was certainly important. Notwithstanding the licentious tone of some of his early pieces, we are assured by himself (and his brother unhesitatingly confirms the statement), that no positive vice mingled in any of his love adventures until he had reached his twenty-third year. Considerable alteration was produced on his mind and manners by a residence for several months on a smuggling coast, where he mingled without reserve in scenes of riot and dissipation. In 1781–2, he spent six months at Irvine, where, to use the words of Gilbert, "he contracted some acquaintance of a freer manner of living and thinking than he had been used to, whose society prepared him for overleaping the bounds of rigid virtue which had hitherto restrained him." Subsequently to this time, he indulged the propensity with some freedom; but I do not believe that in this respect he differed from young men in general at the same period, and in the same or perhaps any station of life. I have little doubt that Love of Approbation and Secretiveness, which are largely developed, essentially contributed to augment the number of his love adventures, Secretiveness delights in concealment, intrigue, and stolen interviews, and, combined with Individuality, gives tact and *savoir faire*. Its organ was certainly one of the largest in the brain of Burns, and in love affairs the tendency found abundant gratification. "A country lad," he says, "seldom carries on a love adventure without an assisting confidant. I possessed a curiosity, zeal, and intrepid dexterity, that recommended me as a proper second on these occasions; and I daresay I felt as much pleasure in being in the secret of half the loves of the parish of Tarbolton, as ever did statesman in knowing the intrigues of half the courts of Europe †."

* Phren. Journ. vol. III. p. 82.

† The consequences of these adventures, says Lockhart, "are far, very far, more frequently quite harmless than persons not familiar with the peculiar manners and feelings of our peasantry may find it easy to believe."—*Life*, p. 33.

It may be thought that the grossness of Burns's unpublished correspondence indicates a still greater development of Amativeness than that which appears from the skull. In judging, however, of these letters, and drawing inferences from their language, it is very necessary, as Mr. Lockhart acutely remarks, "to take into consideration the rank and character of the persons to whom they are severally addressed, and the measure of intimacy which really subsisted between them and the poet. In his letters, as in his conversation, Burns, in spite of all his pride, did something to accommodate himself to his company." (Lockhart, p. 185.) It seems highly probable, that while composing these letters, and also certain of his songs, the poet, instead of giving vent to his actual feelings, rather had his eye upon the roar of laughter and applause expected from the circle of his jovial and licentious acquaintances. Finally, the effects of frequent carousing on the activity of the cerebellum, ought to be kept in view.

Philoprogenitiveness is very large, and the poet's affection for his children was proportionally strong. It was Philoprogenitiveness that formed the chief obstacle to his emigration to America. In one of his letters, after enumerating the various motives by which he was impelled to leave Scotland, he adds, "All these reasons urge me to go abroad, and to all these reasons I have only one answer—the feelings of a father. This, in the present mood I am in, overbalances every thing that can be laid in the scale against it." He dreaded poverty more on account of his wife and children than for his own sake; and the prospect of leaving them destitute gave him many uneasy reflections. "There had much need," he writes to Mrs. Dunlop, "be many pleasures annexed to the states of husband and father, for God knows, they have many peculiar cares. I cannot describe to you the anxious sleepless hours these ties frequently give me. I see a train of helpless little folks; me and my exertions all their stay; and on what a brittle thread does the life of man hang! If I am nipt off at the command of fate, even in all the vigour of manhood as I am—such things happen every day—gracious God! what would become of my little flock! 'Tis here that I envy you people of fortune."

The Rev. James Gray, rector of the Dumfries Academy, and afterwards one of the masters in the High School of Edinburgh, states, in a letter to Gilbert Burns, that Robert "was a kind and attentive father, and took great delight in spending his evenings in the cultivation of the minds of his children."—(Lockhart, p. 244.)

The organ of Combativeness is also very large. Burns, along with much Cautiousness, had a strong endowment of courage. In the course of his duty as an exciseman, he on one occasion headed some dragoons, waded sword in hand to a smuggling brig on the shore of Solway Firth, and was the first to board

her. The crew lost heart and submitted, though their numbers were greater than those of the assailing force. (Lockhart, p. 219.) Combativeness was one of the elements in his irritability of temper. It made him also naturally inclined to disputation, and impatient of contradiction. "He was more disposed," says Allan Cunningham, "to contend for victory than to seek for knowledge. The debating club of Tarbolton was ever strong within him; a fierce lampoon, or a rough epigram, was often the reward of those who ventured to contradict him. His conversation partook of the nature of controversy, and he urged his opinions with a vehemence amounting to fierceness. All this was natural enough, when he was involved in argument with the boors around him; but he was disposed, when pressed in debate, to be equally discourteous and unsparing to the polite and the titled." (P. 349.) The conspicuous part which Burns took in the theological warfare between the partizans of the New and Old Light doctrines is well known. This polemical spirit continued with him through life. "When in the company of the demure and the pious, he loved to start doubts in religion, which he knew nothing short of inspiration could solve; and to speak of Calvinism with such latitude of language as shocked or vexed all listeners." (Cunningham, p. 352.) He was likewise a keen politician, wrote electioneering songs, and injured his worldly prospects by too freely giving vent to his sentiments.

Combativeness, when very large, impels its possessor to adopt a line of conduct contrary to that which he may be advised or requested to follow; and with Burns it produced its usual effect. An amusing illustration is mentioned by Mr Lockhart. When riding one dark night near Carron, his companion teased him with noisy exclamations of delight and wonder, whenever an opening in the wood permitted them to see the magnificent glare of the furnaces: "Look, Burns! good Heaven! look! look! what a glorious sight!"—"Sir," said Burns, clapping spurs to his mare, "I would not *look, look* at your bidding, if it were the mouth of hell."

From the earliest youth, as his brother Gilbert informs us, he was not amenable to counsel; a circumstance which often produced much irritation between him and his father. In childhood he delighted in perusing narratives of martial achievements. "The two first books I ever read in private," he says, "and which gave me more pleasure than any two books I ever read since, were *The Life of Hannibal*, and *The History of Sir William Wallace*. Hannibal gave my young ideas such a turn, that I used to strut in raptures up and down after the recruiting drum and bagpipe, and wish myself tall enough to be a soldier; while the story of Wallace poured a Scottish prejudice

into my veins, which will boil along there till the flood-gates of life shut in eternal rest."

The effects of the large Destructiveness of Burns were very conspicuous. From this, and Self Esteem, arose that vindictive and sarcastic spirit which formed one of his chief failings. In one of his letters, he speaks of the "dirty sparks of malice and envy which are but too apt to invest me;" and in an unpublished piece, he alludes to the terror excited by

———" Burns's venom, when
He dips in gall unmixed his eager pen,
And pours his vengeance in the burning line."

Even those who unwittingly put him to inconvenience sometimes fell under his lash. Having come, during an excursion in Ayrshire, to an inn where he used to lodge, but which he on that occasion found entirely occupied by mourners conveying the body of a lady to a distant place of interment, he gave vent to his spleen in a lampoon full of bitterness:

" Dweller in yon dungeon dark,
Hangman of creation, mark
Who in widowed weeds appears
Laden with unhonoured years.
Note that eye—'tis rheum o'erflows—
Pity's flood there never rose:
See those hands, ne'er stretched to save;
Hands that took, but never gave."

"In these words," says Allan Cunningham, "and others bitterer still, the poet avenged himself on the memory of a frugal and respectable lady, whose body unconsciously deprived him of a night's sleep." (P. 218.).

Respecting Burns's Acquisitiveness a few words are necessary. According to his own description, he was "a man who had little art in making money, and still less in keeping it." That his art in making money was sufficiently moderate, there can be no doubt; for he was engaged in occupations which his soul loathed, and thought it below the dignity of genius to accept of pecuniary remuneration for some of his most laborious literary performances. He was, however, by no means insensible to the value of money, and never recklessly threw it away. On the contrary, he was remarkably frugal, except when feelings stronger than Acquisitiveness came into play—such as Benevolence, Adhesiveness, and Love of Approbation; the organs of all of which are *very large*, while Acquisitiveness is only *rather large*. During his residence at Mossgiel, where his annual revenue was not more than L. 7, his expenses, as Gilbert mentions, "never, in any one year, exceeded his slender income." It is well known also, that he did not leave behind him a shilling of debt; and I have learned from good authority, that his household was much more frugally managed at Dumfries than at Ellisland,—

as in the former place, but not in the latter, he had it in his power to exercise a personal control over the expenditure. I have been told also, that after his death the domestic expenses were greater than while he was alive. These facts are all consistent with a considerable development of Acquisitiveness; for when that organ is small, there is habitual inattention to pecuniary concerns, even although the love of independence, and dislike to ask a favour, be strong. The indifference with respect to money, which Burns occasionally ascribes to himself, appears therefore to savour of affectation; a failing into which he was not unfrequently led by Love of Approbation and Secretiveness. Indeed, in one of his letters to Miss Chalmers, he expressly intimates a wish to be rich."

Burns, as we have already seen, was in common silent and reserved. This resulted chiefly from large Secretiveness. His appearance, on the occasion of a visit by Mr Mackenzie, was very characteristic. "The poet," says that gentleman, "seemed distant, suspicious, and without any wish to interest or please. He kept himself very silent in a dark corner of the room, and before he took any part in conversation, I frequently observed him scrutinizing me, while I conversed with his father and his brother."—(Cunningham, p. 61.) His love adventures, above noticed, furnish another illustration. Sometimes also, like Sir Walter Scott, whose Secretiveness was no way inferior to his, he disowned the authorship of his productions. "Burns," says Cromek, "sometimes wrote poems in the old ballad style, which, for reasons best known to himself, he gave to the world as songs of the *olden time*. That famous soldier's song, in particular, first printed in a letter to Mrs Dunlop, beginning, 'Go fetch to me a pint of wine,' has been pronounced by some of our best living poets, an inimitable relique of some ancient minstrel! Yet I have discovered it to be the actual production of Burns himself. The ballad of *Auld Langsyne* was also introduced in this ambiguous manner, though there exist proofs that the two best stanzas of it are indisputably his; hence there are strong grounds for believing this poem also to be his production, notwithstanding the evidence to the contrary. It was found among his MSS. in his own handwriting, with occasional interlineations, such as occur in all his primitive effusions."—(Reliques, p. 112.) Secretiveness is a chief ingredient in humour, of which Burns possessed a distinguished share.

Self-Esteem was a very prominent quality in the character of Burns. The organ is largely developed, and, besides partaking of the general activity of his brain, was peculiarly stimulated by adverse circumstances, and the painful consciousness that his station in life was not that to which his talents made him

entitled. Self-esteem, in fact, was a chief source of the annoyances which embittered his days. "There are," he says in his common-place book, "There are few of the sore evils under the sun give me more uneasiness and chagrin than the comparison how a man of genius, nay of avowed worth, is received every where, with the reception which a mere ordinary character, decorated with the trappings and futile distinctions of fortune, meets. I imagine a man of abilities, his breast glowing with honest pride, conscious that men are born equal, still giving honour to whom honour is due; he meets, at a great man's table, a Squire Something, or a Sir Somebody; he knows the noble landlord, at heart, gives the hard, or whatever he is, a share of his good wishes, beyond, perhaps, any one at table; yet how will it mortify him to see a fellow, whose abilities would scarcely have made an *eightpenny tailor*, and whose heart is not worth three farthings, meet with attention and notice, that are withheld from the son of genius and poverty? The noble Glencairn," he adds, "has wounded me to the soul here; because I dearly esteem, respect, and love him. He shewed so much attention—engrossing attention—one day, to the only blockhead at table, (the whole company consisted of his lordship, dunderpate, and myself), that I was within half a point of throwing down my gage of contemptuous defiance." Again, in a letter to Mrs Dunlop, he says; "When I must skulk in a corner, lest the rattling equipage of some gaping blockhead should mangle me in the mire, I am tempted to exclaim, 'What merits has he had, or what demerit have I had, in some state of pre-existence, that he is ushered into this state of being with the sceptre of rule and the key of riches in his puny fist, and I am kicked into this world, the sport of folly, or the victim of pride?'" It was under the influence of such feelings that he composed his song "For a' that and a' that," every line of which is an ebullition of Self-esteem. He had an intense admiration of Smollett's Ode to Independence, and hated, above all things, to lie under an obligation. "One of the principal parts in my composition," he writes to his teacher Murdoch, "is a kind of pride of stomach, and I scorn to fear the face of any man living: above every thing, I abhor as hell the idea of sneaking in a corner to avoid a dun—possibly some pitiful sordid wretch, whom, in my heart, I despise and detest." It was his powerful Self-esteem and Combativeness, along with great general size of brain, that gave him that coolness and self-possession in the company of men far above his station, which various authors have remarked with surprise: His manners in that society were, as Professor Stewart notices, "strongly expressive of conscious genius and worth."

Love of Approbation was still more powerful than Self-esteem. Burns was greedy of fame and applause, and extremely annoyed by disapprobation. This was one of the strongest motives by which he was actuated. His cogitations before printing the first edition of his poems, and when he had the full intention of emigrating to Jamaica, are thus recorded by himself:—"Before leaving my native country for ever, I resolved to publish my poems. I weighed my productions as impartially as was in my power: I thought they had merit; and it was a delicious idea that I should be called a clever fellow, even though it should never reach my ears." He writes to Mrs Dunlop: "I am fully persuaded that there is not any class of mankind so feelingly alive to the titillations of applause as the sons of Parnassus; nor is it easy to conceive how the heart of the poor bard dances with rapture, when those whose character in life gives them a right to be polite judges, honour him with their approbation." In another letter, the following remark occurs:—"I have a little infirmity in my disposition, that where I fondly love or highly esteem, I cannot bear reproach." He might have added that advice was almost equally intolerable. Mr Robert Riddell, one of his friends, mentions that the poet often lamented to him that fortune had not placed him at the bar or in the senate: "He had great ambition," says Mr Riddell, "and the feeling that he could not gratify it preyed upon him severely."—(Cunningham's Life, p. 350.) "He was far from averse," says the female writer already quoted, "to the incense of flattery, and could receive it tempered with less delicacy than might have been expected." The apologies with which his letters abound, shew how desirous he was to retain the good opinion of his friends; and the anxiety which he manifested respecting his posthumous reputation was very great. "My honest fame," he says, "is my dearest concern, and a thousand times have I trembled at the idea of the degrading epithets that malice or misrepresentation may affix to my name." This letter is so well known that it is unnecessary to quote farther. One additional illustration of Burns's love of notoriety—from "The Poet's Welcome to an Illegitimate Child"—may be given:—

"The mair they talk, I'm ken'd the better;
E'en let them clash!"

Cautiousness is much larger than Hope; in consequence of which circumstance, joined to delicate health, external misfortunes, and the raging of passions within, Burns was afflicted by constitutional melancholy, or liability to *blue devils*. His teacher Murdoch records that, in youth, "Robert's countenance was generally grave, and expressive of a serious, contemplative, and thoughtful mind;" and Allan Cunningham, who lived

near him at Ellisland, mentions that "his face was deeply marked by thought, and the habitual expression intensely melancholy." "My constitution and frame," says Burns himself, "were, *ab origine*, blighted with a deep, indelible taint of hypochondria, which predisposes my existence to it. And again, in a letter to Mrs. Dunlop: "There is a foggy atmosphere native in my soul in the hour of care; consequently the dearest objects seem larger than life. He always looked forward with fond anticipations to the future, and dreaded a time when he should return to his primitive obscurity. The temperament of genius, it may be remarked, adds strength to the causes of hypochondria; for, by the laws of physiology, every transport of inspiration is followed by a corresponding depression of mind.

The organ of Benevolence is very largely developed. This feeling was strong in Burns, and was one of his grand redeeming virtues. Its effusions frequently occur in his correspondence. In a letter to Mr. Hill, he says of "Mankind" as by nature benevolent creatures: "There are in every age a few souls that all the wants and woes of life cannot debase to selfishness, or even to the necessary ally of caution and prudence. If I am in danger of vanity, it is when I contemplate myself on this side of my disposition and character. God knows I am no saint; I have a whole host of sins and follies to answer for; but if I could, and I believe I do it as far as I can, I would wipe away all tears from all eyes." Professor Stewart says: "I never collect he once told me, when I was admiring a distant prospect in one of our morning walks, that the sight of so many smoking cottages gave a pleasure to his mind, which none could understand who had not witnessed, like himself, the happiness and the worth which they contained." "His charities," says Mr. Gray, "were great beyond his means." In particular, he showed great kindness to the harmless imbecile creatures about Dumfries. (See Cunningham, p. 271.) It is believed by some phrenologists,* that Philoprogenitiveness gives sympathy for weak and helpless objects in general, and directs Benevolence in an especial manner to these. The doctrine certainly receives confirmation from the head of Burns. He could not bear to see a bird robbed of her young; he spared and bewailed the fate of the mouse whose dwelling was upturned by his plough; and the verses written on seeing a wounded hare pass by, are expressive of the strongest compassion. His feelings on the latter occasion were a remarkable combination of Benevolence and Destructiveness; two feelings which, though antagonists, by no means neutralize each other, but may be simultaneously in a state of high excitement. The poem is compounded of the language of imprecation and pity, in almost equal proportions:—

* Phren. Journ. ii. 495, 499, and viii. 394.

The portrait of Burns seems to indicate a large development of Firmness; but in the cast of his skull, the organ has by no means a marked appearance. A large development of Firmness gives a tendency to persist in purpose, opinion, and conduct. From its activity result perseverance, steadiness, and resolution. So far as I am able to judge, Burns was rather deficient in those qualities. "The fervour of his passions," says Mrs. Riddell, "was fortunately tempered by their versatility. He was seldom, never indeed, implacable in his resentments; and sometimes, it has been alleged, not inviolably steady in his engagements of friendship. Much, indeed, has been said of his inconstancy and caprices." The rapidity with which his schemes were generally abandoned, may justly be regarded as an illustration of this feature of his character. A letter from Dr Blacklock, for example, received when he was on the road to Greenock, with the intention of sailing to Jamaica, instantly overthrew his plans, and sent him with almost breathless speed to Edinburgh. He had just written to a friend, "Against two things I am fixed as fate, —staying at home, and owning Jean conjugally. The first, by heaven, I will not do! —the last, by hell, I will never do!" Yet, when the lovers met, the second of these "*fixed*" resolutions terminated by his giving Jean a written acknowledgment of their marriage! —Firmness is of great use in enabling men of strong passions to withstand their cravings for indulgence, and reduce virtuous resolutions to practice. Burns was certainly not distinguished here.

Conscientiousness is in nearly the same condition as Firmness. This feeling was well cultivated in youth by his father, who was a very sagacious, honest, intelligent, and pious man. It was quite sufficient to render him honest and candid when no contending impulse was present; and also to make him aware of his imperfections; but it wanted power to restrain the vehemence of his lower feelings within the bounds of candour and justice. "There is nothing in the whole frame of man," he says, "which seems to me so unaccountable as that thing called conscience. Had the troublesome yelping cur powers efficient to prevent a mischief, he might be of use; but, at the beginning of the business, his feeble efforts are to the workings of passion as the infant frosts of an autumnal morning to the unclouded fervour of the rising sun; and no sooner are the tumultuous doings of the wicked deed over, than, amidst the bitter native consequences of folly, in the very vortex of our horrors, up starts conscience, and harrows us with the feelings of the damned."

Ideality—the principal organ of poetical feeling—is large; though, as might have been anticipated from the degree in which he manifested most of the intellectual faculties, it is equalled in size by many of the other organs. Burns's

love of the sublime and beautiful was very strong. His temperament was that which is best adapted for the experience of poetical feeling. He was passionately fond of the beauties of nature, but it was in the dreary, solemn, desolate sublime that he seems to have delighted most. Such a taste I have repeatedly found possessed by individuals with large Destructiveness, Cautiousness, and Ideality, moderate Hope, and a susceptible temperament. Burns was especially fond of the season of winter. "This, I believe," says he, "may be partly owing to my misfortunes giving my mind a melancholy cast; but there is something even in the

'Mighty tempest and the hoary waste,
Abrupt and dead, stretched o'er the buried earth,'—

which raises the mind to a serious sublimity, favourable to every thing great and noble.* There is scarcely any earthly object gives me more—I do not know if I should call it pleasure—but something which exalts me, something which enraptures me,—than to walk in the sheltered side of a wood or high plantation, in a cloudy winter day, and hear the stormy wind howling among the trees, and raving over the plain. It is my best season for devotion: my mind is wrapped up in a kind of enthusiasm to Him, who, in the pompous language of the Hebrew bard, 'walks on the wings of the wind.' The enthusiasm here mentioned results from activity of Ideality, Wonder, and Veneration. Addison's *Vision of Mirza*, a production full of Ideality, captivated Burns, as he himself tells us, "before he was capable of fixing an idea to a word of three syllables." In many of his poems, but particularly the Address to Mary in Heaven, he manifests a degree of Ideality which contrasts strongly with the coarseness of his satirical effusions, produced under the influence of far different feelings.

Burns was less remarkable for wit than for humour. The former is well described by Lockhart as a "peculiar vein of sly homely wit." Humour depends on the organs of Secretiveness,

* In the *Vision*, Burns makes Coila address him as follows:—

"I saw thee seek the sounding shore,
Delighted with the dashing roar;
Or when the north his fleecy store
Drove through the sky,
I saw grim Nature's visage hoar
Struck thy young eye."

The next stanza refers to the poet's benevolence:—

"Or when the deep-green mantled earth
Warm cherished every flow'et's birth,
And joy and music pouring forth
In every grove,
I saw thee eye the general mirth
With boundless love."

The portrait of Burns seems to indicate a large development of Firmness; but in the east of his skull, the organ has by no means a marked appearance. A large development of Firmness gives a tendency to persist in purpose, opinion, and conduct. From its activity result perseverance, steadiness, and resolution. So far as I am able to judge, Burns was rather deficient in those qualities. "The fervour of his passions," says Mrs. Riddell, "was fortunately tempered by their versatility." He was seldom, never indeed, implacable in his resentments; and sometimes, it has been alleged, not inviolably steady in his engagements of friendship. Much, indeed, has been said of his inconstancy and caprices. The rapidity with which his schemes were generally abandoned, may justly be regarded as an illustration of this feature of his character. A letter from Dr Blacklock, for example, received when he was on the road to Greenock, with the intention of sailing to Jamaica, instantly overthrew his plans, and sent him with almost breathless speed to Edinburgh. He had just written to a friend, "Against two things I am fixed as fate, —staying at home, and owning Jean conjugally. The first, by heaven, I will not do! —the last, by hell, I will never do!" Yet, when the lovers met, the second of these "fixed" resolutions terminated by his giving Jean a written acknowledgment of their marriage! —Firmness is of great use in enabling men of strong passions to withstand their cravings for indulgence, and reduce virtuous resolutions to practice. Burns was certainly not distinguished here.

Conscientiousness is in nearly the same condition as Firmness. His feeling was well cultivated in youth by his father, who was a very sagacious, honest, intelligent, and pious man. It was quite sufficient to render him honest and candid when no contending impulse was present, and also to make him aware of his imperfections; but it wanted power to restrain the vehemence of his lower feelings within the bounds of candour and justice. "There is nothing in the whole frame of man," he says, "which seems to me so unaccountable as that thing called conscience. Had the troublesome yelping cur powers efficient to prevent a mischief, he might be of use; but, at the beginning of the business, his feeble efforts are to the workings of passion as the infant frosts of an autumnal morning to the unclouded fervour of the rising sun; and no sooner are the tumultuous doings of the wicked deed over, than, amidst the bitter native consequences of folly, in the very vortex of our horrors, up starts conscience, and harrows us with the feelings of the damned."

Ideality—the principal organ of poetical feeling—is large; though, as might have been anticipated from the degree in which he manifested most of the intellectual faculties, it is equalled in size by many of the other organs. Burns's

love of the sublime and beautiful was very strong. His temperament was that which is best adapted for the experience of poetical feeling. He was passionately fond of the beauties of nature, but it was in the dreary, solemn, desolate sublime that he seems to have delighted most. Such a taste I have repeatedly found possessed by individuals with large Destructiveness, Cautiousness, and Ideality, moderate Hope, and a susceptible temperament. Burns was especially fond of the season of winter. "This, I believe," says he, "may be partly owing to my misfortunes giving my mind a melancholy cast; but there is something even in the

'Mighty tempest and the hoary waste,
Abrupt and dead, stretched o'er the buried earth,'—

which raises the mind to a serious sublimity, favourable to every thing great and noble.* There is scarcely any earthly object gives me more—I do not know if I should call it pleasure—but something which exalts me, something which enraptures me,—than to walk in the sheltered side of a wood or high plantation, in a cloudy winter day, and hear the stormy wind howling among the trees, and raving over the plain. It is my best season for devotion: my mind is wrapped up in a kind of enthusiasm to Him, who, in the pompous language of the Hebrew bard, 'walks on the wings of the wind.' The enthusiasm here mentioned results from activity of Ideality, Wonder, and Veneration. Addison's *Vision of Mirza*, a production full of Ideality, captivated Burns, as he himself tells us, "before he was capable of fixing an idea to a word of three syllables." In many of his poems, but particularly the Address to Mary in Heaven, he manifests a degree of Ideality which contrasts strongly with the coarseness of his satirical effusions, produced under the influence of far different feelings.

Burns was less remarkable for wit than for humour. The former is well described by Lockhart as a "peculiar vein of sly homely wit." Humour depends on the organs of Secretiveness,

* In the *Vision*, Burns makes Colla address him as follows:—

"I saw thee seek the sounding shore,
Delighted with the dashing roar;
Or when the north his fleecy store
Drove through the sky,
I saw grim Nature's visage hoar
Struck thy young eye."

The next stanza refers to the poet's benevolence:—

"Or when the deep-green mantled earth
Warm cherished every flow'ret's birth,
And joy and music pouring forth
In every grove,
I saw thee eye the general mirth
With boundless love."

Mirthfulness, and Individuality; while wit is more exclusively connected with the second organ. The poet had little gaiety of disposition about him, except when stimulated by society or otherwise. "His wit," says Professor Stewart, "was ready, and always impressed with the marks of a vigorous understanding; but to my taste, not often pleasing or happy."

Imitation is large. I am not aware whether Burns indulged in mimicry; but certainly he had a tendency to imitate the style of such books as he was very familiar with. He was a successful imitator of the old songs of Scotland. Imitation conferred on him also the dramatic power which characterizes some of his humorous productions, such as *The Turn Dogs*, *The Hilly Fair*, *The Jolly Beggar*, and also many of his songs. He had an extraordinary tact in assuming for a time the feelings of individuals—identifying himself with them—and giving expression to those feelings in forcible and striking language. The great excellence of his songs consists in the admirable adaptation of the words to the tune. "When his soul," says Sir Walter Scott, "was intent on suiting a favourite air to words humorous or tender, as the subject demanded, no poet of our tongue ever displayed higher skill in marrying melody to immortal verse." For these talents, Imitation is believed to be indispensable.

The intellect of Burns was of a high order. He was not indeed on a level with such men as Bacon, Shakspeare, or Franklin; but his understanding was nevertheless one of unusual power. The anterior lobe projects much forward, and the frontal sinus probably did not exceed the ordinary size. Individuality seems to have been the largest of the intellectual organs. From this, and Eventuality, which is very little inferior to it, originated the remarkable acuteness of his observation, and the vividness of his descriptions. There is nothing general in the pictures which he draws: every object is given with a distinctness and detail which make us almost imagine that the scene itself is before our eyes. Burns's love of knowledge was very strong, and had the same origin. In youth, as his brother Gilbert relates, he read such books as he could procure, "with an avidity and industry scarcely to be equalled." "No book," it is added, "was so voluminous as to slacken his industry, or so antiquated as to damp his researches." His penetration into the feelings and motives of others arose from Individuality and Secretiveness, joined to the strength of his own faculties in general. The first gave readiness in noticing and remembering facts; the second enabled him to dive beneath external appearances; and the third furnished the consciousness, and hence the full comprehension, of every faculty which actuates mankind.

There are several of the perceptive faculties, of the manifes-

tations of which I am entirely ignorant. He was fond of travelling, and of visiting scenes renowned in history and song. "I have no dearer aim," he tells Mrs Dunlop, "than to have it in my power, unplagued with the routine of business, for which Heaven knows I am unfit enough, to make leisurely pilgrimages through Caledonia; to sit on the fields of her battles; to wander on the romantic banks of her rivers; and to muse by the stately towers, or venerable ruins, once the honoured abodes of her heroes." This wish he afterwards in some measure accomplished. Its principal source was his powerful Locality. By means of the same faculty, he "made a good progress" at school in mensuration, surveying, and dialling.

The organ of Tune is full; but I have experienced difficulty in judging of his musical capacity. His teacher mentions that, in childhood, he could hardly distinguish one psalm-tune from another; but it is evident that, at a later period, he was fully alive to the beauty of the sacred music of Scotland. This is proved by the manner in which he alludes to the subject, in *The Cotter's Saturday Night*:

"Perhaps Dundee's wild warbling measures rise;
Or plaintive *Morrigs*, worthy of the name;
Or noble *Elgin* beats the heartward flame,
The sweetest far of Scotia's holy lays:
Compared with these, Italian thrills are tame;
The tickled ears no heart-felt raptures raise;
None unshun hae they with our Creator's praise."

Though Burns had no taste for the mere technicalities of music, he was fond of the simple and the expressive. "My pretensions to musical taste," he writes to Mr. Thompson, "are merely a few of nature's instincts, untaught and untutored by art. For this reason, many musical compositions, particularly where much of the merit lies in counterpoint, however they may transport and ravish the ears of your connoisseurs, affect my simple lug no otherwise than merely as melodious din. On the other hand, by way of amends, I am delighted with many little melodies which the learned musician despises as silly and insipid." I shall not pretend to say whether the taste of Burns or that of the connoisseurs was the better. The development of the organ of Tune, though not great, is, I think, sufficient to have enabled him to display, after due cultivation, a very respectable amount of musical talent. The faculty, however, was entirely neglected.

Respecting Comparison and Causality I have nothing to remark, except that they are indispensable ingredients in a character so sagacious as that of Burns. There is something ludicrous in the surprise of Dugald Stewart, at the distinct conception which Burns formed of the general principles of association, from a

perusal of Alison's work on Taste. The poet's letter to Mr Alison, on this subject, deserves to be quoted. "I own, sir, that, at first glance, several of your propositions startled me as paradoxical. That the martial clangour of a trumpet had something in it vastly more grand, heroic, and sublime, than the twingle-twangle of a Jew's harp; that the delicate flexure of a rose-twig, when the half-blown flower is heavy with the tears of the dawn, was infinitely more beautiful and elegant than the upright stub of a burdock, and that from something innate and independent of all association of ideas these I had set down as irrefragable orthodox truths, until perusing your book shook my faith." Allan Cunningham is in doubt whether or not Burns's faith was really shaken. To me it seems evident, from the very nature of the objects contrasted,—the trumpet and Jew's harp, the rose and bare stub of a burdock,—that the poet was only complimenting the philosopher, and retained as firmly as ever his original and rational conviction.

Burns had a good deal of logical power, and could trace acutely cause and effect; but it is hardly necessary to observe, that of his reflective faculties he had little opportunity of making any notable display.

I have thus endeavoured to give an impartial account of the character of Burns, and to trace its various features to the radical mental qualities indicated by his skull. The subject is by no means free from difficulty; and I am conscious of many defects in the foregoing analysis; but, after what has been said, I may perhaps be allowed to hope that the candid reader will agree with me in regarding the skull of Burns as a striking and valuable confirmation of the truth of Phrenology.

ARTICLE IX.

THE PRINCIPLES OF PHYSIOLOGY APPLIED TO THE PRESERVATION OF HEALTH, AND TO THE IMPROVEMENT OF PHYSICAL AND MENTAL EDUCATION. By ANDREW COMBE, M. D., Fellow of the Royal College of Physicians of Edinburgh. 2d Edition, Enlarged and Corrected. Edinburgh: A. & C. Black; and Longman & Co. London. 1834. 12mo. Pp. 385.

DR COMBE's object in this volume, is to lay before the public a plain and intelligible description of the structure and uses of some of the more important organs of the human body, and to shew how information of this kind may be usefully applied both to the preservation of health, and to the improvement of physical and mental education. The work is divided into ten chapters, in which are considered the usefulness of physiological

knowledge,—the structure and functions of the skin,—preservation of the health of the skin,—nature of the muscular system,—effects of, and rules for, muscular exercise,—structure, uses, and health of the bones,—respiration and its uses,—the nervous system and mental faculties,—causes of bad health,—and application of the principles of physiology to the amelioration of the condition of the insane. The author has no intension of endeavouring to make “every man his own doctor;” but, in expounding the laws which regulate the corporeal system, aims merely at enabling persons of common sense to take care of their health while it subsists; to perceive why certain circumstances are beneficial or injurious; to understand, in some degree, the nature of disease; and the operation of the agents which produce and counteract it; and to co-operate with the physician in removing the morbid state when it occurs, instead of defeating, as is now through gross ignorance constantly done, the best concerted plans for the renovation of health. It is commonly objected to the communication of such knowledge to the public generally, that it is sure to do harm by making people constantly think of this and the other precaution, to the utter sacrifice of every noble and generous feeling, and to the certain production of hypochondriacal peevishness and discontent. “The result, however,” observes Dr. Combe, “is exactly the reverse; and it would be a singular anomaly in the constitution of the moral world were it otherwise. He who is instructed in and familiar with grammar and orthography, writes and spells so easily and accurately as scarcely to be conscious of attending to the rules by which he is guided; while he, on the contrary, who is not instructed in either, and knows not how to construct his sentences, toils at the task, and sighs at every line. The same principle holds in regard to health. He who is acquainted with the general constitution of the human body, and with the laws which regulate its action, sees at once his true position when exposed to the causes of disease, decides what ought to be done, and thereafter feels himself at liberty to devote his undivided attention to the calls of higher duties. But it is far otherwise with the person who is destitute of this information. Uncertain of the nature and extent of the danger, he knows not to which hand to turn, and either lives in the fear of mortal disease, or, in his ignorance, resorts to irrational and hurtful precautions, to the certain neglect of those which he ought to use. It is ignorance, therefore, and not knowledge, which renders an individual full of fancies and apprehensions, and robs him of his usefulness. It would be a stigma on the Creator's wisdom, if true knowledge weakened the understanding, and led to injurious results. And accordingly, the genuine hypochondriac, whose blind credulity leads him to the implicit adoption of every monstrous specific, is

not the person who has gained wholesome knowledge by patient study in the field of nature; but he, and he alone, who has derived his notions of the human constitution, and of the laws of nature, from the dark recesses of his own crude imagination.

"Those who have had the most extensive opportunities of forming an opinion on this subject from experience, bear unequivocal testimony to the advantages which knowledge confers in saving health and life, time and anxiety. Dr. Davies of the East India Company's Depot at Chatham, for example, distinctly states that, for this very reason, the man of mature age, who has been some years at a trade before enlisting, is found to make the most valuable soldier, because, 'he not only conforms with more ease to the system of diet and restraint necessary to subordination, but, having more experience, he is *more observant of health, learns sooner how to take care of himself, to avoid or diminish causes of disease, and when ill, he gives more aid in bringing about a state of convalescence.*' Dr. Davies adds afterwards, that this '*knowing how to manage is an invaluable qualification to a soldier embarking for service in a tropical climate;*' and if it is invaluable to the soldier, it is assuredly not less safe and advantageous to the civilian."

As the health of the brain, and consequently the proper performance of the mental functions, is greatly influenced by the condition of the other parts of the body, particularly the skin, lungs, stomach, and blood, it is impossible fully to understand the moral and intellectual phenomena of man, without bestowing attention upon every part of his frame. "It has been the misfortune," says the late Professor John Gregory, "of most of those who have studied the philosophy of the human mind, that they have been little acquainted with the structure of the human body and the laws of the animal economy; and yet the mind and body are so intimately connected, and have such a mutual influence on one another, that the constitution of either, examined apart, can never be thoroughly understood." To the phrenologist, therefore, the subjects treated of by Dr. Combe, especially in his chapter on the brain, possess a peculiar interest.

In this second edition is given a chapter in which the principles of physiology are applied to the condition of the insane. As the truths which it contains ought to be made known as extensively as possible, and the chapter must be new to such of our readers as have perused the first edition alone, we shall transfer the greater part of it to our pages.

"Having given the reader some notion of the extent to which human health and happiness depend on the fulfilment of the conditions which the Creator has attached to the exercise of the bodily and mental functions, and shewn that the direct design of suffering and pain is to lead us to a stricter obedience to

nature's institutions, and to more perfect enjoyment of life, I might now perhaps leave the farther application of the doctrines to the consideration of the reader. But the reception which the first edition of this volume met with, gives me fresh confidence in the practical importance of the principles which I have been unfolding, and encourages me to add in the present edition a few remarks on the condition of the insane, a class of sufferers who have the strongest claims on our sympathy, and in regard to whom, notwithstanding the numerous channels in which public benevolence has of late been so generously flowing, an apathy is still displayed which is not less hurtful than melancholy, and which can proceed only from the real state and wants of the insane being too imperfectly known.

"It is certain indeed, that the secluded life which most of the insane are obliged to lead, separated from kindred and from society, and the disgraceful prejudices against them which have descended to us almost unimpaired from amidst the superstitions of the darker ages in which they originated, have contributed, in no small degree, to perpetuate the obscurity in which the subject has long been involved, and to render insanity one of the few evils which mankind has never ventured to look fairly in the face, with a view to discover its nature, and the means of its prevention and cure. The consequences are, that its roots have been allowed to extend more and more widely, while scarcely any thing has been done to arrest its growth, or to remove it when formed; and, as little improvement can be effected until the public shall become heartily interested in the cause, it becomes an imperative duty to allow no opportunity to escape of spreading abroad such information as may help to dissipate the prevailing indifference, and rouse attention to the magnitude of the existing evils.

"If the state and management of public and private asylums for the reception of this class of patients be examined with reference to the conditions of health already explained in treating of the respiratory, muscular, and nervous systems, it cannot fail to strike the reflecting observer, that while in many institutions the most laudable zeal has been shewn for the physical health and comfort of the patients, comparatively little has been accomplished, or even attempted, with the direct purpose of correcting the morbid action of the brain, and restoring the mental functions. We have now, in most asylums, clean and well ventilated apartments, baths of various descriptions, abundant supplies of nourishing food; and a better system of classification; the furious and the depressed being no longer subjected to each other's influence and society: and the result has been, that in so far as these important conditions are favourable to the general health, and to that of the nervous system in particular, recovery has

been promoted, and personal comfort secured. But in so far as regards the systematic employment of what is called active moral treatment, and its adaptation to particular cases, a great deal more remains to be done than has hitherto been considered necessary. This will be apparent on reflecting how extremely influential the regular employment of the various feelings, affections, and intellectual powers is on the health of the brain, and how few asylums possess any adequate provision for effecting this most desirable object. If want of occupation, and the absence of objects of interest, be, as we have seen, sufficient to destroy the health of a sound organ, the same causes must be not less influential in retarding the recovery of one already diseased. Hence it becomes an object of extreme importance in establishments for the insane, to provide the necessary means for encouraging the healthy and regular exercise of the various bodily and mental powers; and for drawing out, as it were, and directing, the various affections, feelings, and intellectual faculties to their proper objects—this being a condition essential, in a higher degree than any other, to the success of curative measures.

“Those who have not attended to the subject, may be disposed to think that the importance attached to mental and bodily occupation in cases of insanity is here exaggerated. But the physiologist who looks to the established law of the animal economy, which denotes regular action of every organic part to be essential to its health, no matter whether that part be bone, muscle, bloodvessel, nerve, or brain, will not fail to bear testimony to the truth of my remarks. The pathological observer, also, whose attention is daily called to the miseries and bad health resulting from the total absence of mental occupation in those whom fortune has condemned to a life of idleness, without having imparted to them that activity of constitution which seeks out objects of interest and makes occupation for itself, will at once acknowledge that a command of the means of healthy mental and bodily exercise would add more to his power over nervous and mental diseases, than any other remedy, which art has yet discovered. And yet, in the majority of our asylums, the patients are still merely placed in security and humanely treated, without the least effort being made to afford them occupation of mind or body, or any of the more cheering comforts of sympathy and social intercourse; and this being the case, can we be surprised that only one-third or one-half recover their reason, or shall we rest contented in imagining that human means can go no farther to alleviate their calamities?

“It is in the treatment of this unhappy class of patients, who are deprived of their dearest enjoyments and of the soothing intercourse and consolations of social and domestic life, that an ac-

quaintance with the laws of health, and the structure and functions of the human body, becomes pre-eminently useful. When, for example, we contemplate the number of the muscles, the importance of their functions, and their influence on the circulation and on the general system, and understand the laws or conditions of their healthy action, we cannot fail to perceive that any mode of treatment which does not provide for their exercise in the insane, must be radically defective; however kindly and judiciously it may be administered in other respects; and we have thus an unerring standard by which the efficacy of every contrivance used to rouse the lunatic from contemplative inaction to useful exertion, may be at all times determined. Hence we can have no hesitation in denouncing, as imperfect, every asylum which does not provide for the regular active employment of its inmates, either in their former trades or in some kind of bodily, and, if possible, useful and imperative exertion. When we know the structure, uses, and relations of the skin, and are at the same time aware that in insanity its exhalations and nervous functions are almost always disordered, so much so as often to be accompanied with a smell peculiar to mental invalids, it becomes impossible for us longer to overlook the necessity of devoting attention to its condition, and taking steps for its restoration to health as a means of promoting the recovery of the brain. When we become acquainted, in like manner, with the functions of the lungs, and the nature of respiration, we can scarcely fail to to use every exertion to secure free ventilation, and such ample accommodation as shall prevent several lunatics from being placed together in a small apartment. And, lastly, when we become impressed with the fact, that the human mind is endowed with affections, moral feelings, and intellectual powers, operating through the medium of bodily organs, and requiring for their health regular and free exercise on their respective objects, and that without this gratified activity they fall into debility and disease, we can no longer rest contented until every possible means of affording occupation to the intellect, interest to the feelings, and employment to the body, shall have been exhausted. In fact, till adequate arrangements shall have been made in every public and private asylum for effecting these purposes, it will be only deceiving ourselves and shutting our eyes to the truth, to suppose that we have accomplished all that can be done for the recovery and relief of the insane; and too much pains cannot be taken to enforce attention to the defects which still impair the usefulness of many of our best institutions.

“In making these comments I have no wish either to blame any one, or to overlook the difficulties which stand in the way of such improvements as science and humanity will one day

consider indispensable. Adequately trained and qualified moral agents will not be easily obtained in such numbers as will be required; nor will money be easily procured to meet the necessary expense. Still, however slow our progress may be, it will begin the sooner, and proceed the faster, if attention be now called to the urgency of the case, and to the leading principles by which farther ameliorations are to be effected.

"It is a common but most deplorable mistake, to suppose, that because a person is insane, he is insensible to the ordinary feelings and affections of humanity, that his reason is blind to the ordinary relations of life and of external nature; and that consequently it matters little in what language he is addressed, or what demonstrations of feeling are offered to him; for, in the great majority of instances, the mind is only partially disordered, and is as much alive as ever to the perception of insult, kindness, common sense, and drivellings. And even in those rare instances in which all the faculties seem to be deranged, and in which much irritation and violence frequently exist, kindness, truth, and reason, although at the moment they may seem without effect, rarely fail, when calmly persevered in, to produce a salutary impression, and to soothe the patient. It therefore becomes of the utmost conceivable importance, in erecting asylums for the insane, to make also special provision for that systematic moral treatment, which is to the brain and mind, what medicine and dietetic regimen are to the stomach, the liver, and the bowels. It has been said, and I believe not without reason, that keepers of asylums, who live, without any variety of intercourse and occupation, exclusively in the company of the insane, are themselves apt to become of unsound mind; and that of those who escape insanity there are comparatively few who do not ultimately acquire the peculiar expression of eye which is observable in lunatics. If, then, constant exposure to the society of lunatics be in any case sufficient to give rise to madness in a previously healthy mind, it is as clear as the light of day, that the same influence must greatly retard the recovery of those whose minds are already deranged, and that, on the same principle, it must be of importance to subject the lunatic continually to the restorative influence of the society of healthy and well regulated minds. Every day brings fresh conviction with it, that the more nearly we can approximate our treatment of the insane to that of reasonable beings, the more successful shall we be in effecting cures, and the more delightful will the duty become of ministering to the mind diseased.

"It is hardly necessary to remark, that in these observations on the importance of regulating the moral treatment of the insane, I have chiefly in view that numerous class of patients in whom the acute stage has been subdued, either by medical aid

or by the mere lapse of time. At the very commencement of the disease, a cure may frequently be accomplished by the removal of the exciting causes, active medical treatment, and careful superintendence at home. But after this period, much more will be accomplished by judiciously regulating the exercise of the mental and bodily functions, than by strictly medical remedies; and it is consequently chiefly at this stage that I now refer.

"To secure regular and animating exercise of all the mental and bodily functions, as conducive equally to the preservation and restoration of mental health, ought then to be our grand aim in the construction and management of public and private asylums.

"In planning the means of mental and bodily occupation for the insane, we should follow, as far as possible, the same rules and principles which are applicable to persons of sound mind. Thus, daily muscular exercise in the open air is essential equally to bodily health and to mental soundness, and is therefore indispensable to both sane and insane. It is more pleasant, more easily persevered in, and also more salubrious to the individual, when it is combined with an object calculated to occupy but not to strain the mind. Mere walking or riding, for the sake of exercise, generally becomes irksome, and is consequently either speedily given up or pursued with a languid inactivity, which deprives it of its utility. On this account, mechanical and agricultural pursuits, which interest attention and elicit activity, ought to be provided for in choosing a situation: for experience has demonstrated that, as remedies, such employments cannot be too highly estimated; and that, wherever the rank of the patient does not preclude him from engaging in them, they produce the happiest results in promoting quiet and sleep, subduing irritation, disposing to perfect subordination, and, above all, hastening the progress of recovery.

"Ample extent of ground for the purposes of agriculture and gardening, ought therefore never to be forgotten; and for those who either are fond of mechanics or have been trained to some manual employment, workshops become equally necessary, and have the advantage of contributing to the general expenses of the house. In several establishments where field labour, gardening, and workshops, have been tried on an extensive scale, the results have been highly satisfactory, not only in the improved habits and comfort of the patients, and in their more speedy and numerous recoveries, but also in the important advantage of economy: as the labour of the patients has in some asylums gone far to defray their current expenses,—while scarcely a single accident is on record, as having arisen from an im-

greater use of the liberty allowed them, or of the edged tools put into their hands.

Man is so much of a social being, and depends so much on the sympathy, esteem, and co-operation of his fellows, that, as one of a body, he will submit cheerfully to tasks and duties, against which, if proposed to him as an individual or as one of a few, he would unhesitatingly rebel. Disease may modify this tendency of the mind, but cannot destroy it: and the practical physician does not fail to avail himself of its power in the management of his cases. Many will at first refuse to work in the fields or in the garden, particularly if unaccustomed to manual labour; but seeing others do so with cordiality and pleasure, they gradually acquire their resolution to give way, and ere long become as forward as they were previously backward. One of the great advantages of large establishments, is the great facility and facility of turning out numbers to every kind of employment, so as to get an individual who refuses to exert himself, to feel the advantages of singularity, which the insane can never do, but that persons of sound mind.

Where there is any difficulty in engaging patients of a higher class in bodily labour, much good may still be done by engaging them in such as possible in the employments to which they are commonly accustomed. Billiards, bowls, walking, reading, writing, and music, are then valuable resources, and may be made to constitute the business of the day; care being taken to connect with the talents of the patient to a useful acquisition, so as to give him as much satisfaction as the consciousness of filling his place as a member of society.

In the smaller, and especially in private asylums, dedicated to the middle and higher classes of society, the presence of a sufficient body of INTELLIGENT AND EDUCATED ATTENDANTS, is a great desideratum. The patients are too few in number to operate on each other by example, and their habits are too far removed from any manual employments. By placing numerous attendants among them, who would act systematically in endeavouring to engage them in useful labour, at first of a very light description, and to rouse them by example and cheerful encouragement, a good deal might be done; but as in such refuges the patients are generally persons of a more intelligent and refined disposition than in the larger asylums, the attendants to associate with them, would require to possess proportionally higher moral and intellectual qualifications, so as to fit them for being companions and friends, as well as guardians, of the inmates. The expense of providing a sufficient number of qualified persons will long be an obstacle to their being obtained, but the importance of the provision were once fully ap-

preciated, and its success demonstrated, it can scarcely be doubted that this difficulty would be surmounted. Every year, we hear of large legacies being left to Lunatic Asylums by the benevolent, and if one of these were bequeathed to the first public institution that should introduce such a system, we should not have to wait long to see the example generally followed. The wealthier classes are, indeed, directly interested in the experiment, as their ranks afford proportionally the greatest number of victims; and if the disease were once treated on such principles, there would be much less reluctance to seek early advice, and consequently much more success in combating its attacks.

“ Pinel has said that thirty years' experience had taught him that a striking analogy subsists between the art of educating and training the young and that of managing the insane, as the same principles are applicable to both. Natural activity, unwearied kindness, tact and firmness, are eminently useful in both situations; but they are productive of their fullest advantages only when reinforced by an accurate acquaintance with the laws which regulate the mutual influence of mind and body, with the nature and sphere of the primitive mental powers, and with the methods and objects by which each may be soothed into repose or stimulated to activity—in other words, by an intimate knowledge of human nature and of the philosophy of mind.

“ But it will be asked, What fortunate establishment possesses attendants endowed with such excellent qualifications, and where are such persons to be found by any one who wishes to procure their assistance? The answer must be, Nowhere; but as a necessary consequence, it may with equal truth be affirmed, that nowhere is the treatment of insanity so successful as it would be, were such assistants provided in sufficient numbers to mix with and exert a constant and active influence on the patients. In some retreats, an approximation to this desideratum is made in the frequent admission of visitors, who, actuated by kindness and intelligence, seek the society of the insane, devote themselves to their relief and comfort, and, by gaining their confidence and shewing a sympathy with their situation, succeed in dispelling morbid associations and restoring health and tone to the disordered mind. In these asylums, the proportion of cures is proportionally greater than in others apparently as well regulated, but in which no effort is bestowed in active moral treatment. In the Connecticut Retreat, this system has been carried as far as the present state of knowledge will permit, and with the best effects; the proportion of cures in recent cases being nine out of ten of all admitted. At present, indeed, no amount of funds could command the services of a sufficient number of properly qualified assistants; but, nevertheless, it is important that the

proper use of the liberty allowed them, or of the edged tools put into their hands.

“ Man is so much of a social being, and depends so much on the sympathy, esteem, and co-operation of his fellows, that, as one of a body, he will submit cheerfully to tasks and duties, against which, if proposed to him as an individual or as one of a few, he would unhesitatingly rebel. Disease may modify this tendency of the mind, but cannot destroy it ; and the practical physician does not fail to avail himself of its power in the management of the insane. Many will at first refuse to work in the fields or in the garden, particularly if unaccustomed to manual labour, who, seeing others do so with cordiality and pleasure, will gradually allow their resolution to give way, and ere long become as zealous as they were previously backward. One of the chief advantages of large establishments, is the great facility they afford of turning out numbers to every kind of employment, so as to subject an individual who refuses to exert himself to all the disadvantages of singularity, which the insane dislike even more than persons of sound mind.

“ Where there is any difficulty in engaging patients of a higher class in bodily labour, much good may still be done by engaging them as much as possible in the employments to which they were formerly accustomed. Billiards, bowls, walking, reading, writing, and music, are then valuable resources, and may be made to constitute the business of the day ; care being always taken to turn the talents of the patient to a useful account, whenever an opportunity occurs, so as to give him as frequently as possible the consciousness of filling his place as a member of society.

“ In the smaller, and especially in private asylums, dedicated to the middle and higher classes of society, the presence of a **NUMEROUS BODY OF INTELLIGENT AND EDUCATED ATTENDANTS**, is a great desideratum. The patients are too few in number to operate on each other by example, and their habits are not in harmony with any manual employments. By placing numerous attendants among them, who would act systematically in endeavouring to engage them in useful labour, at first of a very light description, and to rouse them by example and cheerful encouragement, a good deal might be done ; but as in such retreats, the patients are generally persons of a more intelligent and refined description than in the larger asylums, the attendants, to be on a par with them, would require to possess proportionally higher moral and intellectual qualifications, so as to fit them for being companions and friends, as well as guardians, of the inmates. The expense of providing a sufficient number of qualified persons will long be an obstacle to their being obtained ; but if the importance of the provision were once fully ap-

preciated, and its success demonstrated, it can scarcely be doubted that this difficulty would be surmounted. Every year, we hear of large legacies being left to Lunatic Asylums by the benevolent, and if one of these were bequeathed to the first public institution that should introduce such a system, we should not have to wait long to see the example generally followed. The wealthier classes are, indeed, directly interested in the experiment, as their ranks afford proportionally the greatest number of victims; and if the disease were once treated on such principles, there would be much less reluctance to seek early advice, and consequently much more success in combating its attacks.

"Pinel has said that thirty years' experience had taught him that a striking analogy subsists between the art of educating and training the young and that of managing the insane, as the same principles are applicable to both. Natural activity, unwearied kindness, tact and firmness, are eminently useful in both situations; but they are productive of their fullest advantages only when reinforced by an accurate acquaintance with the laws which regulate the mutual influence of mind and body, with the nature and sphere of the primitive mental powers, and with the methods and objects by which each may be soothed into repose or stimulated to activity—in other words, by an intimate knowledge of human nature and of the philosophy of mind.

"But it will be asked, What fortunate establishment possesses attendants endowed with such excellent qualifications, and where are such persons to be found by any one who wishes to procure their assistance? The answer must be, Nowhere; but as a necessary consequence, it may with equal truth be affirmed, that nowhere is the treatment of insanity so successful as it would be, were such assistants provided in sufficient numbers to mix with and exert a constant and active influence on the patients. In some retreats, an approximation to this desideratum is made in the frequent admission of visitors, who, actuated by kindness and intelligence, seek the society of the insane, devote themselves to their relief and comfort; and, by gaining their confidence and shewing a sympathy with their situation, succeed in dispelling morbid associations and restoring health and tone to the disordered mind. In these asylums, the proportion of cures is proportionally greater than in others apparently as well regulated, but in which no effort is bestowed in active moral treatment. In the Connecticut Retreat, this system has been carried as far as the present state of knowledge will permit, and with the best effects; the proportion of cures in recent cases being nine out of ten of all admitted. At present, indeed, no amount of funds could command the services of a sufficient number of properly qualified assistants; but, nevertheless, it is important that the

deficiency be made known, that we may make provision for supplying it, and not proceed, contented with our present means, as if they were already adequate. The tendency of the human mind is to become accustomed to existing defects, and never to think of remedying them, till some accidental occurrence displays their magnitude and turns the attention to further improvements.

"As matters now stand, the higher classes of lunatics are in one sense the most unfortunate of all. Accustomed at home to the refinements of educated and intelligent society, to the enjoyments arising from change of scene, to horse and carriage exercise, and to the command of numerous sources of interest, they find themselves transported to an asylum where they may be no doubt be treated with kindness, but where they are necessarily cut off from many of the comforts to which they have been accustomed, and must encounter prejudices, feelings, and modes of thinking and acting, to which they are strangers, and with which they can have no sympathy. Being there restricted almost exclusively to the society of keepers, who, from their rank, education, and manners, cannot be considered qualified to gain their confidence or elicit friendly interchange of sentiment, the patients are, in a great measure, deprived of that beneficial intercourse with sound minds which is indispensable to health, and of the numerous opportunities which such intercourse presents for gradually stirring up new interests and leading to new trains of thought. The medical attendant, indeed, is often the only being to whom patients of this class freely unburden their minds, and from whom they can seek comfort; but unfortunately, in most establishments his visits are so few and short, that they can scarcely be reckoned as part of an efficient moral regimen.

"The poorer patients, on the other hand, although too much left to their own society, have still the advantage of being, to a certain extent, in daily communication with minds in harmony with their own both in feeling and in intelligence; as the keepers are always men of the same rank, education, and manners, as themselves. They consequently are less sensible of the change in their situation, and feel less acutely any actual indignities to which they may be exposed.

"Experience has already shewn that great benefit arises to the insane from the frequent association and sympathy of persons of tact, intelligence, and kindness, who feel a real interest in the happiness of the patients, and *visit them from a wish to soothe and comfort them*, and not from mere idle curiosity. Nothing tends so much as this to break down the formidable barrier which still separates the disordered in mind from the sympathies of society, and to dispel those sinful prejudices which stamp in-

sanity with the stigma of crime, and impel us to shroud its victims in obscurity and neglect.

"It may be said, 'That is all true, and very proper for medical men to know, but why introduce it into a book intended for the general reader?' My answer is, that I introduce it here purposely, 'because it is from among the public that the directors and managers of institutions for the insane are chosen; and so long as they remain unacquainted with the wants of the patients, little can be done to provide a remedy.' Medical men may direct, but society must co-operate, and cheerfully and earnestly take a part in the good work. Besides, there are thousands of warm-hearted beings who would delight in this very duty, if they only knew how to set about it; and they can be reached only by writings addressed to the general public."

That he may not be considered as either too severe in pointing out existing defects, or too visionary in his conceptions of the improvements required, Dr Combe contrasts the Pauper Lunatic Asylum at Hanwell with that in Edinburgh, and gives a brief account of Esquirol's system of management at Ivry, near Paris. In commenting on the defects of the Edinburgh Asylum, he gives every credit to the managers of the institution. "I am quite aware," says he, "of their anxiety to better the condition of the patients, and that they have already done more than could have been conceived possible with their imperfect means. But it is on this very account,—that the public may be stirred up to provide the necessary funds,—that I am so anxious to direct attention to the miserable accommodation; for I cannot help considering the asylum, in its present state, as a disgrace to the metropolis of the country."

Just as we were sending off this article to the printer, there was handed to us the Fourteenth Report of the Directors of the Dundee Lunatic Asylum, for the year ending 31st May 1834. That asylum is admirably conducted; and the report is of so gratifying a nature, and so strikingly confirms many of the observations of Dr Combe, that we shall present our readers with an extract from it in next Number.

We saw it mentioned in a newspaper, some months ago, that the province of Antwerp possesses, instead of a lunatic asylum, a lunatic *village*. It is called Gheel, and the poor creatures are allowed to roam at large in it; and where their infirmity does not incapacitate them, the inhabitants give them work. Many districts in the Netherlands send their lunatics to reside in this village, and pay for their board and clothing. It is said to be found, that for one cured effected under confinement, ten are brought about by kindness and the absence of coercion. We shall be obliged to any correspondent who can send us further information respecting the village of Gheel.

ARTICLE X.

PROCEEDINGS OF SOCIETIES.

1. *The Phrenological Society.*

21st November 1833.—Dr William Gregory read an account of the progress and prospects of Phrenology in Paris.—Mr Robert Cox read Notes, chiefly historical, on the philosophy of apparitions; and correspondence between himself and Mr G. M. Schwartz of Stockholm, in September last, regarding casts of the heads of two Laplanders, and of the skull of a Swedish criminal. Dr Gregory explained the characteristics of the individuals under mentioned, casts of whose heads were presented by him to the Society. Letters from the Rev. Thomas Liddell and Donald Gregory, Esq. Sec. A. S., relative to skulls presented by them, were read. The following donations were laid on the table:—Seven skulls of Thugs or Stranglers of Central India; presented by George Swinton, Esq. late Chief Secretary to the Supreme Government in India. Casts of the heads of two Laplanders, and of the skull of a Swedish criminal; presented by Mr G. M. Schwartz of Stockholm. Six skulls of Druids, from the Hebrides; presented by Donald Gregory, Esq. Skull found in April 1833 under the foundation of the old steeple of Montrose; presented by the Rev. Thomas Liddell. Cast of the head of Linn, a pugilist and parricide; presented by Dr M'Donnell of Belfast. Cast of the head of a musical child, a Negro, and a Charruas Indian savage of South America; presented by Dr William Gregory. Additional plate illustrative of the *Théorie des Ressemblances*; presented by the Chevalier da Gama Machado. American edition of Dr Spurzheim's work on Physiognomy; presented by Nahum Capen, Esq. Boston, United States.—An application by Mr John Ritchie, 6. Hill Square, for admission as an ordinary member, was read; also a letter from Mr William Slate, resigning as a member of the Society.

5th December.—The following gentlemen were elected Office-Bearers for the ensuing year:—George Combe, *President*; George Monro, Bindon Blood, John Anderson jun. and Arthur Trevelyan, *Vice-Presidents*; James Crease, Patrick Neill, John F. Macfarlan, Lindsay Mackersy, Charles Maclaren, and Henry M. T. Witham, *Councillors*; Dr William Gregory, *Secretary*; Robert Cox, *Conservator of the Museum*; D. Campbell, *Clerk*.—Mr Simpson read Observations on the phrenological standard of civilization. Donation: "Discours de la Mission du Philosophe au Dix-neuvième Siècle, &c. &c. par le Docteur Fos-

sati;" presented by the author. Mr John Ritchie was unanimously admitted an ordinary member.

19th December.—Mr Cox read an Account of the *Thugs* or Stranglers of Central India, by H. H. Spry, Esq. Bengal Medical Service, Saugor; with remarks by himself on seven of their skulls presented to the Society by George Swinton, Esq.

23d January 1834.—Mr Simpson read Observations on the connexion between the present unfavourable condition of the British people, and the imperfections of their education. The following work was presented by the author:—"Epilepsy, a case of twenty years standing cured, with the treatment and remarks thereon. By John Epps, M. D. London, 1834."

6th February.—Mr Cox read an Account of the life, character, opinions, and cerebral development of Rajah Rammo-hun Roy. Donations:—Cast of the skull of Dr Spurzheim; presented by the Boston Phrenological Society. Two French marked busts, and marked cast of the brain; presented by Dr William Gregory.

20th February.—Mr Simpson read Observations on the effects of defective education on the condition of the middle and higher classes of society.

20th March.—Mr Cox read an Essay on the elementary function of the organ of Combativeness.—The Secretary read a letter which he had received from J. J. F. Hely, Esq. Rome, relative to the skull of Raphael; upon which the Society expressed themselves highly gratified by that gentleman's attention.

17th April.—The following papers were read:—An Essay on the existence of a faculty of Modesty or Shame between the sexes, with an attempt to explain the origin of the institution of marriage; communicated by a phrenologist resident in France.—Notes respecting two suicides, casts of whose skulls are now presented by the Dunfermline Phrenological Society.—In voting thanks to that Society for this esteemed donation, the meeting expressed their high satisfaction with the zeal and activity which have so long distinguished the phrenologists of Dunfermline.

2. *The Warwick and Leamington Phrenological Society.*

4th April 1834.—The Society held its first meeting; John Conolly, Esq. M. D. in the Chair. The President, on taking the chair, expatiated at some length, in an interesting and eloquent address, upon the advantages likely to be derived by society at large from the study and general reception of Phrenology as the true doctrine of the mind; and concluded by energetically urging the members to exert themselves for the promotion

of so desirable an object.—The Secretary then read communications from Mr Combe, Dr Elliottson, and Dr Kennedy, consenting to become Honorary Members of the Society.—Seven new Ordinary Members were announced, (the names of the original members were mentioned in our last number, p. 668), namely, Peter Francis Juard, Esq. M. D., Warwick; John Wilmsburst, Esq. Surgeon, Warwick; Rev. George Childe, A. M., Chaplain to the County Prisons; George Cattell Greenway, Esq. Solicitor, Warwick; W. El. Buck, Esq. Solicitor, Warwick; Henry L. Smith, Esq. Surgeon, Southam; and S. Levason, Esq. Leamington.—Some conversation took place respecting casts, busts, &c., when the Secretary was commissioned to write to Mr Combe to solicit his assistance in obtaining what might be requisite. The thanks of the meeting were voted to Mr Levason of Leamington and also to Mr Rider of Leamington, for having offered their services gratuitously, the former as caster, the latter as artist to the Society. Henry Jephson, Esq. M. D. of Leamington was proposed as an Ordinary Member.—Mr Watson then read an Essay on the history of Phrenology, &c. which the President was requested by members present to transmit to the Editors of the Phrenological Journal, for publication in as early a number of that work as would suit their convenience.—The Secretary was requested to procure four copies of Mr Combe's Elements of Phrenology, to be kept in constant circulation amongst the members.

6th June.—For the benefit of the non-medical members, Mr W. D. Watson demonstrated the anatomy of the scalp, muscles, skull, and other coverings of the brain; and adverted to the various impediments to the formation of a correct estimate of the development of certain cerebral parts during life. He also pointed out the situation of the different organs, taking for this purpose the aid of a brain, phrenological bust, and the beautiful “mechanical brain” of Mr Bally of Manchester, a copy of which he had procured for the occasion. Dr Henry Jephson of Leamington was elected an ordinary member. It was announced that an essay on some subject connected with phrenology would be read at the next meeting, on 1st August, by Dr Conolly.

3. *The Edinburgh Ethical Society for the study and practical application of Phrenology.*

4th November 1833.—The following office-bearers were elected: Dr William Gregory and Robert Cox, *Presidents*;

* The essay here mentioned was forwarded to us accordingly; but though it is a production of considerable merit, and well adapted to the audience before which it was read, we have respectfully declined to insert it—for two reasons: 1st, The subjects treated are already familiar to a large proportion of our readers; and, 2dly, Our materials are at present in a state of inconvenient superfluity.—Ed.

Arthur Trevelyan, James Marr, Donald Gregory, Thomas Duncan, and Robert Walker, *Councillors*; Andrew Brash, *Librarian*; Thomas Moffat, *Treasurer*; R. D. Douglas, *Secretary*.—Dr Gregory then communicated to the Society some interesting particulars relative to the progress of Phrenology in France.

11th November.—Mr Cox read a paper on the reception of Phrenology by medical men.

18th November.—Mr Brash read an essay on Fatalism.

25th November.—Mr Cox read an Exposition of the principles according to which phrenologists infer dispositions and talents from the size, form, and quality of the brain; being the first of a series of essays on practical phrenology which he has undertaken, at the request of the Society, to bring forward this winter.

2d December.—Mr Cox read an essay on the effects of different sizes of the head.

9th December.—Dr Gregory read phrenological observations on Mr Bulwer's work "England and the English." Mr Cox read an essay on the effect of very large size of head.

16th December.—Mr Brash read an essay on the evils resulting from the Scotch law of primogeniture and entail. Mr Cox read an Essay on the effects of the different proportions in which the regions of the brain are developed relatively to each other.

23d December.—Dr Gregory read farther observations on Mr Bulwer's work.

20th January, 1884.—Mr Cox read an Essay on Amativeness.

27th January.—Mr Drysdale read a Phrenological Analysis of the character of Cowper, the poet. Mr Cox read Observations on the objection that Phrenology leads to materialism.

3d February.—Mr Alexander Ireland read an Essay on free inquiry.

10th February.—Mr A. G. Hunter read an Essay on the freedom of the will.

17th February.—Mr John Mackenzie read an Essay on moral responsibility. Mr Cox read Remarks on the objection that Phrenology leads to the doctrine of fatalism; also an Essay on Philoprogenitiveness.

24th February.—Mr Cox read an Essay on the character and cerebral development of Rammohun Roy.

3d March.—Mr Walker read a Phrenological Analysis of the character of George IV.

10th March.—Mr Douglas read an Essay on the Animal Propensities. Mr Brash read an Essay on Marriage.

17th March.—Mr Cox read an Essay on Concentrativeness.

24th March.—Mr Mackenzie read an Essay on Beauty.

29th March.—The Society dined in the Café Royal.

31st March.—Mr Cox read an Essay on Combativeness; and Mr James M'Kean read a paper on Love.

5th May.—Mr Cox read an Essay on the character and cerebral development of Robert Burns. A discussion ensued, in which a part was taken by two of Burns's correspondents, Messrs Robert Ainslie and George Thomson, the former of whom read several of the poet's letters. On the motion of the essayist, the thanks of the Society were voted by acclamation to Messrs M'Diarmid, Rankine, Kerr, Bogie, Crombie and Blacklock, of Dumfries, for their exertions in procuring a cast of the poet's skull.

12th May.—Dr Gregory read an Essay on the character and cerebral development of Signor Emiliani, and on the Faculties which constitute the elements of musical genius.

19th May.—Mr Brash read an Essay on Mind and Matter.

26th May.—Mr Cox read Observations on the effect of intellectual education on the moral character.

2d June.—Mr Brash brought under the notice of the Society a statement regarding the effects of a wound in the brain, in an article in Chambers's Edinburgh Journal, entitled "The Philosophy of Death, No. 2.;" which gave rise to some conversation. The Society spent the remainder of the evening in the examination of crania.

9th June.—Mr Cox read an Essay on Adhesiveness, and communicated to the Society a paper on Modesty and the origin of Marriage, written by a phrenologist resident in Paris.

16th June.—An Essay on the Temperaments, by Mr Daniel Noble, surgeon in Manchester, was read; also some account of the Caribs.

23d June.—Several members read characters inferred from the development of an individual whose head had been manipulated by Mr Cox.

30th June.—Mr J. Montgomery Stuart read first part of an Essay on criminal legislation, by Sir G. S. Mackenzie, Bart. Messrs Brash and Cox read characters deduced from two skulls from New South Wales.

7th July.—An Essay on civilization, by Mr Simpson, was read.

14th July.—Mr Brash read a paper entitled "Anti-phrenology," by the Rev. Charles Findlater, minister of Newlands; with an answer thereto by himself.

21st July.—Mr Stuart read the second part of Sir George Mackenzie's Essay on criminal legislation.

28th July.—Mr Stuart read an extract from Moore's Life of Lord Byron, regarding the size of his Lordship's head; after which a long discussion on this subject, and on the character and genius of Lord Byron, took place. The Society then adjourned till the first Monday in November.

MISCELLANEOUS NOTICES.

LONDON UNIVERSITY AND PHRENOLOGY.—At the annual examinations in the medical school of the London University in May last, several of the pupils in the Practice of Physic class, of which Dr Elliotson is Professor, adopted the phrenological principles as the only basis on which an intelligible account of mental affections could be erected. We have seen two or three of the extempore dissertations on this subject, and have been extremely gratified with their general clearness and accuracy. It will one day be the proud boast of the London University, that, knowing Dr Elliotson to be a phrenologist, and one who would not conceal his opinions, it nevertheless placed him in its most important chair. To Dr Elliotson himself it must afford infinite satisfaction to witness the readiness with which the ablest of the unprejudiced youths who listen to his prelections seize upon the truth and apply it to practical purposes. We congratulate the University on having a man of Dr Elliotson's undoubted eminence and talent among its medical professors. Few have of late years done so much as he to advance the science of medicine; and his reputation as a physician is so well established, that his advocacy of Phrenology cannot fail to operate most extensively and beneficially on the younger members of the profession. We need hardly remind our readers, that Dr Elliotson was one of the earliest phrenologists in Britain, and that he wrote in favour of Phrenology at a time when obloquy and ridicule were likely to be his sole rewards.

MANCHESTER.—The Manchester Phrenological Society continues to display much activity. We intended to publish in this Number an excellent essay on the Temperaments, read at one of the meetings by Mr Daniel Noble, surgeon; but are reluctantly obliged to postpone it for want of room. It shall certainly appear in our next.

LYMINGTON.—We observe from the *Salisbury Herald* of 31st May, that on the 19th of that month, Mr Deville gave a lecture on Phrenology at the Lymington Literary and Scientific Institution; the money paid for admission being given to the funds of the public dispensary. "The lecture," says the *Herald*, "was well attended; indeed the boxes were completely filled by most of the respectable inhabitants; and if we may be allowed to form an opinion, Phrenology has gained not a few points amongst us."

GLASGOW.—We are much pleased by the able Report of the Committee of the Glasgow Mechanics' Institution, dated 6th May 1834. It contains a forcible reply to the objection that the scientific knowledge taught in the Institution has not a sufficiently moral and religious tendency. That Phrenology continues to maintain its ground is obvious from the following extract:—"The Committee have pleasure in announcing, that, at their solicitation, Dr William Weir has kindly consented to deliver a course of lectures on Phrenology in the Institution, during the months of August, September, and October next. In this course, Dr Weir will give a concise and popular view of the principles of the science; a full account of the various organs and faculties; with a consideration of the practical application of Phrenology to general conduct, education, and the science of morals." The first lecture, as we learn from the *Glasgow Argus*, was delivered on 5th August. "It occupied nearly an hour and a half, was delivered in a clear and forcible manner, and was listened to with marked attention by the very large and respectable assembly."

PARIS.—An association entitled "The Universal Society of Civilization," has been established in Paris. It has instituted a philosophical school, where lectures are given *gratis*, on sciences, arts, and industry. M. Dumoutier recently lectured on Phrenology to crowded audiences.—The fifth, sixth, and seventh Numbers of the Journal of the Phrenological Society of Paris, which we have now obtained, indicate no abatement of spirit in its conductors. We shall take an early opportunity of noticing at some length the contents of these Numbers.

AMERICA.—Extract from a letter, dated Albany, United States, 30th April 1834, to a gentleman in Edinburgh:—"Societies similar to the Edinburgh Association for procuring Instruction in Useful and Entertaining Sciences are springing up throughout this State. One was formed in Albany last winter, called 'The Young Men's Association for Mutual Improvement.' Mr Dean, their President, has just finished a course of Lectures on Phrenology before the Association. He presented me with a ticket, and so great was the interest created, that he has been obliged to repeat the lectures twice. He was without casts to illustrate the subject, which was a great disadvantage to him. His lectures are to be published, and I shall send you a copy, so that you may be able to judge of them for yourself. Lectures have been delivered before the Association this season, on Astronomy, Anatomy, Geology, Medical Jurisprudence, American History, Horticulture, American Literature, Comparative Examination of the Animal Kingdom, and Botany. The Association has a library and reading-room, where may be seen all the leading periodicals and newspapers of the United States. The citizens of Albany have cordially supported it, by giving donations of money and books. The members are males, between fifteen and thirty-five years of age, who pay two dollars of entry-money, and one dollar annually afterwards. The lecturers were all natives except two, who were Scotchmen. I have got two numbers of an American periodical called 'The ~~Whisker~~ *Whisker*,' which I shall send you shortly. One contains an article on Phrenology by Mr Timothy Flint, who always speaks of Mr Combe with the highest respect: the other number has a review of 'The Constitution of Man,' by another hand."

An English translation of Gall's work *Sur les Fonctions du Cerveau*, to consist of three volumes, was announced last winter as proposed to be published at Boston."

RAPHAEL'S SKULL.—The following letter, addressed to the Secretary of the Phrenological Society, and dated Rome, September 30, 1833, having been sent by a private hand, did not reach Edinburgh till March 1834.

"SIR,—I have not the pleasure of being known to you, but will indulge a hope that the communication itself, which is the cause and subject of this letter, may be deemed extenuatory of the liberty I take in addressing you.

"Late perusal of two numbers of the Phrenological Journal, has totally suppressed in me the hasty deference with which I had listened to objections hazarded against the system; and I now sincerely avow regret that present literary and antiquarian avocations at present do, and for some time will, preclude my going in *medias res*, or even endeavouring to master the rudiments of so interesting a study.

"It has happened, that just at the time when I was devouring the pages to which I have alluded, the discovery of the bones of Raphael was effected in the Pantheon, and it immediately struck me, that attainment of a cast of that sublime artist's skull might be acceptable to your Society, and of utility in its researches. In consequence, I forwarded to the Pope, through the medium of the Cardinal Secretary, a memorial, of which the following is a translation:—

"MOST HOLY FATHER,—The recent discovery of the bones of Raphael Sanzio impels Mr J. J. F. Hely, an Irish gentleman, and a member of the British army, respectfully to offer to your Holiness a tribute of congratulation upon an event which is a subject of universal exultation, and will constitute a distinguished epoch in the annals of your pontificate.

"At the same time, as so fortunate an occurrence may be productive of increased gratification to the lovers of the fine arts, and probably of utility to scientific men, and this without causing any injury to the remains themselves, your memorialist is encouraged to beseech your Holiness to permit him to cause a plaster-cast of the skull to be taken, by an expert artist, and at his expense.

"If time would permit your memorialist to transmit information of his purpose to his own country, such tidings, as well as those of the requested favour being eventually granted, would, he is persuaded, be received with en-

thusiasm and gratitude by all to whom the arts are dear, and by whom science is venerated.

"To this application I have not yet received any answer. In fact, it had been more than hinted to me, subsequently, that the tenets here are hostile to Phrenology and its deductions. In such case, I can hardly expect the boon to be granted. At all events, I shall take the liberty of saying with an old writer—'Sit voluisse satis.' Should I, however, be agreeably disappointed, you may rely upon receiving the cast. Mean time, I have the honour to be, Sir, your very obedient humble servant, J. J. F. HALL."

Subsequently to the arrival of the foregoing esteemed communication, we received letters from two phrenological friends, who had seen a cast of Raphael's skull; and with one of whom, Dr Robert Verity, a phrenologist of very considerable skill and acuteness, we lately had the pleasure of conversing. Only two casts have been made; and there is a prohibition to the effect that they shall not be multiplied. "The proofs adduced in favour of the authenticity of the skull," says one of our correspondents, "are various. The most conclusive are in Raphael's own hand-writing, contained in a codicil to his will. He was buried in the Pantheon beneath an altar, and his will is deposited in the archives of that church, where perpetual mass is said for his soul, as he left a sum of money for that purpose. He also left to a sculptor, whose name, though mentioned, I forget, a certain sum to defray the expense of a statue of the Madonna, which he requested to be placed above his tomb. Beneath this statue the skeleton was found. It was examined by antiquaries, surgeons, &c. The length of the skeleton, 74 Roman palms, agrees with the height of Raphael. The sockets of the elbow and wrist bones were found different from those of the left, owing to the continual employment of the right arm in his art. He was a Knight of the Golden Spur: the badge of the order was found in his grave. Moreover, it is stated by several authors that he was buried in the Pantheon; and the evidence altogether is of such a satisfactory nature, that it is the general if not universal belief, that the skeleton is that of Raphael. Since the Council of Trent, interment beneath altars has been prohibited: Raphael died 38 years before it." Dr Verity says, "Only two casts were allowed to be taken; one of which is in the possession of the Academy of St Luke, and the other is deposited at the house of Signor Fabris, professor of sculpture, 14 Via Felice, to whose care it was consigned by the Academy of the Fine Arts, with the view of aiding him in the execution of a bust of Raphael which had been ordered by the Pope. Learning that the casts were guarded with all the professional jealousy of their respective possessors, I was enabled, by the kindness of Sir William Gell, to employ the influence of Signor Nibby, professor of archaeology, in obtaining the consent of Signor Fabris to permit me to examine the one in his studio. The Professor assured me the cast might be depended upon as most accurate, the Government having employed for the occasion the most skilful artist in that department who could be found in Rome. With the exception of the upper part of the occipital bone, which is broken off, the cranium and bones of the face are perfect, and the lower maxillary bone is surmounted with a circle of teeth of great beauty. The organization appeared to be of exceeding delicacy, owing most probably to the fine quality of the osseous substance. The bones of the nose descend from the forehead boldly, and in a singularly forward manner, full and broad in the transverse direction between the orbits—the situation of the organ of Form; and so filled up are the internal lateral regions of the orbits, that I could not refrain from calling the Professor's attention to the point, when he assured me it was no accidental circumstance, but the exact fac-simile of the parts themselves in the skull. Certainly this combination of development is of striking beauty in the eyes of a phrenologist. Holding up the cast, and placing it by the side of a large engraving of Raphael, Professor Fabris begged me to observe how closely the features of the cast resembled those of the portrait. 'It is Raphael himself,' he said." The skull, we are further informed, differs from that of Don Desiderio Adjutorio, formerly supposed to be Raphael's, in being narrower, and having less general volume; but the combination of the organs is very favourable to the excellence in the fine

arts; and from the portraits of Raphael, but more especially from the delicate texture of the skull, it appears that the quality of the brain was exceedingly fine. It is well known that designing and expression were the departments of art in which Raphael most excelled; and in conformity with this, both of our correspondents notice a large development of Form and Imitation. The organ of Colouring Dr Verity states to be only full; a circumstance which holds also in the case of Don Desiderio. Constructiveness does not seem to be so protuberant as with the latter. On several points our friends are a little at variance; so that we refrain from offering any detailed remarks at present. Both agree as to large Amativeness, Concentrativeness, Adhesiveness, Secretiveness, Cautiousness, Love of Approbation, Imitation, Form, Size, Locality, Causality, and Comparison. Of the organ of Hope, Raphael had only a full or moderate development. Dr Verity adds: "In the Capitoline Museum, there is a bust of Raphael, executed by Carlo Maratta in 1674, giving very much the same development of the intellectual organs, of Benevolence, and of Imitation, as appears from the skull; together with large Form. In his own portrait, painted by himself, in the School of Athens, there is the same broad expanse of forehead, and a deep pensive intellectual expression pervading the whole countenance. His stature was below the average; and, as far as we can judge from portraits, his temperament must have been highly nervous, with that combination of the bilious so prevalent among the southern Italians."—We are informed that Don Desiderio Adjutorio was passionately fond of the fine arts, an amateur, a priest, a man of learning and refinement, and the founder of St Luke's Academy of Painting. Is it wonderful, then, that, in cerebral development as well as character, he and Raphael should have in many particulars resembled each other?

Dr WILLIAM STOKES, in a lecture delivered at the Medical School, Park Street, Dublin, and published in the London Medical and Surgical Journal of 21st June 1834, adverts at considerable length to Phrenology, and states that, in his opinion, "there can be no doubt that the principles of Phrenology are founded on truth." He falls, however, into the extraordinary error of stating that pathology is entirely disregarded by the phrenologists,—an avowment which he repeats in a great variety of forms throughout the lecture. "It is idle," says he, "to say, as they do, that theirs is the science of health, and that it is unfair to apply to it the test of disease. From pathology is drawn a host of facts, from which the doctrines they profess derive their principal support." Now, it cannot fail to be well known to every one who has perused the writings of Dr Gall, Dr Spurzheim, Mr Combe, or Dr Andrew Combe, that, almost at every turn, pathology is there referred to in support of Phrenology. Dr Gall's book, in particular, contains a regular array of "*Preuves Pathologiques*" of the plurality of cerebral organs. (*Sur Les Fonctions du Cerveau*, ii. 443-457.) In what work did Dr Stokes find the *idle saying* with which he charges the phrenologists? Though we are tolerably well versed in phrenological literature, it has certainly not hitherto fallen in *our way*. The Doctor expresses a strong desire to see the science in better hands than those of the rejecters of pathology, and adds, "We shall then, I have no doubt, recognise it as the greatest discovery in the science of the moral and physical nature of man that has ever been made."

Mr J. L. LEVISON's temper has been somewhat ruffled by our late notice of his book on Mental Culture; and he has, in consequence, heartily abused us in a letter published in the Berkshire Chronicle of 14th June 1834. Having already replied to him in a communication politely inserted by the editor of that paper, on 12th July, we deem only a few remarks necessary on the present occasion. The passage in our review which has given offence to Mr Levison is as follows:—"Want of space prevents us from giving any thing like an analysis of its (the book's) contents; but this is the less to be regretted, as the author's ideas seem, in many instances, borrowed from Dr Spurzheim." Now, what is the obvious meaning of this sentence? Simply, that as our readers were already acquainted with Dr Spurzheim's views on education, from having read either his own work or the analysis of it given in this Journal, they had little cause to regret the want of an abstract of Mr

Levison's book, in which the same ideas are expressed in an inferior manner. This is the sense in which the words were intended to be understood, and we humbly think they will bear no other interpretation. Mr Levison, however, finds in them a serious charge of "plagiarism," and speaks most feelingly of "the lash of the critic;" and he proceeds to justify his adoption of Dr Spurzheim's views, and to challenge us "to prove that, in any one instance, the *language* of Dr Spurzheim is servilely adopted." Now, in the first place, Mr Levison freely admits the whole extent of our averment, viz. that Dr Spurzheim's *ideas* are extensively borrowed, and consequently his cry of *facta non verba* is quite uncalled for; secondly, we did not say that the Doctor's *language* had been adopted; and, thirdly, Mr Levison received from us neither commendation nor reproof for repeating the ideas of Dr Spurzheim. The readiness, however, with which he has discovered in the sentence above quoted a meaning which it does not and never was meant to express, and the warmth with which his letter is written, have induced us to look again into his book, and we now without hesitation affirm, that Mr Levison, although, according to his own explicit confession, he has "reiterated the opinions" of Dr Spurzheim on education, *does not acknowledge his obligation to that philosopher for a single idea contained in the most important part of his book on Mental Culture*—the chapters, namely, where Phrenology is applied to the business of education, and which constitute nearly two-thirds of the whole work (p. 117 to p. 269.) But even now, we are far from complaining that Mr Levison has reiterated Dr Spurzheim's opinions on education; every one who aids in diffusing them has our best wishes, and we have no doubt that his book will be of service in spreading them abroad. We only assert as a fact, that he expounds many of Dr Spurzheim's ideas as his own, and thus puts himself in the way of receiving the honour which is justly due to another. Whether this is intentional or not, we do not pretend to judge. Had Mr Levison expounded in philosophical and accurate language the opinions of Dr Spurzheim, and avoided the errors which are mixed up with the great body of true and useful ideas contained in his work on Mental Culture, no periodical would have more willingly and heartily commended his production than the Phrenological Journal. He tries to exculpate himself by saying that he "has not acted half so much the plagiarist as the writers who principally contribute to the Phrenological Journal;" in particular, he charges Mr Combe and Mr Simpson with the sin, and denies all originality to the Scotch phrenologists. Nor does he fail to make use of misrepresentation in doing so. But even assuming Mr Levison's assertion as to want of originality to be true, there is this great difference between his mode of proceeding and that of the Scotch phrenologists, that the latter every where acknowledge, in the most open and explicit manner, their obligations to Gall and Spurzheim; and not only so, but, as the readers of our Journal are well aware, have for many years zealously defended the merits and reputation of these philosophers. The question whether the Scotch phrenologists have displayed originality of thought, we leave to the decision of those who have studied their writings and compared them with those of Gall and Spurzheim.

Mr Levison calls for an enumeration of the errors by which we stated his book to be disfigured. We could easily quote a variety of statements little redounding to his credit as a phrenologist; but having exhausted our space, and already gratified him by pointing out, in the *Berkshire Chronicle*, some of the principal blunders, we must now take leave of the subject.

The fifty-second number of *Fraser's Magazine* (April 1834) contains one of the most paltry attacks on Phrenology which we have seen for many years. Such specimens of controversy are admirably fitted to bring the cause of antiphrenology into contempt. The critic admits (what certain other critics deny) that Gall and Spurzheim made some valuable discoveries relative to the anatomy of the nervous system; but for nothing beyond this will he allow them the slightest credit. So hot is his zeal against their doctrine, that he manfully sets himself in array against the whole world of physiologists, and, in a fit of chivalrous and disinterested enthusiasm, declares he "would rather die" than concede that the brain is the material instrument by means

of which the mind carries on intercourse with the external world ! Does the critic really believe that any man can think in this world without brains, and that their only use is to save Nature from the horror of a vacuum in the skull ? With equal gravity he propounds the insufferably trite and contemptible piece of cant, that " Phrenology is now the stronghold of materialism ; " an assertion a thousand times refuted, and which no respectable opponent has ever brought forward. He affirms, moreover, that " phrenologists present us with analogy only," to establish the fact that the brain is an aggregate of organs performing different functions ! We marvel that Oliver Yorke admits such trash into his magazine : he ought in future to submit all antiphrenological lucubrations sent him for insertion, to the scrutiny of his friend the Modern Pythagorean, whom he knows to be no fool, and who would not fail to treat the writers according to their deserts.

RAMMOHUN ROY.—Some of our ideas about Rammohun Roy have been combated—though in a very friendly spirit—by a critic in the *Christian Pioneer* for July ; but we have been so ably defended in the August number of the same periodical, by an unknown Glasgow phrenologist, subscribing " M. A. C.," (to whom our best acknowledgments are due,) that any remarks on the subject in this place would be quite superfluous. The critic falls into various misapprehensions, which are well exposed by M. A. C. We still differ from both writers, however, in believing that Rammohun Roy doubted, at least till towards the close of his life, the miraculous origin of Christianity ; nor is it possible to depart from this belief, till the reasons which led to it, and which are detailed in our last Number, shall be invalidated.

HEAD OF NAPOLEON BONAPARTE.—A paragraph lately appeared in the London Medical Gazette, stating that Dr Antommarchi had published a bust of Napoleon, taken by Dr A. himself from the dead body of the Emperor ; and that this bust is chiefly remarkable for the smallness of its size, the measurements being under the average. No details are given, but the case is described as one very unfavourable to Phrenology. Now we have seen and handled the cast in the possession of Dr Antommarchi, and are therefore entitled to request attention to the following facts.

1. In October last, Dr Antommarchi possessed only a cast of the head as far back as a line passing downwards a little behind the vertex. The back part was wanting, and Dr A. was very anxious to obtain a copy of a cast of the posterior region of the head, which he stated to be in the possession of an English gentleman : from peculiar circumstances, however, he had very little hope of accomplishing this object. If, then, an entire cast has been published, it is, in all probability, authentic only in the middle and anterior regions, the back having been added by guess to make a bust. But,

2. The cast in the possession of Dr Antommarchi, as far as it goes, we can state, from personal observation, to be of a *very unusually large size* ; almost every organ included in it being remarkably well developed. We had not permission to measure it, and indeed the measurements of a half bust would not have been satisfactory ; but we are sure that, if the back part of the head was only in proportion to the parts seen in the cast, the whole head must have been one of the largest in Europe. We have no doubt that if Dr Antommarchi has procured the authentic cast of the posterior portion, and joined the two halves accurately (a matter of some difficulty, as they are not halves of one cast, but taken separately), the head will be found to correspond with our description of it. It is proper to explain, that when Dr A. took a cast of the head, the back part, as he informed us, was broken, owing to a deficiency of plaster, which caused it to be very thin, and that another cast of that part was subsequently made. In joining this to the other, if he had procured it, he was to have been guided by measurements made on the actual head.

Further observations would be superfluous until we either see the bust or obtain correct measurements, along with proper evidence of its authenticity. From the foregoing statement, our readers will be able to judge how far the *anti-phrenological fact* of the Medical Gazette is worthy of credit.

EDINBURGH, 1st September 1834.

THE
PHRENOLOGICAL JOURNAL.

No. XLII.

ARTICLE I.

**THE PHYSIOLOGICAL CHARACTERS OF RACES OF MANKIND
CONSIDERED IN THEIR RELATIONS TO HISTORY;** Being
a Letter to M. Amédée Thierry, Author of the *History of the Gauls*. By
W. F. EDWARDS, M. D., F. R. S. L. &c. &c. Paris, 1829.

THE very interesting work of the title of which a translation is prefixed, may be divided into two parts. In the first, the author endeavours, and we think successfully, to prove that a race, if not extirpated, continues, however it may be mixed with others, to present its characteristic features, and may thus be recognised after the lapse of many ages; and, in the second, he gives some examples of the application of this important principle in discovering, among modern nations, the descendants and representatives of various ancient races, commonly supposed to have been lost in the mixture of tribes which followed the various conquests and settlements which have taken place in Europe.

Dr Edwards justly observes, that, "When a people is conquered, and has lost its independence, as it no longer forms a nation, it ceases to exist in history; and we are tempted to believe that in such revolutions each disaster annihilates the previously existing races. But an attentive study of languages enables us to detect, in those spoken at the present day, the ancient idioms which have formed them, and thus to trace, in countries where otherwise we should never have suspected it, an uninterrupted connexion between the ancient and the modern inhabitants. If, then, the forms of speech leave traces which betray their ancient origin, what are we to think of the physical characters of the race? Are they less permanent? Do we retain nothing of the features of our ancestors? Has climate so changed them that they can no longer be recognised? Has the mixture of races confounded every thing? Has civilization regenerated every thing? Has decay degraded every thing? Has force exterminat-

ed or expelled entire peoples? Such are the questions which must be briefly examined, before coming to the observations which are the subject of this work."

On the question of **THE EFFECTS OF CLIMATE**, the author observes, that we must attend not to extraordinary and perhaps isolated instances, but to the general results when large masses of beings are exposed to this cause. He shews that the greater number of plants, when brought into a new climate, retain their peculiar character, if they survive; and the same is the case with animals, with the remarkable exception of the well known changes in their fur and other coverings; but here the essential characters remain unaltered.

All the European nations have sent portions of their population into distant countries; and, as many of the colonies thus formed have existed very long, we can judge by them of the effect of the prolonged influence of climate. Now, asks Dr Edwards, do England, France, or Spain, find it difficult to recognise the descendants of the original colonists? Do not these colonists, on the contrary, exhibit the proper characters of their mother country? But as these characters, in the European nations, are not single and uniform, but mixed to a considerable extent, and consequently admit of some hesitation in pronouncing upon them, let us take, says he, an example which will leave no doubt on the subject. The physiognomy of the Jews is so marked, that it is universally known and recognised. They may be considered as colonists in all countries and climates; and, as they have preserved their customs, and have mixed little with the surrounding tribes, they are in the most favourable circumstances for shewing the real effect of climate.

In the first place, then, Jews in all countries resemble each other, and differ from the people among whom they live. Secondly, at distant periods, they had the same external characters. In the Last Supper of Leonardo da Vinci, this painter, who was an excellent naturalist and close observer, has painted faces which might be portraits of living Jews. This was 300 years ago; but we have evidence, that 3000 years ago the Jews had the same characters.

In the copy of the paintings adorning the tomb of an Egyptian king, exhibited in London about ten years ago, there are representations of four different races in procession:—1st, The natives, very numerous, of a dark brown tint, but without the woolly hair of the Negro; 2^d, Negroes, with the black skin, thick lips, and woolly hair of that race; 3^d, Persians; and, 4th, Jews, distinguished, says Belzoni, by their complexion and physiognomy. Dr Edwards says, "I had seen on the previous day, Jews in the streets of London; I thought that I now saw their portraits."

Here, then, is a people, existing with the same type in every variety of climate, and for ages. We could not desire a better experiment to ascertain the effect of climate. Even supposing that other nations might not so powerfully resist its influence, we must admit that such is the tendency of nature, and that, if no other cause were in operation, races of men would preserve the characteristic features of their ancestors, during a long course of ages, in every climate.

Next, as to THE MIXTURE OF RACES. This cause, to which all modern nations have been more or less subjected, seems likely to effect more important changes. If the mixture of races were unlimited, perhaps it might confound all; but it has evident limits. The differences of caste and rank, originating often in difference of race, oppose to it a barrier which is now and then overleaped, notwithstanding the force of laws and prejudices, but which long restrains the mass. Let us, however, suppose all artificial restrictions removed, and observe the result.

First, we must consider the relative number of the two races. Supposing a *very great disproportion*, the type of the smaller number will finally disappear. If a Negro and a white produce a mulatto, this mulatto with a white produces an individual nearer to the white; and after five and sometimes even four crossings with white blood, the black taint can no longer be perceived. The same is observed in domesticated animals. This conclusion, at first, appears unfavourable to the search after ancient races among modern nations; and it would be so in the case of such races as had formed but a minute fraction of the mass; but where the mass has been great and preponderating, this principle shews, on the contrary, that the type of the race must still exist. If, then, where no restrictions as to mixture of races exist, the least numerous, if the disproportion be great, finally disappears, still less will the type of the more numerous be altered, if, as in most cases occurs, such restrictions do exist.

Let us now take the other extreme case, namely, where the two races are *equal in number*. What is required, that both should disappear, and form only one intermediate type?

Each individual of the one race must unite with an individual of the other, or at least each race must have nearly an equal share in the amalgamation of physical characters. Such are the conditions absolutely necessary; and if their occurrence be not impossible, it is, at least, in the highest degree improbable.

When animals of different species are crossed, they produce an animal of an intermediate type, or a mule; but when different varieties of the same species are mixed, the result is often quite different. M. Coladon of Geneva made a very striking experiment, which bears strongly on this point. He procured a great number of white mice, as well as of common brown mice,

studied their habits, and found means to cause them to breed. In his experiments he always put together mice of different colours, expecting a mixed race; but this did not occur in one instance. All the young mice were either white or brown, but each type was produced always in a state of purity.

Even in the case of varieties of the same species, we have an intermediate type or mule, but this is when the varieties differ most from each other: when, as in the case of the mice, they approach very nearly, mules are not produced. In both cases we see one common principle, namely, that the mother often produces a being of a type different from her own,—less so, however, in the latter case. The same principle is seen even in the same variety; for here also the mother, in producing a male, gives birth to a being whose type differs, and in some cases differs very much, from her own.

Now, the same is observed in man. The varieties which differ most strongly, such as the Negro and white, when crossed, produce mules; and when varieties more nearly resembling each other are crossed, the descendants sometimes resemble one parent, sometimes the other, sometimes both. This is the cause of the great variety observable in modern nations; among which, however, we can always observe specimens of the pure types which have entered into their composition. Thus, even if two races having considerable resemblance to each other, and in equal numbers, were to mix without limitation, the original types would still frequently occur in their descendants.

Another cause which prevents the disappearance of the original types, where there has been no great disproportion of numbers, is the geographical distribution of the races. They cannot be so thoroughly mixed that the one or the other shall not predominate in some district, where, of course, the type of the race so predominating must exist.

A type may occasionally disappear by extermination. Thus the Guanehes, savages who inhabited the Canary Isles, have disappeared; but their number was small, and they were confined to small islands. The Caribs, likewise, for the same reason, have almost disappeared from the Caribbee Islands, although they are said still to exist on the continent. But it is impossible to extirpate a numerous nation, more especially when they have attained a certain degree of civilization. In that case, it becomes the interest of the conquerors to preserve the conquered people as slaves, and not to destroy them; and we have no example in history of a *whole people* sacrificing themselves rather than submit to such slavery. On the other hand, we must suppose an incredible rage and cruelty on the part of the conquerors, if a whole people is to be exterminated. When it was proposed to Genghis Khan, by some of his counsellors, to extirpate the Chi-

nese whom he had conquered in the north of China, as being useless to the conquerors, one of his ministers, Yeliu-thou-tsai, made the emperor observe, that in advancing towards the south, his armies would be in want of many things which it would be easy to procure by imposing on the conquered people contributions, not oppressive, of money and provisions.—How then could it be said that such a people was useless to the state? This reasoning prevailed, although the cruelty of the Mongols was atrocious; and such reasons will always oppose the extermination of populous nations, possessed of some civilization.

A nation, that is, a numerous people, may be dispossessed of a large territory. This, however, has rarely happened, and only in the case of savages. It has occurred in America, but not in Hindostan. Where industry exists, the chiefs cannot induce a nation to emigrate in a body; and if conquered by a new tribe, the latter expels a portion to obtain room, if nomadic, but preserves the rest, as slaves, as auxiliaries, or as tributaries. These conclusions are confirmed by history; and M. Abel Remusat has even been able, by comparing language with history, to discover nearly all the nomadic tribes of Asia in their primitive seats, notwithstanding the numerous revolutions and conquests which have occurred in that quarter of the globe.

As to the influence of CIVILIZATION on physical characters, we know nothing, either one way or the other; but its effect cannot be great, as it is commonly confined to the higher classes, except to a very small extent; and besides, wherever distinct types are seen, they will be found to pervade all classes of society.

Having now considered the chief causes,—climate, mixture of races, and civilization,—that might affect the physical characters of a race, and found that these causes are not capable, in ordinary cases, of annihilating the original type, we are prepared to find among modern nations the types of those tribes which have formerly occupied the soil.

We have seen that, if the accession of new tribes increases the number of types, it does not destroy them. The number increases by those which the new people brings, and by those which it creates by mixture; but the old ones remain, and exist along with the new, except where a particular tribe has been small in number, in which case the type of such a tribe may have disappeared; but it *may* have also been preserved, for obvious reasons.

Of course we will naturally expect to find the descendants of the most numerous nations.

In reading the historical accounts of the destruction of the Roman empire by barbarous tribes, we are apt to imagine that their numbers were immense, and that there was scarcely room

for them ; but, on examining more closely, we find that this impression is erroneous. The Goths, who conquered the Heruli, a race which preceded them in Italy, had only 50,000 men to oppose to Belisarius. They were finally reduced to 7000, who capitulated and were sent to Constantinople. The Lombards, who possessed nearly half of Italy, and gave their name to a part of it, remained there ; but, according to Botha, they did not exceed 100,000 armed men. The Normans, who conquered Naples and almost the whole of the south of Italy, were but a handful of men ; and the Franks under Clovis, who possessed themselves of Gaul and gave their name to that country, were far from numerous.

Still later, William the Norman conquered England with 60,000 men. These were memorable conquests, which totally changed the face of affairs in these countries, but which cannot have produced any considerable changes in the types of the conquered races ; and such is the history of most conquests, in which a nation does not fall upon a nation, but a small portion of one people subjugates the entire country of another.

In some cases, indeed, where a country has been exposed to successive invasions from the same race, the latter has established itself in such numbers as to continue to perpetuate itself in its new abode. It was thus the Saxons obtained possession of England, and retained, from their numbers, their own characters, without, however, exterminating the previous inhabitants.

We have consulted natural and civil history, and both agree in the conclusion that the direct descendants of almost all the great nations of antiquity must still exist. Now, as we have seen that physical characters are transmitted without much change, we may expect to find the types of these nations at the present day.

The proper plan is obvious. We must observe whether, in those nations which we study, there be one or more distinct types, and we must then trace these types to their origin.

The characters which most strongly distinguish a type, are certainly those drawn from the proportions of the head and of the features, since these are the characters by which we recognise the individual. Thus the representation of a man by means of a bust, will always give a much clearer idea of his individual character than any description which it is possible to give. The description would apply to the race, but would never serve to distinguish the individual. The modifications relative to complexion, stature, and colour of hair, are considered important but secondary, because they are more apt to be changed by external circumstances.

Having formed an idea of the type, it must, if correct, occur in a large number of individuals. If not, we can have no con-

fidence in it. It will be seen immediately how well these conditions have been fulfilled, in the observations of Dr Edwards, which form the second part of his work. To the consideration of this we now proceed.

In travelling through France, Italy, and a part of Switzerland, Dr E. had scarcely reached the frontiers of Burgundy, when he began to observe a union of features which constituted a particular type. This became more marked and frequent as he penetrated into the country, especially from Auxerre to Châlons. He arrived in this latter town on a market day, and immediately repaired to the market to study the faces of the peasantry from the surrounding country. He was astonished to find a great many of them totally different from those he had first observed, and forming a strong contrast to them. During the rest of his journey in Burgundy, the first type occurred frequently, and continued in the Lyonnais, in Dauphiné, and in Savoy, as far as Mont Cenis. There were in this large district many shades of colour; but, with the exception of the group at Châlons, only one well marked type of head and face. Both types shall be afterwards described.

In Florence, Dr E. took the opportunity afforded by the Ducal Gallery to study the Roman type in the busts of the emperors; among which, especially those of the earlier emperors, he found a type so well marked, that it is difficult to forget or to mistake it. In this type, the vertical diameter is short, and consequently the face broad. As the coronal region is flat, and the lower edge of the jaw nearly horizontal, the head seen from before has a square aspect. This form is so essential, that if the head be lengthened, preserving the other features, it ceases to be characteristic, even supposing it to be the exact portrait of an ancient Roman. The lateral parts of the head above the ears are arched, the forehead low, the nose truly aquiline, that is, the curve commences near the root and stops before reaching the point, so that the base of the nose is horizontal. The front of the chin is rounded. This type is well seen in Augustus, Pompey, Tiberius, Germanicus, Claudius, Nero, Titus, &c.

As Dr E. travelled towards Rome, expecting to find the Roman type in that city, the resemblance to it must have been very striking to attract his attention among the peasantry of Monte Gualandro, where he entered the Papal territory; and he saw the same character in a great many individuals on the road at Perugia, Spoleto, &c., till he arrived in Rome, where it exists in all classes of society. His companions observed it as well as himself. Dr E. does not say how far this type extends to the southward; it is not seen at Naples, but to the north of Rome it is found not only towards Perugia, but in the direction of Sienna, and even beyond Viterbo. This type is characteristic of

these districts; and it is remarkable that it is seen in the soldiers and others on ancient bas-reliefs, as well as in the emperors; and as Rome was founded by a small band, it was probably even then the type of the surrounding country. According to Niebuhr, the Sabines and other enemies of the Romans were of the same race as their conquerors. This race appears to have extended formerly, as now, into Tuscany.

But another type was found along with it in this latter country by Dr E.; and one which had long attracted his attention. All the busts and pictures of Dante agree in giving that poet a very marked physiognomy. He had a long head, not broad; the forehead was high and well developed, the nose curved so that the point of it drooped, the wings of the nose raised, and the chin prominent.

Dr E. saw at Radicofani people who possessed this type, and one of whom was the image of Dante. He had also observed it in the busts of many of the Medici, and other distinguished men of the Republic of Florence; and even traced it in some Etruscan bas-reliefs. He continued to observe it at Bologna, Ferrara, Padua, and the intermediate towns. It was very frequent at Venice. When examining at this last place the picture of a saint painted by one of the Venetian school, the cicerone desired him to observe how much it resembled Dante. In the Ducal Palace he observed that a great majority of the Doges, whose portraits he saw, had the same character.

In proceeding towards Milan, this type became still more frequent, and was sometimes absolutely caricatured. In one village where he stopped for an hour or two, he saw a number of peasants, and could scarcely take his eyes off them, so great was their similarity to those whom he had seen in the market place at Châlons. Being now in Cisalpine, as he had formerly been in Transalpine Gaul, he naturally concluded that this was a Gaulish type. In crossing the Alps, he met first with a German type, then with the Burgundian, and finally near to and in Geneva, with the type observed at Châlons and in Tuscany. Here, then, was a population composed of two races, each having its own type, and forming a complete contrast to each other. The one observed in Burgundy, Dauphiny, Savoy, and the Valais, having the head more round than oval, and rounded features, with a middling stature. The other, observed in Tuscany, at Geneva, and at Châlons, having the head long, the forehead broad and high, the curved nose, the prominent chin, and a tall stature. With the Roman type we have nothing to do at present.

M. Thierry, to whom the work of Dr Edwards is addressed, has shewn in his *History of the Gauls*, that the greater part of

Gaul was occupied by two great families, differing in language, habits and social state.

Dr Edwards discovers in the same part of Gaul two predominant types, so distinct that it is impossible to confound them. Had there been no foreign intrusion, we could not hesitate to ascribe these types to two Gaulish tribes. But we know that since the period alluded to, different nations have successively conquered the whole or parts of this territory. How, then, are we to distinguish? On the principle established previously, that the smaller number never imposes its type on the larger. Now we know the extreme disproportion of the conquerors of Gaul to its inhabitants, who have consequently retained their own type.

Of these two families, which are named by M. Thierry Gauls and Kimris (Cimbri), the former should be the more numerous, as he has shewn that they were the ancient inhabitants, who occupied almost the whole of Gaul before the establishment of the Kimris. Hence Dr Edwards concludes that the type first observed by him in Burgundy, which was the most numerous, is that of the Gauls, and the other that of the Kimris; and their geographical distribution corresponds to this view.

The type of the Gauls is as follows:—The head is nearly spherical. The forehead of middling size, somewhat arched, and retreating towards the temples. The eyes are large and open. The nose is nearly straight, and rounded at the point. The chin is likewise round; and the stature is middling. In a word, the head is more round than oval, the features rounded, and the stature middling. This type occurs in the east and south-east of France, where M. Thierry, from historical considerations, places the Gauls.

The Kimris, whose type has already been described in speaking of Dante, are placed by M. Thierry chiefly in the north of France, in the Belgium of Cæsar, and in Armorica. Now Dr Edwards in a former journey had observed this type to predominate in the most marked way in the country extending from the mouth of the Somme to that of the Seine, and we have seen that he recognised it at Châlons and in Tuscany. Although occurring in Burgundy, it cannot be the type of the Burgundian conquerors, because it appears in Picardy and Normandy, where the Burgundians never appeared; neither can it be that of the Scandinavian Normans, because it occurs at Macon and Châlons in Burgundy, which the Normans never approached. It must therefore belong to the previous inhabitants, the Cimbri or Kimris.

According to M. Thierry, England was chiefly occupied by the same people who possessed the north of Gaul, viz. the Kimris, and Dr Edwards has recognised the type of this people

very abundantly in England. Those who exhibit it he considers as the descendants of the ancient Britons, whose supposed extermination he very properly doubts.

In that part of Switzerland where French is spoken, formerly called Helvetia, Dr Edwards finds both races. The Helveti, according to Thierry, were Gauls, but must have been either then or subsequently mixed with Kimris.

From the earliest period, the north of Italy, between the Alps and Apennines, was inhabited by Gaulish races. Thierry says, that both Gauls and Kimris formed the population of Cisalpine as well as of Transalpine Gaul. We have already seen, that the type of the latter is abundant in the north of Italy; and Dr Edwards also saw the type of the Gauls, though less distinctly and marked, in some parts of that country.

One very curious observation led him to suppose that this type might occur more frequently in those districts which he had not visited in the north of Italy. In a bookseller's shop at Milan, he saw an almanac containing a print, which represented two grotesque characters mocking each other. These figures were the most exact caricatures of the Gaul and Kimri types, even to the difference of stature, the Kimri being very tall, and the Gaul of middling size. The painter surely thought neither of natural history nor of antiquity, but he must have drawn from what was before him, and furnished a ludicrous contrast. The gigantic Gauls, described by the Roman historians, were obviously Kimris. Dr Edwards has observed, that a tall stature very often accompanies the Kimri type in France, England, Switzerland, Italy, in short, wherever he has seen it. This also accounts for the circumstance, that in France, where the Gaul type predominates, the people are not tall, so that the question is often asked, what has become of those gigantic Gauls, formerly so terrible? They are still to be found even in France wherever the Kimri type prevails, as in Normandy.*

Such are the conclusions of Dr Edwards with regard to these two races. He next examines some of the Slavonic tribes, which are found in the east of Europe. Having had an opportunity of examining many Austrian troops, he separated the different nations from each other, and studied their physical characters. There were Silesians, Bohemians, Moravians, Poles, and Hungarians. In none of these, however, did he find a characteristic type peculiar to the individual nation. But he soon saw a type which occurred frequently in all of them, and

* See the second article of our 18th number, (vol. v. p. 194), for an account of the comparative degrees of intelligence manifested by the inhabitants of the different departments of France. See also, with respect to the Gauls and Kimris, Malte Brun's *System of Geography*, Edinburgh edition, vol. vi. p. 77.

which he recognised as the Slavonic type. It is found in the east of Europe, mixed with the German type, occurring very frequently among the nations above mentioned, and also among the Russians and Austrians. It is unnecessary to enter into details on this part of the subject.

Among the Slavonic nations, Dr Edwards includes only a portion of the Hungarians, chiefly those inhabiting a circular strip of territory, varying in width, on the frontier of Hungary. But the central part of Hungary is peopled by a nation speaking the Magyar language, which is quite different from the Slavonic Hungarian. This would lead us to conclude, without consulting history, that a foreign people had established themselves among the Slavonians, who may possibly represent the Dacians, the earliest inhabitants of this part of Europe. But what was the origin of the Magyars? Dr Edwards has observed that many of those who speak the Magyar language and pass for Magyars, are of Slavonic type. Supposing the Magyars to have conquered Hungary, they would, from their political ascendancy,[†] have perpetuated their language; while the Slavonians, from their superiority of number, would have perpetuated their type. But Dr Edwards has shewn, that another type exists in Hungary, and is quite peculiar. He found it by comparing those Hungarians who were not of Slavonic type. This new type corresponds accurately with the descriptions given by ancient authors of the Huns, who, in the fifth century, overran Hungary. The establishment of the Magyars took place in the ninth century. This type, which Dr Edwards calls the Hun type, seems to him too abundantly diffused to have resulted from the Huns alone, whose empire in Hungary fell to pieces soon after the death of Attila, and who must have been greatly reduced in number by their constant wars. It has even been said that they were exterminated, which is improbable, but at all events their type must have been extended by some subsequent irruption of a similar race, probably the Magyars. Now the tradition of the latter people is, that their chief, Arpad, was descended from Attila.

But further, the Hun type is Mongolian, and therefore we should trace the Huns to Asia. Now, De Guignes, in studying the races of the east of Asia, shows us a tribe called Hioung-nou in their original seat, follows them to the westward, and finds them connecting themselves with the Finns, and establishing themselves in Hungary. Dr Edwards tells us, that the Finnish type is different, but that the Magyar language is Finnish to a great extent, thus confirming the deductions of De Guignes, which were founded solely on historical considerations. The Hun or Mongol type, therefore, which is almost universal in the eastern half of Asia, is found in different parts of the west

of that continent, in Russia, and in Hungary. The study of the languages of the people possessing this type connects them all with the Mongol race.

It is justly observed by Dr Edwards, that this correspondence in the results obtained by different means, adds greatly to their interest. "If," says he, "De Guignes, beginning in the east of Tartary, recognises the same people in their distant expeditions, and in their communications with the Finns, and follows them even into Hungary; on the other hand I recognise, in a part of the inhabitants of Hungary speaking a Finnish dialect, physical characters which prove their ancestors to have come from Eastern Asia."

Dr Edwards gives some very ingenious remarks on language, and particularly on pronunciation, as a natural character. He distinctly traces, on the authority of Mezzofante the celebrated linguist of Bologna, the resemblance of the dialects and especially the pronunciation of northern Italy to those of France, to the fact that in both countries the Latin language was imposed on a Gaulish tribe; and shews that, as in the case of the English, the original tongue, (in this case Celtic), although lost, communicates a peculiar and recognisable accent to the language which has supplanted it. We shall not, however, dwell on this division of the subject, but rather offer a few remarks on that part of the work which more particularly interests us as phrenologists.

No one can read Dr Edwards's interesting statement without regretting that he had not the assistance of Phrenology, which would have doubled the interest and importance of his discoveries.

But, although not a phrenologist, we find him describing the characters drawn from the head and face as the most important, and laying great stress on the form of the head in all his types. We are therefore entitled to conclude, that where the type of a race appears pure, we shall find likewise the prevailing cerebral development of that race; and it is much to be desired that some of the many scientific men who have the opportunity, should endeavour to fill up the blank left by Dr Edwards. We should then see the national character as described in history illustrated by the development, while the identity of the race would be shown by the external characters or type.

While, therefore, we would offer our best thanks to Dr Edwards for this valuable contribution to the natural history of man, we earnestly hope to see the subject taken up, not only on a more extended scale, as Dr Edwards himself recommends, but also on phrenological principles.

ARTICLE II.

AN ESSAY ON THE TEMPERAMENTS. By MR DANIEL NOBLE,
Member of the Royal College of Surgeons in London. Read before
the Members of the Manchester Phrenological Society, April 30. 1834. *

THE doctrine of the temperaments has been variously considered, in different ages, and by different individuals. The ancients, with Hippocrates at their head, regarded the bodies of all the higher classes of animals as consisting of four elements, viz. of blood, of a watery fluid, and of two kinds of bile, yellow and black; and the temperament was defined according as each of these assumed elements had the predominance. The word *temperament* is derived from the Latin *temperare*, to mix, to *temper*; and, in the popular acceptance of the term in modern times, it is used to denote the result of a mixture or *tempering* of all the qualities, bodily or mental, characteristic of the individual; just as, by the ancients, it was employed to designate the kind of mixture in each animal body, of what were considered to be its elementary constituents. Hippocrates, in following up the views of his predecessors and contemporaries, established four *genera* of temperaments, which he denominated from the fluids whose excess he regarded as the cause of their existence:—first, the *sanguine*, produced by an undue predominance of the quantity of blood in the system; next, the *lymphatic*, dependent upon an excess of the watery fluid in the various animal tissues; third, the *bilious* or *choleric*, resulting from a surplus of the yellow bile; and, lastly, the *atrabiliary*, or *melancholic*, produced by an excess of the fancied elementary black bile. These respective peculiarities of temperament were considered to be associated with corresponding powers and dispositions; and thus what in the present day we regard as the combined effect of temperament and cerebral organization, was attributed by the disciples of this school to the influence of the temperament only; the sanguine temperament, for instance, being considered to be associated with quickness of perception, tenacity of memory, a lively and luxuriant imagination, a disposition readily roused to anger but as easily appeased, and an undue attachment to the indulgence of sense; and, in like manner, each of the other temperaments was regarded as the cause

* This essay, which we have taken the liberty slightly to compress, is inserted not so much on account of any novelty in the author's views, as with the object of keeping alive the attention of phrenologists to the very important subject of the temperaments, and of stimulating to farther diligence those who have of late years been endeavouring to elucidate their origin and effects. —ED.

of certain other mental characteristics. These views, in their main bearings, have continued in great favour with many physiologists even to the present day. In its popular acceptation, the word *temperament* is employed in a more extensive sense; for we frequently hear the slightest peculiarity in individuals attributed to their temperament: thus the brave man is said to be of a courageous temperament; lazy people are said to be of an indolent temperament; individuals distinguished for warmth of feeling are described as being of an ardent temperament; persons of great muscular energy and agility are said to be of an athletic temperament, and so on.

It would appear from an attentive observation of facts, that the powers of the mind, as well as the vegetative and mechanical functions of the system, are influenced, in a variety of ways, by the quality of their material organs; and whilst it would seem that mere native power of function is intimately dependent upon the character of the *solid* structures of the frame, it would appear that the *activity* of the functions, and more especially the cerebral, is intimately connected with the character of the *fluids*. No illustration is required by the members of this Society to enable them to appreciate the distinction between *power* and *activity* of any human faculty. We are all aware that, in respect to the muscular system, one man is exceedingly quick, restless, and vivacious, but unfit for energetic labour; while another is little disposed to exertion, tardy in his motions, but able, when set to work, to execute feats of strength which the first individual would attempt in vain. There is a perfect analogy, in this respect, between muscular power and all the other animal functions, including those of the brain and nervous system; and this difference is to be traced to variations in the character of the organs necessary for their manifestation. As a general rule, I think it may be stated that *power* is for the most part dependent on the quantity of the solid material of the organization, and *activity* upon the character of the fluids. I am aware that it may be objected, that it is a difficult and almost hopeless attempt, to point out the lines of demarcation—where the solid and where the fluid materials begin, end, or run into each other. My reply is, that we have here an objection to which the present state of our knowledge will not afford a complete or satisfactory answer; but nevertheless, although, at present, we can receive but minute glimpses in our investigations of this subject, still we must avail ourselves of the lights we happen to possess, and not reject partial illumination because we cannot, at once, enjoy the full blaze of a meridian sun. For ordinary purposes, there can be no difficulty in specifying the solid and the fluid constituents of the body.

The temperaments are considered, by phrenologists, as fairly

divisible into four *genera* ; and the division is, to some extent, founded on the principle which guided Hippocrates in his classification. Spurzheim regarded the activity of the mental powers as being modified by the influence of the sanguineous, lymphatic, and biliary fluids ; and by peculiarities in the excitability of the nervous system, probably dependent upon the existence of a nervous fluid, as supposed by many physiologists. He considered the lymphatic temperament as *least*, and the nervous as *most*, predisposing to cerebral activity ; and in estimating, by physical signs, the mental characteristics of any individual, he never lost sight of the importance of the temperament. It is to be regretted that Spurzheim's example, in this respect, has not been well followed by many of his disciples, who, in their phrenological manipulations, are all alive to the *size* of the organs, but almost totally neglect the circumstances affecting their *quality*. In consequence of this neglect, numerous errors have been fallen into.

As least favourable to functional activity, I shall first describe the characters and general results of the *lymphatic* temperament. This is considered to depend upon an undue predominance of the watery constituents of the various animal materials, as in the glandular, serous, and mucous secretions, and of the quantity of the serous portion of the blood. And as the various organs of the human frame, more particularly the brain, seem to act upon the application of *stimuli*, so it is considered, that, with the lymphatic temperament, the fluids of the body are of the least stimulating quality. The physical characteristics of this temperament are a softness of the fleshy parts, from undue repletion of the cellular tissue ; commonly a fairness though thickness of the skin ; the hair most usually of light, flaxen, or sandy complexion ; a plumpness of figure, but without expression ; the pulse weak and slow ; and a languor and want of energy in all the vital actions. Individuals of this temperament are generally remarkable for their aversion to both mental and corporal exercise ; and whatever be the native power in either of these respects, the deficiency of activity, in its exercise, will even operate as an unsurmountable barrier to the attainment of first rate excellence in any pursuit. Persons of the lymphatic temperament, with the highest mental power, will be surpassed in their qualifications for the common and extraordinary duties of life, by individuals of far less native strength of mind, but who, with a more favourable temperament and consequent love of exercise, have laid in larger stores of mental possessions. In drawing inferences, therefore, from combinations of development of the cerebral organs, the greatest possible caution should be observed when the temperament is lymphatic, as sometimes the activity of powerful organs will hardly have been induced, in the absence of strong external stimuli.

The *sanguine* temperament is supposed to depend upon a predominance of the vascular system over the rest of the tissues of the animal economy ; the quantity of blood circulating in the system being in a proportion sufficiently great to characterise the individual. With respect to the nature of the circulating fluid in this temperament, I suppose we are to regard it as being constituted with a somewhat considerable proportion of the more nutrient ingredients, as the *fibrin*, the *albumen*, and the saline materials ; and, hence, in the course of the circulation, more effectually stimulating the various organs, than when of a more watery or lymphatic composition. The sanguine temperament may be distinguished by the red or light brown hair, blue eyes, and a fair florid complexion : the arteries and veins are large, and generally superficial, the pulse full and frequent, the skin soft, tolerably thin, and somewhat delicate ; the body largely made, and inclined, especially in the middle period of life, to obesity. This temperament, probably more than any other, is generally regarded as influencing the mental economy otherwise than by its effects upon the activity of function ; and, by many able physiologists, it is considered to be the bodily condition producing the powers and dispositions specified when speaking of the sanguine temperament at the commencement of this paper. An appeal to facts will readily set the matter at rest ; and I defy every physiologist in civilized Europe to adduce this or any of the temperaments, as invariably associated with any peculiarity of human character. Individuals of the sanguine temperament are decidedly of a more active disposition than those of the lymphatic : at the same time, there is most commonly a disposition to indolence and mental inactivity, in the absence of any very powerful motive ; and this is probably owing to the predominant energy possessed, in these instances, by the organs of vegetative life,—great activity of one portion of the system always, *ceteris paribus*, detracting from the activity of another. Nevertheless, we shall find, that these individuals, when strongly excited, will be second to none in vigour of conduct ; and it is highly probable that the reason why we so frequently observe the animal propensities in a state of activity with the sanguine temperament is, that, in the mass of mankind, these, so far surpassing in native energy the moral and intellectual faculties, more frequently afford powerful motives of action.

The *bilious* temperament affords a still higher degree of functional activity than the sanguine ; and is considered by many to depend upon a redundancy of power in the biliary system ; as the last was regarded in connection with a similar condition of the sanguineous vessels. It may not be a very easy matter to convey a precise idea of the mode in which the bilious temperament produces its results upon the cerebral organization ;

but I will endeavour to explain, in as few words as possible, the views which suggest themselves to my mind, respecting the matter. As before observed, I consider the influence of the temperaments upon organic activity to depend upon the peculiar states of the animal fluids, characteristic of each; and, in the case of the lymphatic and sanguine temperaments, I have attempted to suggest the *rationale* of their effects upon the system. But, in the case of the bilious temperament, I confess that I do not see my way quite so clearly. However, I would observe that we must regard the biliary system in two points of view—in relation to the depuration of the venous blood, and to the healthful stimulation of the alimentary canal. It is a fact, than which none in physiology can be better established, that a due arterialisation of the blood is essential to the full possession of its vital qualities; and it is absolutely necessary to the attainment of this object, that the noxious and superfluous ingredients of the venous blood should be eliminated from its composition. One great agent, in effecting such elimination, is the liver, the organ which secretes the bile. Now, as the secretion of the bile constitutes so striking a feature in the necessary re-integration of the blood, we may be able, from this circumstance, to arrive at some general notion as to the necessary influence which the state of the biliary system must have upon the functions of the cerebral organisation. Again, the intimate sympathy at all times subsisting between the brain and the alimentary canal, may lead us to appreciate the importance of any diversity in the permanent character of a secretion so materially influencing the healthful condition of the latter; for the bile is universally known to act as a powerful stimulant upon the intestinal tube, into which it is conveyed from the liver by its own proper duct. Hence, it might readily be inferred *a priori*, that functional activity must be modified by the character of the biliary system; and observation has established that its energetic condition produces a temperament midway, in its results, between the nervous and the sanguine. In the bilious temperament, the pulse is strong and hard, as in the sanguine, but somewhat more frequent; the veins are cutaneous and projecting; the complexion of a somewhat swarthy character; the hair black, or of a darkish brown; the body moderately fleshy, and the muscles firm and well marked; and, often, there is a peculiarly strong and harsh expression of the countenance. Individuals characterised by this temperament have generally a considerable share of native energy, manifesting their predominant powers and dispositions with remarkable keenness. Unlike individuals of the lymphatic or even of the sanguine temperament, they require no very powerful external stimu-

lants to produce such a result. On the whole, I should be disposed to regard the possession of this temperament as most favourable, *ceteris paribus*, to the attainment of first rate excellence, in the generality of pursuits; and from the descriptions of historians, I should suppose that Alexander the Great, Cicero, Julius Casar, Attila, King of the Huns, our own Richard III., and Oliver Cromwell, were all of this temperament. Generally, indeed, the individuals who, under all circumstances, evince a kind of indomitable activity of character, are found to be of this temperament; they are neither enticed to indolence or sensuality by the lymphatic or the sanguineous constitution, nor too speedily exhausted of power, as is very often the case with individuals of the nervous temperament.—I need scarcely observe that the *atrabilious* temperament of Hippocrates must be considered as a diseased condition; for the doctrine of the existence of black bile in the system, except as a morbid state of the secretion of the liver, has long been exploded.

The temperament denominated *nervous* is the most favourable to mere activity of the mental powers; but the activity is not so enduring as in the case of the bilious temperament. The mind may then be compared to a taper burning with a light too brilliant, and thence the more speedily consumed; or to ignited flax, which astonishes by its glare, but whose flame is as transitory as it is brilliant. In this constitution there seems to exist an extreme susceptibility of excitement in the nervous system, not referable to any observed peculiarity in the recognised fluids of the animal system. It may here be asked, what becomes of my own definition of the circumstances giving rise to the temperaments, if I adduce any of them as unconnected with coincident peculiarities in the condition of the fluids? In answer, I observe, that I am now discussing a subject concerning which very little that is satisfactory has been written, and very little of what is decidedly established, or perfectly defined, is even known; and I need hardly say that, under such circumstances, I am not prepared with facts, capable of being fashioned into a complete system. In the absence of direct facts, therefore, I will, for the present purpose, call in the aid of hypothesis, and will assume the correctness of those physiologists who have supposed the existence, in the constitution of the nerves, of a fluid, intimately affecting the sensibility and other phenomena of the nervous system; and, in that case, it appears to me to be highly probable that a greater or less proportion of this fluid will produce, *ceteris paribus*, a greater or less activity in the functions of the nervous masses. In accordance with this view, we observe that *children*, whose nervous *power* is far below that of adults, greatly surpass the latter in *activity*; now, the more fluid condition of their brain and nerves is well known. Again,

as in old age we notice a comparative slowness and inactivity of all functional power, so do we observe a proportionate dryness and rigidity of the nervous masses. In these remarks, I wish to be understood as but throwing out suggestions, which future investigation may confirm or reject. However, I will now proceed to mention the external characteristics of this temperament. A soft skin; fair and thin hair; sometimes a paleness of the complexion, and sometimes a hectic tinge; small and soft muscles; delicacy of the whole organization; generally a slenderness of form; a sparkling vivacity of the cornea; and a quick sharp pulse,—are signs, in the aggregate, of the nervous temperament: giving rise, as I have before observed, to the highest degree of cerebral activity. Individuals so characterised will be sure to be in a state of very energetic excitement, on the application of stimuli inadequate to the result with the mass of mankind. If a person have strong animal propensities, he will, unless strongly under the influence of properly-directed moral feeling, be almost sure to run a short but active career of profligacy and libertinism; if the intellectual organs be in relatively large proportion, he may speedily wear down his bodily strength, and sink prematurely into the grave, the victim of excessive mental exercise; or if the religious feelings predominate greatly over the intellect and animal propensities, he may become a religious maniac; and so on. In children, the possession of the nervous temperament, under the present rage for early and strenuous mental excitation, is sometimes the worst of misfortunes; since their young brains, being so readily excited, often afford, in the mistaken judgment of their guardians, the highest evidence of genius; and thus the poor victims are goaded on, until some affection of the exhausted brain or nervous system hurries them to the close of their ill-fated career,—if it do not leave them the prey of some serious nervous affection, as epilepsy, hysteria, or even downright fatuity. In such cases, however, ill-judging and mistaken parents usually console themselves by observing that their children were too good for this world; or that they themselves were too happy in the contemplation of their excellencies, and that calamity had befallen the children as a visitation for the sins of their forefathers. I am far from disputing the verity of the doctrine implied by the last proposition; but an Almighty Providence has given us the capability of noting, to a certain extent, the intermediate links in the chain of causation, and has permitted us, where practicable, to modify their relations; and hence I would exhort every guardian of youth or infancy to consider well the effects of conduct such as I have just mentioned. Henry Kirke White, I should consider, afforded the very *beau ideal* of the nervous temperament; and

I have very little doubt that Lord Byron, Pope, and Cowper, were mainly of the same constitution.

These various temperaments are rarely found unmixed, but in the great majority of mankind are found to run into each other. Thus, combinations of the *sanguine* with the *bilious*, the *bilious* with the *nervous*, and the *sanguine* with the *lymphatic*, are very frequent; and generally those temperaments will be observed to run into each other, whose characteristic activity makes the nearest approach. This, however, is not invariably the case, for we may have a mixture of the *nervous* and *sanguine*, or *lymphatic* and *bilious*; and I am not sure that the combinations of temperament are not unlimited: and, in estimating their influence upon the activity of the powers, I suppose we must take the mean of the characteristic activity of the temperaments entering into the combination.

I have thus endeavoured to state in what manner, and to what extent, each temperament may be regarded as modifying the activity of the brain. And, in conclusion, I would earnestly recommend every Phrenologist to employ all vigilance and zeal in prosecuting the study of the subject, whereby we may probably hereafter obtain more certain information as to the real nature and extent of the influence of the temperaments, separately and in combination, and arrive at more precise explanations of the processes by which such influence is exerted.

[The foregoing essay displays talent and ingenuity, and shews that Mr Noble has bestowed much consideration on his subject. But though very far from disputing the truth of the general proposition, that the cerebral functions are materially influenced by the condition of the fluids, particularly the blood,—we cannot help regarding some of the *detailed* views of Mr Noble respecting the causes of the temperaments as purely theoretical; and he therefore seems to us to have done well in offering his suggestions rather in the hope that they may aid in leading to a true explanation than as furnishing such an explanation themselves. His description of the signs and effects of the different temperaments is clear and accurate, and what he says respecting the treatment of nervous children is especially worthy of serious consideration. It is with the *effects* of the temperaments, more than their *causes*, that we are most concerned; and happily the former are less obscure than the latter. When an individual is characterised by softness of flesh, fairness of the skin, flaxen hair, plumpness of figure, a weak slow pulse, and a loutish inanimate expression, physiologists agree in describing him as a person of a lymphatic temperament; and whatever be the *cause* of these appearances, we know from experience that they

are *indications* of great languor of the bodily and mental functions. *Ceteris paribus*, temperament seems to affect equally every part of the body; so that if the muscles be naturally active and energetic, we may expect also activity and energy of the brain; and if one set of muscles be active, the like vivacity may be looked for in the others. This principle is practically recognised by William Cobbett, who, whatever may be his merits or demerits as a politician, is certainly a shrewd observer and describer of real life. In his Letter to a Lover, he discusses the question, "Who is to tell whether a girl will make an industrious woman? How is the purblind lover especially to be able to ascertain whether she, whose smiles, and dimples, and bewitching lips, have half bereft him of his senses; how is he to be able to judge, from any thing that he can see, whether the beloved object will be industrious or lazy? Why, it is very difficult," he answers: "There are, however, certain outward signs, which, if attended to with care, will serve as pretty sure guides. And, first, if you find the *tongue* lazy, you may be nearly certain that the hands and feet are the same. By laziness of the tongue I do not mean *silence*; I do not mean an *absence of talk*, for that is, in most cases, very good; but I mean a *slow* and *soft utterance*; a sort of *sighing out* of the words, instead of *speaking* them; a sort of letting the sounds fall out, as if the party were sick at stomach. The pronunciation of an industrious person is generally *quick* and *distinct*, and the voice, if not strong, *firm* at least. Not masculine; as feminine as possible; not a croak nor a bawl, but a quick, distinct, and sound voice."—"Look a little, also, at the labours of the *teeth*, for these correspond with the other members of the body, and with the operations of the mind. 'Quick at meals, quick at work,' is a saying as old as the hills, in this, the most industrious nation upon earth; and never was there a truer saying." "Get to see her at work upon a mutton-chop, or a bit of bread and cheese; and if she deal quickly with these, you have a pretty good security for that activity, that *stirring* industry, without which a wife is a burden instead of a help." "Another mark of industry is a *quick step*, and a somewhat heavy tread, shewing that the foot comes down with a hearty good will." "I do not like, and I never liked, your sauntering, soft-stepping girls, who move as if they were perfectly indifferent as to the result."*

We are disposed to think that Cobbett's advice will prove sound in all cases where the nervous and muscular systems are equally developed, equally healthy, and equally accustomed to exercise. But if the head be large and the muscles small, the

* Cobbett's Advice to Young Men, Letter III, § 102-5.

individual will be much more inclined to mental than to muscular activity; and, on the other hand, if he have large muscles and a small brain, the activity derived from a sanguine or bilious temperament will have a tendency to expend itself in exercise or labour of the body. The reason of this is, that the largest organs have, *ceteris paribus*, the greatest tendency to act; their activity is productive of the greatest pleasure; hence they are more frequently exercised than the smaller organs; and thus the energy and activity of the former are made to predominate still more than they did originally, over those of the latter. Mr Noble remarks, that when the temperament is sanguine, "there is most commonly a disposition to indolence and mental inactivity, in the absence of any very powerful motive;" but this, we suspect, is true only where the cerebral organs are in development and cultivation inferior to the muscles. The sanguine temperament is of itself no way unfavourable to mental activity; on the contrary, its usual effect is to give animation, not only to the muscular system, but also to the affective and intellectual faculties. The remarks now offered in reference to the comparative efficiency of the muscular and cerebral functions, are equally applicable to the cerebral organs, considered in relation to each other. Where two organs are alike in development and cultivation, a nervous or sanguine temperament will render them equally active; but where one is more fully developed than the other, it will excel the latter both in power and in activity. In another brain of the same size and form, but with a lymphatic temperament, a similar predominance of the power and activity of one organ over those of the other will be found; but the absolute power and activity of both will be less than in the other case supposed. Temperament, therefore, besides influencing the *activity* of the organs, affects their *power* also, to a greater extent than Mr Noble seems inclined to allow.

Facts, it is on all hands admitted, are still wanted, to place the subject of the temperaments on a completely satisfactory footing.—Ed.]

ARTICLE III.

CASE OF DERANGEMENT OF THE FACULTY OF LANGUAGE, IN CONSEQUENCE OF A BLOW NEAR THE EYE.

A considerable number of years ago, M. De Fouchy read to the French Academy a very interesting account of an accident which he himself had sustained, and which was followed by derangement of the faculty of language. It is quoted by M. Moreau, in the *Encyclopedie Méthodique*, article *MEDICINE MENTALE*

(Paris, 1816; vol. ix. of the Medical Division), and is regarded by that writer as described "with the courageous, calm, and wise impartiality, which forms the characteristic of a philosopher." M. De Fouchy's narrative is as follows:—"The first of the accidents," says he, "which kept me absent from the Academy during a considerable time, was accompanied by a circumstance which appears to me worthy of being communicated. On the 24th of March last, leaving the house of M. Anisson, where I had been assisting at the trial of his new press, I was returning home about seven in the evening, when it was beginning to be rather dark. A projecting part of the pavement tripped my foot, and caused me to fall forwards and a little to one side, with my face on a heap of stones which happened to be there. The blow struck precisely on the vomer,* and on the angle of the right eye; the skin covering the former was cut, and bled much. I felt at the moment of the blow an acute pain, which extended along the left eye; but I was in no degree stunned, nor experienced any affection of the heart (*maux de cœur*); and I proceeded on my way, holding a handkerchief on my nose. On reaching home, I washed the wound, which had stopped bleeding, with warm wine, and the pain diminished so much as not to prevent me from sleeping. Next day it was supportable, and I thought I remarked it in two places, namely, on the vomer, and also above the left eye, which had not suffered from the blow.

"The pain of the vomer was accompanied by a particular circumstance, which lasted a long time, and consisted in this—that when I moved that bone to the right or left with my finger, I perceived a slight internal crepitation, as if its articulation with the other bones of the face had suffered. Up to this time I had noticed nothing extraordinary. I went out, and returned to dinner, when the following circumstance occurred, which appears to me worthy of much attention.

"Towards the end of dinner, I felt a slight increase of the pain above the left eye, and, at that very instant, became unable to pronounce the words which I wished. I heard what was said to me, and thought what I wished; but I pronounced other words than those which could have expressed my thoughts, or, if I begun, could not finish them, but substituted other words for them. I had, however, the power of every motion, as free as in my usual state. I did not drop my fork, nor the piece of bread which I held in my hand. I saw clearly every object; and the organs which produce the action of thought were, so far as I could judge, in their natural state. This kind of paroxysm lasted for a minute, and, during its continuance, I was sufficiently conscious of this singular distinction in the sensorium

* It may be necessary to explain to our non-medical readers, that the vomer is the thin bone which forms the partition of the nose.

of the mind (*seniorum de l'âme*), which had only one of its parts affected, without the others suffering the slightest disturbance.

"When M. Vicq-d'Azyr read to the Academy on the Anatomy of the Human Brain, I was struck by what he said regarding the nervous filaments which pass from the brain and enter the interior of the nose through the cribriform plate, and I thought I had discovered in them the explanation of my singular state. These filaments, having perhaps received a shock from the blow on the vomer, had transmitted that shock to the brain; but I could discover no reason for the singular phenomenon of the sensorium of the mind being affected in one of its parts only.

"I confine myself, here, simply to the relation of the fact which I deemed it my duty to communicate to the Academy. In order that, if deemed expedient, it may be entered in the registers.

"An observation of this kind must necessarily be extremely rare, since it is requisite that a man of science should be the subject, and that the accident should not be so severe as to prevent him from observing all the circumstances attending it. Notwithstanding, however, all my zeal for the promotion of sciences which are the objects of the Academy, I trust I can readily pardon me for not wishing to present it often with similar observations."

The phenomena here described are altogether inexplicable except on the phrenological principle that the brain is a aggregate of organs, performing different functions; and the appearance of the derangement at the very moment when the increase of pain took place in the situation of the organ of language, must be regarded as strikingly confirming that of that part of the brain *.

ARTICLE IV.

PHRENOLOGY AND THE BRITISH ASSOCIATION

THE British Association for the Advancement of Science held its Annual Meeting in Edinburgh on 8th September, and the five succeeding days. About a week previously I had addressed the following letter to John Robison, Secretary:—

* See, in vol. V. of this Journal, p. 431, a somewhat curious memory of names was impaired by a fall on the forehead.

" John Robison, Esq.

23. CHARLOTTE SQUARE,
2d September 1834.

" MY DEAR SIR,—As I mentioned to you yesterday, I intend to apply to be admitted a member of the British Association for the Advancement of Science.

" In case a demonstration of the Phrenological Society's collection of national skulls would be acceptable in any of the Sections, I beg leave to express my readiness to give one, on any day except Wednesday 10th September, and I shall take it kind if you will mention this to the Committee. At the same time, I wish it to be understood that I have no individual anxiety for the acceptance of this offer; and that my only motive in making it, is to contribute, so far as lies in my power, to the fulfilment of the objects of the Association. Believe me to remain, &c."

" GEO. COMBE."

Mr Robison returned the following answer:—

MY DEAR SIR,

3d September.

" I have forwarded your intimation to Mr J. Forbes, for insertion in the list of communications, all of which will be laid before the Sections on their first meeting; and it will be with them to arrange what order they shall be brought forward in."

Mr Combe was duly admitted a member of the Association, and attended meetings of several of the Sections; but he was not honoured with any reply whatever to his offer of a communication. From Mr Robison he received the most polite attention; and the reason of the silence of the Committee became apparent at the first meeting. Mr Sedgwick, the President for last year, before resigning his office, addressed the Association, in a speech in which " he urged most strenuously upon the Association the necessity of keeping in mind the objects of its institution; and to confine their researches to dead matter, without entering into any speculations on the relations of intellectual beings; and he would brand as a traitor that person who would dare to overstep the prescribed boundaries of the institution. If the Society should ever be broken up, which God forbid, he would predict that it would happen by some members imprudently and daringly passing its boundaries*."

It was reported among the audience, that this anathema was directed chiefly against the Statistical Section of the Association, into which it was feared that moral or political discussion might be introduced; but it obviously applied in an especial manner to Phrenology. Accordingly, in the proceedings of the Association, no allusion was made to our science, except a feeble attempt at ridicule, introduced by Dr Graham in an evening re-

* Report of Proceedings of the British Association, in Edin. New Phil. Journ. for Oct. 1834, p. 372.

port, but which, having met with very little encouragement, was not repeated by himself or imitated by any of the other *savans*. In the Anatomical Section, Sir Charles Bell gave an account of his discoveries in the nervous system, of which we find the following report in the *Scotsman* of 13th September.

“ On Thursday and Friday, there was a numerous attendance in the Anatomical Section, when Sir Charles Bell gave an interesting exposition of his views of the nervous system. He was the first to demonstrate what other physiologists had previously conjectured to be probable, viz. the existence of separate nerves of motion and of sensation. His statement was a recapitulation of his publications, and we did not observe that he added any new facts. In several particulars we were gratified by his exposition, as marking the certain, although slow, progress of truth. Dr Spurzheim, when he visited Edinburgh in 1816, maintained that the uses of the brain could not be philosophically ascertained by mutilations of the brains of animals; but he was ridiculed for saying so, and it was asserted that this was one of his numerous back-doors for escaping from adverse evidence. Flourens and Magendie in France, Sir William Hamilton here, and various other individuals, have, in the interval, performed numerous experiments on the brains of the lower creatures, and published results which have been extensively cited as evidence against Phrenology. Yesterday, Sir Charles Bell explicitly stated, that he also had made such experiments, and had obtained no satisfactory results; and he then shewed why he had failed, and why all other experimenters must fail who pursue this method of inquiry. These experiments always, and necessarily, involve a great shock to the nervous system in general, and cannot be confined in their effects to the part cut out. We may add,—If we do not know what office the part performs in health, how can we know whether the function has ceased *in consequence* of the ablation or not? It may be very true, that if we were to cut out the organ of Tune from the brain of a canary, the bird would never sing again; but if, in ignorance of what part is that organ, we were to cut out any other portion of the brain, with a view to discover it, we should be disappointed; because, whatever part we injured, the effect on its singing would always be the same; it would cease to sing, for the obvious reason that singing and a mangled brain are not compatible in nature. We rejoiced to hear this method of investigation renounced and condemned by so great an authority.

“ In the 49th Number of the *Edinburgh Review*, the late Dr John Gordon wrote a severe attack on Dr Spurzheim, for asserting that the brain exhibited fibres extending from the *corpora pyramidalia, olivaria, and restiformia*, to its surface. In his ‘*Observations on the Structure of the Brain*,’ published in

1817, in support of the Review, he declared Dr Spurzheim's description of this particular structure to be 'objectionable in all its points, and full of error and hypothesis.' He also condemned, in strong terms, Dr Spurzheim's plate of a section of the brain, shewing the alleged fibres. It is due to the great cause of truth to state, that Sir Charles Bell, according to our understanding of his statement, admitted the existence of these disputed fibres to the full extent asserted by Dr Spurzheim, and that the plate of a section of the brain exhibiting the fibres, which he produced in illustration of his views, presented to our eyes precisely the same appearance as the drawing given by Dr Spurzheim, which was so loudly condemned.

"Sir Charles Bell is no phrenologist. He did not allude to the subject, and made no pretensions to knowledge of the functions of the particular portions of the brain. This was a sound and philosophical proceeding, and we admire the candour and justice which dictated it, as much as the talents which led him to his own discoveries of the functions of the nerves."

At the meeting of the Natural History Section, held on 12th September, Mr Pentland, in continuation of the observations which he had offered at a previous meeting, on the physical configuration of the Andes of Peru and Bolivia, and on the distribution of organic life, at different elevations on the declivity of these gigantic chains, entered into details on the reasons which have led him to conclude that there existed, at a comparatively recent period, and between the 14° and 19° of S. Lat., a race of men very different from any of those now inhabiting our globe, characterised principally by the anomalous form of the cranium, in which two-thirds of the entire weight of the cerebral mass is placed behind the occipital foramen, and in which the bones of the face are very much elongated, so as to give to these crania more the appearance of certain species of the ape family, than that of human beings. Mr Pentland entered into details to prove that this extraordinary form cannot be attributed to pressure, or any external force, similar to that still employed by many American tribes; and adduced, in confirmation of this view, the opinions of Cuvier, of Gall, and of many other celebrated naturalists and anatomists.

"The remains of this extraordinary race are found in ancient tombs of the mountainous districts of Peru and Bolivia, and principally in the great interalpine valley of Titicaca, and on the borders of the lake of the same name. These tombs present very remarkable architectural beauty, and appear not to date beyond seven or eight centuries before the present period.

"The race of men to which these extraordinary remains belong, appears to Mr Pentland to have constituted the inhabitants of the elevated regions, situated between the 14° and 19°

of South Lat., before the arrival of the present Indian population, which, in its physical characters, its customs, &c. offers many analogies with the Asiatic races of the old world *."

The Phrenological Society possesses a skull from the neighbourhood of Arica on the coast of Peru, to which Mr Pentland's description applies. Its form differs in a remarkable manner from that of the skulls brought from Lima, which are very broad in proportion to their length. We have a paper in progress respecting the skulls and character of the Peruvian Indians, and shall advert in it to Mr Pentland's observations, which are published in the *Dublin Journal of Medical and Chemical Science* for July 1834. We exhibited the Arica skull to Mr Pentland, and understood him to say that he regarded it, though found in a burial place on the coast, as having belonged to a native of the interior, one of the race now extinct. He was unluckily called away before we could inquire into the reasons on which this conclusion was founded.

On 13th September, Dr Abercrombie concluded the business of the Medical Section by a very excellent address, in which, after expressing his confidence in the zeal of the members in following out the investigations which had been recommended to them, and impressing on them the necessity of cultivating pathology, he proceeded to make some observations on the interest and importance to the medical profession of the study of mental philosophy. "In alluding to this subject, he said he was aware of the objections which had been brought against admitting the philosophy of mind as one of the regular Sections of the Association; and to a considerable extent he admitted their truth, as it might be difficult to preserve such discussions from those hypothetical speculations by which this important science had been so much obscured and retarded in its progress. But, by treating it as a branch of Physiology, he trusted this might be avoided, by rigidly restricting the investigation to a careful observation of facts, and the purposes of high practical utility to which they might be applied. Keeping in view the importance of these rules, he earnestly recommended the subject to medical inquirers, as capable of being cultivated on strict philosophical principles, as a science of observation, and as likely to yield laws, principles, or universal facts, which might be ascertained with the same precision as the laws of physical science. For this purpose, however, inquirers must abstain from all vain speculations respecting the nature and essence of mind, or the mode of its communication with external things, and must confine themselves to a simple and careful study of its operations. Some of these Dr Abercrombie alluded to under the following heads:—the laws of the succession of thoughts, and the remarkable in-

* *Edin. New Phil. Journ.* October 1834, p. 433.

fluence of association :—the voluntary power which we possess over the succession of thought, the due culture of which lies at the foundation of all sound mental discipline :—the influence of habit upon mental processes, and the means of correcting injurious habits :—the important relation between voluntary intellectual processes and moral emotions, and between such intellectual processes and the result of evidence in producing conviction :—the laws of reason or judgment—the means of cultivating it—and the ruinous effects which result from the neglect of such culture. In concluding these observations, Dr Abercrombie alluded briefly to the moral phenomena of the human mind, and the impressions which we derive from them, with a feeling of absolute certainty, respecting the moral attributes of the Creator.

“ Respecting the means of cultivating the Philosophy of Mind as a science of rigid observation, Dr Abercrombie alluded to the study of mental phenomena and mental habits in ourselves and in other men ; and the whole phenomena of dreaming, insanity, and delirium, and the mental conditions which occur in connexion with diseases and injuries of the brain. The subjects of dreaming and insanity, which have hitherto been little cultivated with this view, he considered as capable of being prosecuted on sound philosophical principles, and as likely to yield curious and important results respecting the laws of association, and various other processes of the mind.

“ The practical purposes to which mental science may be applied, Dr Abercrombie considered briefly under the following heads :—(1.) The education of the young, and the cultivation of a sound mental discipline at any period of life. In all other departments, we distinctly recognise the truth, that every art must be founded upon science, or on a correct knowledge of the uniform relations and sequences of the essences to which the art refers ; and it cannot be supposed that the only exception to this rule should be the highest and most delicate of all human pursuits, the science and the art of the mind. (2.) The intellectual and moral treatment of insanity, presenting a subject of intellectual observation and experiment, in which little comparatively has been done, but which seems to promise results of the highest importance and interest. (3.) The prevention of insanity in individuals in whom there exists the hereditary predisposition to it. He gave his reasons for being convinced that in such cases, much might be done by a careful mental culture, and that irremediable injury might arise from the neglect of it. (4.) Dr Abercrombie alluded to the importance of mental science as the basis of a Philosophical Logic, but did not enlarge on this part of the subject. He concluded his address by some observations on the dignity and importance of medicine, as one of

the highest pursuits to which the human mind can be directed ; as it combines with the culture of a liberal science the daily exercise of an extensive benevolence, and thus tends at once to cultivate the highest powers of the understanding and the best feelings of the heart." *

In conclusion we remark, that although the British Association, under its present constitution, may perhaps be right in excluding discussions on the relations of intellectual beings, it must be humiliating to the philosophers of the nineteenth century to make the public acknowledgment which we have quoted, of the entire absence of any philosophy of mind which can be included among the sciences, and discussed with temper and judgment, and without "imprudently and daringly passing the boundaries of the Association." We must be permitted also to tell them, that they will make a sorry figure at the bar of posterity, when Phrenology shall be recognised as the very philosophy of which they stood in need, and when it will be universally acknowledged that their narrow-minded prejudices alone prevented them from investigating and adopting it.

ARTICLE V.

CASE OF IDIOCY.

At a meeting of the Manchester Phrenological Society in September last, Mr G. Wilson, the President, read a paper on a remarkable case of idiocy, illustrated by a cast of the individual's head. This paper we regard as a valuable contribution to phrenological literature. A copy of the cast having been presented by the society now mentioned, to the Phrenological Society in Edinburgh, we are enabled to give a sketch of it on page 128. For the sake of contrast, a view of the head of Ram-mohun Roy, on the same scale, is likewise inserted.

This individual, as we learn from Mr Wilson's paper, is the son of a labourer in moderate circumstances, and was born near Prestwich, in October 1814; so that he is now twenty years of age. He is the third of five children, and is in perfect health. The integuments of the skull are very thick and loose, so that the brain is not so large as might be supposed by one who has not manipulated the head. The hair appears to have been of considerable length when the cast was made. The stature of the individual is about five feet six inches, and he weighs about nine stones.

His father states, that for a considerable time after birth he

* Edin. New Phil. Journ. Oct. 1834, p. 443.

was remarkably small and helpless, and that he was three years old before he could be taught to walk. Up to this period he displayed no intellectual faculties, his actions being merely regulated by animal instinct. Afterwards he learned to recognise individuals and to say "mother," a term which he applied also to his father and every member of the family. As he grew up, his favourite habits were to walk into the garden and to amuse himself by digging or scraping holes, either with his hands or more especially with bits of wood. When about seven years old he became very passionate and learnt to swear, which, when enraged, he does freely. The next child to him was also an idiot; she died about two years ago; her head was larger, and she displayed more general power, and had the command of a greater number of words. This girl and he were constant companions, and were seldom separate from each other. They always rambled and slept together, and for a short time after her death he looked very solitary, and even now he is more attached to a girl of the same name where he resides than to any other member of the family.

His habits now are to arise from bed when called, having taken no more rest than the others; and as he is incapable of dressing himself, his godmother performs this office for him. He remains at home till breakfast, with which, as well as every other meal, he never appears to be satisfied or to have taken sufficient. After this he rambles with company sometimes miles from home, though generally returning with those who induced him away. During his rambles he is, of course, subjected to the perpetual annoyances of mischievous children, and often of those whose years should render them more humane; yet he immediately forgets all and is soon happy. He frequently accompanies horses and carts, and can drive with the whip pretty well. His partiality for horses is very striking, and was manifested early in life. A few weeks ago a gentleman was riding on a small pony in the neighbourhood, and as this, from some cause or other, displeased him, he seized hold of the pony's tail and pulled with all his strength; this with the gentleman's weight were sufficient to stop the pony, at which the gentleman was so enraged that he jumped from the saddle and laid the whip so freely upon the poor boy's shoulders, that his cries were heard at a great distance, and the castigator narrowly escaped being mobbed by the whole neighbourhood. He spends a great portion of his time at a retail beer shop in the neighbourhood; and as he is exceedingly fond of drink, and almost all who frequent the place know him and invite him to taste with them, he gets intoxicated sometimes for days together. It requires more than an ordinary quantity of beer to intoxicate him; and when he is taken home in this condition, he appears satisfied all is not right, and that

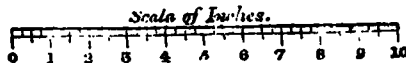
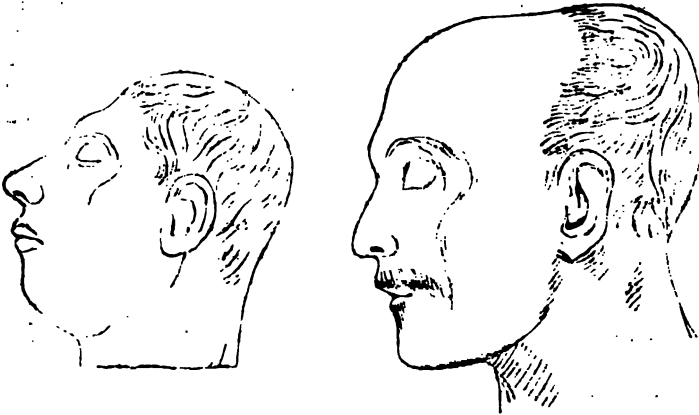
he has merited the scolding which invariably follows from his godmother. When the storm has subsided, and he reads in her countenance returning peace, he usually sets up a loud laugh, and under the excitement of the liquor remains very merry during the remainder of the evening. He is very fond of sweet-meats, and on one occasion when Mr Wilson presented him with some wrapped in a paper, he devoured the paper and contents indiscriminately. Some peas also he eat without shelling them.

The general volume of his head is very small. This will appear from the following note of the dimensions of the cast, (in inches), which we contrast with those of the head of Ram-mohun Roy.

	Idiot.	Rammohun Roy.
From Individuality to Philoprogenitiveness,.....	6½	8½
... Ear to Individuality,.....	4½	5½
... Philoprogenitiveness,.....	3½	4½
... Firmness,.....	4½	6½
... Destructiveness to Destructiveness,.....	4½	6½
... Cautiousness to Cautiousness,.....	3½	5½

IDiot.

RAMMOHUN ROY.



The feebleness of his mind is commensurate with the smallness of his head. So little force of character, indeed, does he possess, that he willingly submits to be governed by a little girl, and to endure the torture of boys to whom he is vastly superior in muscular power. "Now, what explanation," asks Mr Wilson, "besides the phrenological one, can be given of his imbecility? If the mind can act independently of material organi-

zation, why does he not display the powers of human nature equally with those around him? Or, if education do every thing, where is the patron of education who will undertake to bring his mind to the perfection of that of a child a quarter of his age?"

The organs of the propensities are, on the whole, not largely developed in proportion to the other parts of the brain. Amativeness, Philoprogenitiveness, and Combativeness, are, however, of considerable size; while Destructiveness, Secretiveness, and Cautiousness, are small. With respect to the manifestations of the first of these, Mr Wilson has not been able to ascertain much: "I have observed, however," he says, "that he is more patient during the time he is teased by females than when teased by men; and he turned with a very expressive smile towards one who placed her arm within his own." Mr Wilson mentions also, that "he exercises Combativeness rather frequently, immediately striking any who offends him; he is also bold and fearless. I saw him pursue a large dog, and imitate its barking; and when he had provoked its snarl, he appeared highly delighted. He seldom exercises Destructiveness, and his anger is only of momentary duration. Self-esteem and Love of Approbation are seldom displayed. Cautiousness is small, and he can easily be sent into danger. Some mischievous men one day undressed him, and persuaded him to go into the river, although for the first time in his life; he walked in until nearly out of his depth, and was proceeding onward when the sight of his god-mother deterred him. Acquisitiveness and Secretiveness are not very marked; indeed, if any thing be shewn him, he looks attentively at it for a time, but seldom appears desirous of removing it. I placed some pence upon a table and turned away, but he exhibited no desire to take it. When I brought him to the Society, on a former evening, the Members asked him which he would have, a penny or a halfpenny? he invariably put his finger upon both, and wished for both; he did not seem disposed to seize the money, nor did he shew regret at not receiving it."

Such of the perceptive organs as have their place immediately over the eyes, are well developed; but on proceeding upwards to the intellectual region, we find there a lamentable and almost total deficiency. "If he receives a penny," says Mr Wilson, "his Locality guides him to the place where to spend it, because he has observed this first done by others who accompanied him; his Individuality informs him which is the article he wants in exchange, and he invariably chooses the largest piece, in preference: that consumed, he moves away: another object attracts his attention, and he surveys it a moment with every appearance of curious delight; he passes on, alternately no-

ting and wandering (*Individuality* and *Locality*), until either the sting of hunger or the friendly hand of his attendant draws him home. Although he knows few things by name, yet if you direct his eye to an object and bid him reach it to you, he will do it. His Form is rather large, and he recollects individuals very well. He knew the cast-maker and myself the second time he saw us. His Language is moderate; yet I am persuaded, that, with proper instruction, he might have had a more extensive vocabulary. His attendants have never succeeded in teaching him to button or unbutton his own clothes. He shews a great desire to imitate, and the artist succeeded in taking the cast by inducing him to imitate the position shown to him." It is not mentioned whether he is a *good mimic*. The size of the organ of Imitation is not such as to make us anticipate this.

After stating that Dr Spurzheim strongly condemned marriages betwixt relations as likely to lead to mental imbecilities in the offspring, and remarking that the parents of this boy were cousins, Mr Wilson concluded by observing, that "Phrenologists always have insisted upon the necessity of acting in obedience to the natural laws in marriages; and if these laws had been observed by the parents of him whose case I have laid before you, there would, at least, have been two of these unfortunate individuals less upon record, and I should have been spared the necessity of troubling you with a short comment upon the character of one this evening."

We shall finish the present article by quoting a short passage from Dr Spurzheim's work on Insanity. "We are very well aware," says he, "that a great number of facts, repeated under various circumstances, are necessary before we can draw a general conclusion; but with respect to idiotism from birth, we have made such a number of observations in various countries, that we have no hesitation in affirming that a too small brain is unfit for the manifestation of the mind. I beg to remark, that I do not say that idiotism is the attribute of a too small brain only; idiotism may be the result of different causes, one of which is a too small brain. We are convinced from observation, that the laws of nature are constant; and if we continually observe that the same phenomenon takes place under the same circumstances, we consider our conclusion as certain, till experience shews the contrary. No one, then, has the right to maintain that an inference is too hastily drawn because he has not made a sufficient number of observations. It is his duty to shew facts which prove the contrary, if he intend to deny the inference."

ARTICLE VI.

JOURNAL DE LA SOCIÉTÉ PHRÉNOLOGIQUE DE PARIS.
Tome II. No. V.

We are somewhat in arrears with our notices of the French Phrenological Journal, partly from the later numbers not having been received till some months after they were due, and partly from the urgent demands recently made upon our space. It is with pleasure that we now resume consideration of the labours of our Parisian brethren, and congratulate the conductors of the Journal on the regular advance which its contents are making in value and interest. In the introductory notice to this number, it is stated that the causes which prevented the regular appearance of the Journal during the disastrous year 1832 (when cholera raged in Paris), being now removed, the conductors have taken the most efficacious measures to cancel the arrears. "We have," they say, "immense materials in hand, and, by active communications with the principal foreign Phrenological Societies, shall enrich ourselves with the fruits of their discoveries and labours."

Upon the 22d of August, the anniversary of Dr Gall's death, the Phrenological Society of Paris holds an annual meeting, at which are reported the transactions of the previous year, the losses sustained, the acquisitions made, the state of Phrenology at the time, and the evidence afforded by lately received busts in confirmation of the principles of the science. To these annual meetings the public are invited, and on each occasion a large assembly has come forward. Last year, the Hall of St John was early filled by a numerous auditory; among whom were the Prefect of the Seine,—several members of the Institute and Royal Academy of Medicine,—several Professors of the *Ecole de Médecine*, French and foreign savans, advocates, and magistrates,—and also a great number of ladies. The business was commenced by a discourse from the president, Professor Bouillaud; after which, a summary of the proceedings of the Society during the year 1832-3, by Dr Casimir Broussais, the secretary, was read. Both of these are printed in the Journal, and contain many interesting details.

In Professor Bouillaud's discourse, we find some very pertinent general observations on the principles of Phrenology, its practical utility, and the treatment which Gall received from his contemporaries, particularly Napoleon and Cuvier. "The opposition of these two great men," he says, "backed as it was

by the power of ridicule, so terrible in all countries but particularly in France, arrested, so, to speak, the course of the new star which had just appeared above the scientific horizon. Forthwith the journals, schools, and academies, formed a sort of Holy Alliance against the system of Gall; and all would have been over with that system long ere now, were it possible for the triumph of any Holy Alliance over truth, phrenological or otherwise, to continue for ever. This conspiracy of influential men and associations against a truth may indeed delay its progress and retard its development: but there comes at length a time when enlightened public opinion takes truth under its powerful protection; and to the sway of that ruler of the world every thing, not excepting even the authority of a Napoleon and a Cuvier, ultimately yields. But what concerns us most at present is, that the heads of Napoleon and Cuvier are, if I may use the expression, the best arguments which one could desire for refuting the opinions of these illustrious men; and now, when both have descended prematurely to the tomb, Phrenology, which is not the last to pay a just tribute of admiration to the vast and lofty powers with which they were endowed, asks no other revenge for the injury which they inflicted on it, than that of making their heads serve to demonstrate the very principles to which, during life, they were opposed. Glance, now, at these busts," continued Dr Bouillaud, pointing to the casts on the table, "glance at these busts, and, however limited your acquaintance with Phrenology may be, you cannot fail at once to perceive not only that they prove by their volume the law that, *cæteris paribus*, power of mind is in proportion to the size of the brain, but also that, in the difference of their configuration, may be found the cause of the chief differences presented by the characters and talents of these two illustrious individuals. This head," pointing to that of Cuvier, "ought to belong to the Aristotle of France; that," pointing to Napoleon's, "suits better the modern Alexander."

The Professor is of opinion, that as Phrenology is now settled on a secure basis, its votaries ought seriously to devote their attention to its progress and improvement alone, and to the fittest means that can be devised for diffusing and rendering popular the facts with which the science is already enriched, and is daily adding to its store. It is with the view of contributing in some measure to the accomplishment of this important object, that the Parisian Society, besides instituting their Journal and public courses of lectures, has appointed the great annual meeting already mentioned to be held.

In the Summary of the Society's proceedings, various important subjects are introduced. The writer, Dr Broussais, begins by noticing a few of the numerous phrenological facts which

had been brought before the meetings. After alluding to several cases having reference to the organs of reproduction, reported to the Society by MM. Tanchou, Sorlin, Bourjeot Saint-Hilaire, &c., and which confirm the ideas of Gall as to the functions of the cerebellum, he states the following particulars of a case which had occurred in the practice of Professor Bonillaud. That physician attended a young man ill of a violent fever, occasioned by inflammation of the bowels. The patient's head presented a considerable development of the organ of Tune, and he sang incessantly during his fits of delirium, with remarkable force and correctness; while of no other intellectual faculty was any activity apparent. During his periods of calm, he had no recollection of what had occurred during the paroxysms. There is next mentioned a letter from Mr Deville, of London, relating the case of an individual whose head had presented different degrees of cerebral development at different periods of his life. At first, he was abandoned to himself, without education, and in circumstances calculated rather to impair than to develop his faculties; afterwards, he was placed in a situation favourable to their development; and, finally, several years later, he relapsed into his original condition, and anew exhibited deterioration of mind. His brain presented corresponding phases of development and degradation.—Dr Broussais goes on to say, that Dr Lacorbière, in a recent visit to Germany, had successfully applied phrenology in the examination of several patients in a lunatic asylum, and that the accuracy of his phrenological judgment had made some proselytes in Hamburgh.

In reference to a Critical Examination, by Dr Sarlandière, of the classification and names of the mental faculties adopted by Gall and Spurzheim, published in the fourth number of the Society's Journal, Dr Broussais states, that among the members Gall and Spurzheim had found champions who had combated Dr Sarlandière's pretensions; "and from this discussion," says he, "there has resulted, I think, a truth—namely, that the question is yet insolvable, and that nothing but time and the progress of Phrenology can lead to its solution."

A work on the Seat and Nature of Mental Diseases, by Dr Bottex, physician to a lunatic asylum at Lyons, is mentioned with approbation. That writer demonstrates, that insanity is not a disease of the soul or mind, but an affection of the organic structure; that its essential seat is the brain; and that the morbid condition of that viscus varies according to the species of mental derangement: and he maintains, that, without the aid of the principle that the brain consists of a plurality of organs, it is impossible to account for many phenomena of insanity.

Among the skulls and casts presented to the society, and for most of which it is indebted to the active zeal of M. Dumoutier,

Dr Broussais notices that of a negro called Eustache, of which a duplicate was lately added to the collection of the Phrenological Society in Edinburgh (Bust, No. 159), by its zealous secretary Dr William Gregory. On 9th August 1832, this negro, when sixty years of age, obtained the *Prize of Virtue* from the Institute, on account of the devoted attachment which he had displayed, in St Domingo, towards his master, M. Belin. By his address, courage, and devotion, this gentleman, with upwards of 400 other whites, were saved from the general massacre, and the fortune of Mr Belin was several times preserved. "The idea of murder," says the reporter to the Institute, "did not associate itself, in the mind of Eustache, with that of liberty. Placed among companions endeavouring to obtain, with the torch and the dagger, their bloody emancipation, and seeing his masters in danger of being murdered amid the ruins of their burning dwellings, he hesitated not a moment. . . . Incessantly occupied in warning the inhabitants of the conspiracies formed against them (but without revealing the names of the conspirators), and in devising a thousand stratagems to enable the proprietors to unite and strengthen their position, so as to make the insurgents abandon the idea of attacking them,—he consorted with the Negroes during the day, and in the evening went to give warning to the whites." At Paris, where, we understand, he now resides, Eustache is always busy doing good. "He never wishes," says Dr Broussais, "to keep any thing for himself; the profits of his industry, and the rewards which he has obtained, being on all occasions employed in relieving the miserable." He has always preferred to remain in the condition of a servant, in order that he might turn to account his skill in cookery, and enable himself to do good to his fellow-creatures. The following characteristic trait is quoted from the report to the Institute before referred to. At Port-au-Prince, Eustache often heard his master, who was an old man, bewailing the gradual weakening of his sight. Now, had Eustache been able to read, he might have whiled away his master's long and sleepless hours, by reading the journals to him. It was therefore a matter of deep regret with him that he had never been taught to read; but this regret did not long continue. He secretly applied himself to study; took lessons at four o'clock in the morning, in order that the time necessary for the performance of his regular duties might not be encroached upon; speedily acquired the wished-for knowledge; and, approaching the old man with a book in his hand, proved to him, that if nothing seems easy to ignorance, nothing is impossible to devotion. We are sorry that so few particulars relative to Eustache are given by Dr Broussais. Though a Parisian audience may with propriety be addressed with—"Je ne vous raconterai pas sa vie; vous la connaissez tous; vous en avez

tous entendu ou lu le récit ;"—distant readers, who do not possess these advantages, are left very much in the dark. The bust of Eustache exhibits a prodigious development of the organ of Benevolence; and we entirely concur in the statement of Dr Broussais, that there is in the collection no specimen which can be in this respect compared with it. "The organ," says he, "is so large, that, though I were unacquainted with Eustache, I should, at the sight of such a head, exclaim—here is monomania of Benevolence. But I am better pleased to sum up, with M. Briffaut, his life and his character in two words, *in corrigible generosity.*"

We have measured the cast, and subjoin a note of its dimensions. It is proper to notice, that there was no hair on the head when the cast was taken.

	Inches.
Circumference,	22
From Individuality to occipital spine, over top of head,	14½
From ear to ear, over top of head,	14
From Individuality to Philoprogenitiveness,	7½
..... Ear to Philoprogenitiveness,	4½
..... Individuality,	5½
..... Comparison,	5½
..... Benevolence,	6
..... Firmness,	6
..... Destructiveness to Destructiveness,	6
..... Secretiveness to Secretiveness,	6
..... Cautiousness to Cautiousness,	5

It will be obvious to every phrenologist, from the foregoing table, that the head of Eustache is of very considerable size. In this respect, as well as in its form, it has quite the appearance of a European head. The organs of Veneration, Firmness, Philoprogenitiveness, Comparison, and Causality are large, though not equal to Benevolence; Adhesiveness, Combative-ness, Destructiveness, Secretiveness, Cautiousness, Conscientious-ness, and Love of Approbation, rather large or large; Imitation and Wonder, where the head descends rapidly on both sides from Benevolence, moderate or rather full. There seems to be a very fair development of the organ of Language. Benevolence rises to a great height above Comparison. A full-sized view of this head is given by Dr Vimont in the Atlas to his Treatise on Human and Comparative Phrenology, and we hope to see, in the second volume of that publication, farther details respecting Eustache.

Dr Broussais goes on in his Summary to offer some remarks on the heads and characters of Carême, the Baron de Zach, and four musicians—Weber, Kreutzer, D'Héroid, and Lefebure. The mask of Weber indicates a large development of Tune, Ideality, Benevolence, and Imitation. Of Lefebure we are told, that, "though not more than fourteen years of age, he has been for several years the organist of St Roch, and his head presents

the forehead of an intelligent man, with the organs of Tune and Constructiveness in particular very large." A duplicate of this cast was presented by Dr. William Gregory to the Phrenological Society, Edinburgh, and is No. 84. of the masks.

The heads of four criminals, Mabile, Descourbes, Benoît, and Régès, are next adverted to. "In all, the predominance of the sentiments and passions over the understanding is apparent, — *âtes instinctives, âtes animales.*" Dr. Broussais then states some particulars regarding nine suicides, with respect to one of whom, the widow Landon, two interesting documents are given entire: the first, M. Dumontier's remarks on her dispositions, founded on an examination of her head; and the second, an extract from the register of M. Gourel, a commissioner of police, confirming the accuracy of M. Dumontier's statements. The following table, shewing the development of several organs in the heads of the nine suicides, was framed by MM. Dumontier and Broussais. Their names are, 1. St-Simon; 2. E——; 3. G——; 4. Thuillier; 5. Landon; 6. D——; 7. Margueine; 8. Granis; 9. Michelet.

	1.	2.	3.	4.	5.	6.	7.	8.	9.
Destructiveness,	18	20	16	20	16	20	29	20	20
Firmness,	10	18	18	20	18	10	20	22	18
Combativeness,	16	20	18	18	20	20	20	22	18
Love of Life,	6	4	16	6	10	4	16	16	4
Hope,	10	6	4	4	4	10	10	10	4
Cautiousness,	14	20	18	10	16	16	10	3	20
Love of Approbation,	10	10	20	20	20	18	18	20	18

SCALE.—2. Idiocy; 4. Very small; 6. Small; 8. Rather small; 10. Moderate; 12. Rather full; 14. Full; 16. Rather large; 18. Large; 20. Very large; 22. Enormous.

The case of a woman called Denise, detailed in the *Annales de la Médecine Physiologique* (Oct. 1832), is taken notice of, as furnishing a curious example of insatiable appetite for food. In infancy she exhausted the milk of all her nurses, and ate four times more than other children of the same age. At school she devoured the bread of all the scholars; and in the Salpêtrière it was found impossible to satisfy her habitual appetite with less than eight or ten pounds of bread daily. Nevertheless she there experienced, two or three times a month, great attacks of hunger (*grandes faims*), during which she devoured twenty-four pounds of bread. If, during these fits, any obstacle was opposed to the gratification of her imperious desire, she became so furious, that she used to bite her clothes, and even hands, and did not recover her reason till hunger was completely satisfied. Being one day in the kitchen of a rich family, when a dinner party was ex-

pected, she devoured, ~~in~~ *in a very few minutes*, the soup intended for twenty guests, along with twelve pounds of bread! (On another occasion, she drank all the coffee prepared for seventy-five of her companions in the Salpêtrière! Her skull is small; the region of the propensities predominates; and the organ of Alimentiveness is largely developed.

The Society, as above hinted, has established public courses of lectures on Phrenology. These are delivered by M. Dumoutier, and the success of the course preceding the annual meeting is stated to have been *unusually extraordinary*. Two other courses had been given; one by the same lecturer, and the other by Dr Fossati. "But it is not in these courses alone," says Dr Broussais, "that Phrenology has found defenders and representatives: our science has penetrated into the Faculty of Medicine; homage has been paid to it within the precincts of that institution; professors of the *École* have spoken of it with the seriousness and attention which it merits; and one of them, the elder Broussais, has even given an exposition of its principles in several lectures devoted exclusively to this object." It is but a few days since a young physician, M. Lacomme, there based his thesis upon Phrenology. In a word, we have on all sides made converts to our opinions."

The third article is entitled "Phrenological notices on Casimir Périer, Lamarque, and Cuvier, by Dr Foissac." It was in 1792, at the age of twenty-one, that Lamarque began his military career, "in the capacity of a common soldier. In a few months he was advanced to be captain of the grenadiers of Latour-d'Auvergne, known among the enemies of France as the *colonne infernale*. During the subsequent years he distinguished himself by his bravery in many battles, among which were those of Hohenlinden, Villa-Nova, Plave, Oberlitz, Laybach, Alta-Julia, and Wagram, at which last he had four horses killed under him. "In the brain of Lamarque are found the indications of every quality of a good soldier and a great captain: the organ of Inhabitiveness, which, in combination with the higher sentiments, is the source of patriotism*; invincible courage, obvious from the enormous distance between the two mastoid processes; Cautiousness and Secretiveness, which are indispensable to the general of an army in actual service; the passion for glory, resulting from a great development of Love of Approbation; and, lastly, a moral power and immovable firmness, indicated by the elevation of the coronal region,—a quality without which no man ever yet attained to eminence." The organs of Comparison and Causality do not equal those of Lan-

* So Spurzheim conjectured; but our readers are aware that, by many phrenologists, patriotism is regarded as one of the modes of activity of the organ of Adhesiveness.—Ed.

guage, Form, Number, Locality, Individuality, and Eventuality, which are uncommonly large. Hence the forehead has rather a sloping appearance. Ideality is stated to be large; in connexion with which circumstance Dr Foissac alludes to the splendid style for which his bulletins are remarkable, and the brilliancy of his speeches in the legislative assembly.

The facts mentioned with respect to Cuvier's brain are of great interest. The *post-mortem* examination of his body took place on 15th May 1862, in presence of MM. Orfila, Duméril, Dupuytren, Allard, Bieth, Valenciennes, Laumillard, Rousseau, Andral neveu, and Bérard. The weight of the brain was found to be *three pounds ten ounces four drachmas and a half*,—exceeding by nearly a third that of ordinary brains. It was ascertained that this enormous superiority applied almost exclusively to the development of the cerebral lobes, particularly their anterior and superior parts; the cerebellum, &c. being of the usual size. None of the gentlemen present, says M. Bérard, from whom Dr Foissac obtained his information, remembered to have seen so complicated a brain, convolutions so numerous and compact, or such deep anfractuosités, (*un cerveau aussi plissé, des circonvolutions aussi nombreuses et aussi pressées, des anfractuosités si profondes*). A cast of the skull exists, but the Society's request for a copy of it met with a positive refusal. "Every one, however," says Dr Foissac, "who knew Cuvier when alive, is aware of the enormous development of the frontal region in comparison with the three others. We rarely meet, even among men of genius, with so great a development of the organs of Language, Individuality, Locality, Order, Colouring, Form, and Constructiveness. Hence Cuvier was able to read at an age when other children can hardly speak: drawing was one of his favourite occupations; in every respect his memory was prodigious, and he was deeply versed in literature and foreign languages. These faculties, common, though in an inferior degree, to all naturalists, would have given to the forehead of Cuvier the sloping appearance already noticed in the bust of Lamarque, had not the prodigious development of the organs of Comparison, Causality, and Ideality, elevated and expanded the anterior and superior region of his forehead, in which the understanding resides. Hence those profound investigations,—those precise and exact descriptions,—those skilful classifications,—those philosophical, clear, and prolific principles, and that inimitable spirit of generalization, which shine in his works, particularly his Lectures on Comparative Anatomy and Researches on Fossil Bones."

It is mentioned, that in his latter days Cuvier was more just towards Gall than he had been under the influence of Napoleon. When Gall had already one foot in the grave, Cuvier

sent him a skull which he thought confirmatory of his phrenological opinions. But the dying philosopher said to the person who brought it, "Take back that skull, and tell Cuvier that there is now only one wanting to complete my collection: *it is my own*: it will soon be there, as a powerful testimony to the truth of my doctrine."

The next article consists of *Cranioscopical Observations*, by Dr Fossati. He justly observes, that long practice is necessary for the attainment of skill in judging of the development of the cerebral organs; and that to qualify for pronouncing on the mental qualities of individuals, it is not enough to have attended a course of lectures on Phrenology, and to know the situation of the organs within the skull. He reports several cases, in which he himself had successfully exercised his phrenological skill; among others that of M. Traviés, an eminent caricaturist. On examining the head of this artist, Dr Fossati found a large development not only of Constructiveness but also of Locality, which induced him to ask whether he had not a taste for landscape painting. M. Traviés instantly replied that this was his predominant taste, and that he drew caricatures only because this was more expedient for him. He added that the earliest productions of his pencil were landscapes. Dr Fossati remarked the same configuration in the forehead of M. Ferri, the very able decorator of the *Théâtre Italien*; who is also a landscape painter, and has published beautiful views of Paris, which are eagerly sought after by amateurs. His landscapes are more esteemed than his interiors and architectural decorations.

The fifth article is entitled, "Phrenological Considerations on the Heads of four Charruas, by M. Dumoutier." From this paper, and a pamphlet published by the individuals who exhibited in Paris the four savages now mentioned, we have gleaned the following particulars.

The tribe of Charruas occupied a tract of country on the northern shore of the Rio de la Plata in South America, between the rivers Uruguay, Ybicui, and Rio-Negro. When that part of America was first invaded by Europeans, these savages were considerably more numerous than in recent times, and extended from the Uruguay to Maldonado. They are extremely fierce, warlike, and vindictive, and are stated to have shed more Spanish blood than the armies of the Incas and Montezuma. Their dispositions, in short, closely resemble those of the North American Indians. They have never been in the slightest degree influenced by the vicinity of civilization; but when they thought themselves sure of success, were in the habit of coming down like wild beasts upon the peaceable inhabitants of the plains, burning their habitations, and sparing neither man, woman, nor child. Towards the end of last century, their num-

ber had suffered a great diminution, in consequence of the incessant expeditions of the Spaniards against them. They still, however, remained extremely troublesome; till at length, in 1832, General Ribera, President of the Republic of Uruguay, finding it impossible to live in peace with these mischievous neighbours, and that all the conciliatory measures which had been used towards them were ineffectual, resolved to raise a war of extermination against them. They made a desperate resistance; but after a campaign of several months, the whole were massacred, except a few who escaped to the deserts, from which it is probable they will not speedily emerge. Among a dozen made prisoners were the four individuals mentioned above. The first is a chief called Vaimaca-Peru; the second a warrior named Sénacué, noted for his bravery, and who has been a constant and faithful friend to Vaimaca-Peru in every vicissitude of fortune. His character is said to be "less open than that of the chief." Of the remaining two, one is a female. M. Dumoutier had frequent conversations with them all. In captivity, they were fond of boasting of their murderous exploits; and consoled themselves with the hope of regaining their freedom, and satiating with the most atrocious cruelties their thirst for revenge. Both Sénacué and the chief died soon after their arrival. M. Dumoutier was permitted to take a cast of the head of the former, and also of his brain; and duplicates of these have been presented to the Phrenological Society by Dr William Gregory. (Bust, No. 160; and General Illustrations, Nos. 28. and 29.) The dimensions of the head, on which there is a little hair, are these:—

	lines.
From Individuality to Philoprogenitiveness, . . .	7½
... Ear to Philoprogenitiveness, . . .	4½
... ... Individuality, . . .	5½
... ... Firmness, . . .	5½
... Destructiveness to Destructiveness, . . .	6½
... Secretiveness to Secretiveness, . . .	5½
... Cautiousness to Cautiousness, . . .	5½

The brain, covered by the dura mater, measures—

From Individuality to Philoprogenitiveness, . . .	6½
... Destructiveness to Destructiveness, . . .	5½
... Secretiveness to Secretiveness, . . .	5½
... Cautiousness to Cautiousness, . . .	4½

The middle lobe is of extraordinary size; the organs of Destructiveness, Secretiveness, and Cautiousness, being very largely developed. This seems to be a characteristic of the tribe; for, in the pamphlet, it is stated of the Charruas generally that "the form of their head is almost round." Adhesive-Combative-ness, Acquisitiveness, Love of Approbation, and ess, are also large. There is thus an accurate correspondence between Sénacué's dispositions and his cerebral develop-

Our readers will find in Brewster's *Edinburgh Encyclopædia* (Art. *Buenos Ayres*, vol. v. p. 64), an account of the *Charruas* almost identical with that given above. The manifestations of Destructiveness, Secretiveness, and Cautiousness, are vividly described. The enemy is always taken by surprise, and attacked only after the probability of success has been ascertained by scouts.

The last article in this Number of the Journal, is a paper by Dr Sarlandière, on the Measurement of the Human Head. It is occupied chiefly with an account of an invention of his, meant to denote with mathematical precision the development of every individual organ in the brain. It is the last of a series of instruments which he has devised, but all of which, except itself have been abandoned as unsatisfactory. It consists of a copper helmet, capacious enough to admit heads of the largest size, and is fixed on by means of screws. Exactly over the centre of each organ there is a hole in the helmet, through which there passes a graduated wooden screw, terminated at both ends by a knob of ivory, the outer knob having marked upon it the number of the organ over which the screw is placed. The instrument being fixed symmetrically on the head, all the wooden screws are turned till their inner knobs touch the head; after which, the number of degrees indicated by each is noted upon paper. We thus obtain, says Dr Sarlandière, a comparative table, representing mathematically the extent to which every organ is developed.

It appears from some of the Doctor's expressions that his invention has been little admired by the other Parisian phrenologists; and we confess that to us also it is far from satisfactory. In the first place, the forms of heads vary so much, that though the wooden screws be exactly over the centre of the organs in a particular head, they will be found, when applied to many other heads, to be over organs altogether different: secondly, the breadth of the organs, which is an essential element of their size, is entirely left out of view; and, thirdly, the development of Veneration, for example, is not to be judged of merely by the altitude of the coronal surface from the base of the brain, but by the extent to which that surface is elevated above the top of the organs of the propensities, lower sentiments, and intellect. About ten years ago, a *craniometer* (figured in Mr Combe's *Elements*), similar in principle to that of Dr Sarlandière, and much more simple in its construction, was introduced among the phrenologists of Edinburgh, but being found of no utility, was soon afterwards abandoned. The callipers effect all that can be done mathematically; they ascertain the length, breadth, and height of the head, indicate with considerable accuracy its general volume, and give a tolerably correct idea of the direction in which the brain is most developed from the ear to the mesial line.

ARTICLE VII.

OBSERVATIONS ON THE FUNCTIONS OF THE ORGAN OF WEIGHT. By Mr RICHARD EDMONDSON, Manchester.

SOME time ago I addressed a short paper to the Phrenological Journal (published in vol. vii. p. 306), stating that from my own observation, and that of my brother, I was led to suspect that one of the functions of the organ of Weight, was the perception through vision of the position of objects with respect to their perpendicularity; and since then my observations have been so numerous, and the results so unvarying, that all my doubts on the subject are removed. I have examined a great many heads with this particular object in view, and have found, without a single exception, that whenever the organ is small, there is a proportionate incapability of detecting deviations from verticality in any objects; and that when it is large, that power is strong in proportion, no matter what the development may be in other respects. I have met with it so small in two ladies, sisters, that in running my finger over the perceptive organs, I found an indentation over Weight so remarkable, that it appeared as if a piece had been taken out of the skull with a small gouge; and neither of them could detect a deviation from the perpendicular of an inch in a line of eighteen inches or two feet. I tried many experiments with them, and always with the same result. One of them, when I first saw her, had just left a boarding-school, and at my request she shewed me her drawing-books. She displayed considerable taste in representing flowers, birds, and butterflies, but her attempts at any kind of architectural pieces were very inferior. One of her drawings was a view of a small town built on a river, and when I turned to it, she said, "I had more trouble with that piece than with all the rest in the book; my master made me do it four times over; he said all the buildings were tumbling, and I had *such* work to get it done *right*." And, although she had done it four times over, not a single line in it approached to perpendicularity: the buildings were in the most awkward confusion—some were tumbling to the right and some to the left; yet neither herself nor her sister could perceive any thing wrong with them. Both of them had large Form, Size, Colouring, and Order, and made considerable progress in drawing objects where the lines were curved; but they entirely gave up attempting pieces containing straight lines, as they never could please their friends with them. My brother and I invariably find, in our own business, that persons with large Form can cut good curved lines, but unless they have Weight also large, they cannot cut good straight ones;—

in squares, for example, they can never make them "*true*," as we say.

Another remarkable instance, of deficiency in this organ, I observed in a joiner in our employment. He had an excellent development for his business; except of this organ, which was the smallest I have observed in any male head. In planing he was excellent, and in execution rapid; and when he used the square, &c. his work was unexceptionable. In fitting up our benches, a number of uprights were of course required, which he fixed by the eye, and out of upwards of thirty there was not one decently accurate; many of them were above an inch out of truth, and all of them so much so, as to offend our own eyes. We pointed this out to him, and strange to say, he could not perceive the slightest inaccuracy in any of them; but on our applying the plumb-line, he was of course convinced, very much to his astonishment; as he had always supposed he had "*a good eye*," as he called it. I shall mention only one other circumstance:—Some time ago, I had to superintend the erection of some buildings connected with our establishment, at which a great number of hands were employed, and where time was of great importance to us. In watching the bricklayers I was much struck with the difference amongst them in the use of the plumb-line; some of them had continual recourse to it, all of whom had the organ small; while others, who had the organ large, scarcely used it at all. The master-builder had a very large development of the organ; and he frequently found fault with some of the men for losing so much time in plumbing. The bricklayers' turn-out commenced before our work was completed, and the master himself took the trowel in hand. I was quite astonished at the rapidity with which he worked, and the very little use he made of the plumb-line. I have seen him build up two feet of a stack of brick chimnies before he applied it at all; and when he came to plumb it, the inaccuracies were very trifling indeed. I remarked to him how very seldom he found occasion for the instrument, compared with many of the workmen; upon which he replied; "Aye, d—n them, some of them waste half their time in plumbing the corners—a parcel of idle vagabonds; if they would only use their eyes, they might almost do without it altogether." Of course he was no phrenologist, and imagined that every one who pleased could do as well as himself. These few facts, out of many more that I have observed, will suffice for the present. Some other phrenologists in Manchester have made observations on the same subject, and have met with the same result without a single exception. In the third edition of Mr Combe's System, a work beyond praise, it is said on page 397, "*The intoxicated soon lose a steady gait, fall down, see perpendiculars at other angles, believe*

the floor itself perpendicular, and grasp the ground to save themselves from falling off its surface"—which perfectly agrees with the above; and it appears to me, that this organ not only gives us the *feeling* of equilibrium, but also the perception, through vision, of the position of all objects as to their centre of gravity. If this be the fact, will it not give a beautiful explanation of the phenomenon which has so long puzzled philosophers, of objects being reflected in an inverted position on the retina? for if this part of the brain be largely developed, we see objects in the position in which they really exist; but if it be small, we see them approximating more or less to their reflected inverted position on the retina—as those who have it small see perpendiculars at other angles even when sober;—and if you ask them to draw a perpendicular line, they are sure to fail, and give it a deviation either to the right or left; and they actually imagine true perpendiculars to be incorrect. I have sometimes wondered that none of the numerous correspondents of the Journal has noticed the view given in my short paper, either in the way of contradiction or confirmation, more especially as the situation of the organ would lead us to infer that vision ministered to its operations; and in no published work is the inference drawn or supposed. I stated in the Journal that the idea was originally my brother's; and may now observe, that the way in which it first struck him is rather singular. He was in chapel and not much interested in the sermon, when, to while away the time, he began to exercise his perceptive organs upon some object before him. Individuality, he reflected, gave him the power to perceive the object as an individual existence; Form, its shape, and Size, its magnitude; but here he could go no farther by the eye, and, after some time, the thought struck him, that Weight might be the organ enabling him to ascertain the position of the object as to its centre of gravity, more especially as no organ had that function assigned to it. He mentioned the idea to me; it seemed plausible; and I immediately applied to nature for proof. I have in consequence found so much of the clearest evidence in its support, as to leave me without doubt on the subject.

ARTICLE VIII.

DUNDEE LUNATIC ASYLUM.

THE following extract from the Fourteenth Report of the Directors of the Dundee Lunatic Asylum, for the year ending 31st May 1834, will be read with interest and delight by all who desire to see the treatment of the insane based upon sound physiology. We trust that each succeeding year will shew an increased proportion of the number of patients cured.

"It has been often said, that if a lunatic is ever to be raised to the use of reason, he must be treated as a rational being; for we cannot expect to regain the use of our faculties, if no opportunity is offered for their regular exercise. Experience shews that any change in our habits is generally accompanied with some degree of mental excitement, which may be either salutary or otherwise, according to the temperament of each individual. Our frame of body, constitution of mind, and the condition in which we are here placed, point out labour as a duty inseparably connected with our present state; and it is the proper and well regulated exercise of his mental and bodily powers that constitutes the health, comfort, and usefulness of man. Rest is found to be a punishment of a heavier and more afflicting nature than labour. Solitary confinement has been proved to be impracticable, on account of its severity; for the mind either sinks into despondency, or the body yields to the power of death. In a retreat for lunatics, there must be nothing that bears the least resemblance to the treatment of a prison; and the habits that prevail in an Asylum must approximate as nearly as possible to the manners and pursuits of the world. These are views that have been long before the minds of the Directors—but it is only during the last year that their wishes have been fully realised. The patient, as far as his circumstances will allow, is now restored to the habits of real life. Those who have a taste for reading are supplied with newspapers and books, and no publication is withheld that can contribute to harmless amusement or useful instruction. The enlivening influence of music has also been employed to revive the spirits during an hour of gloomy weather, or when the tedious evenings of winter necessarily gave interruption to active employment.

"In this, as well as in every other public Asylum, the great bulk of the patients have been accustomed to labour, and they resume their avocations with an alacrity and cheerfulness, which must have the happiest effect on their mental and corporeal health. However ample may be the day-rooms—however extensive the airing-grounds,—yet, if the unhappy patient be confined within this limited circle—with few companions with whom he can communicate in feelings of sympathy—the same objects continually presented to his view—and cut off from those exercises with which his comfort had been associated,—we are not to be surprised if he should feel heavily the tedium of life—that his mind should sink into despondency—or that the resumption of his former habits should alleviate his burden—banish those thoughts that perplexed his mind—and serve as a powerful auxiliary to the means employed for his restoration.

"Arrangements have been formed, so that each patient, male and female, may return to their former occupations. On the

male side, the tailor has more customers in the house than all his exertions can supply. The shoemaker has laboured, not only for the benefit of his fellow-patients, but his shoes have been purchased by the friends of the establishment; and the workmanship has also been much admired. There are nine looms in constant employment; and as one workman relieves another at stated intervals, the labour never becomes irksome or unpleasant. Several of the patients have likewise acquired considerable dexterity in the manufacture of door mats and mattresses. Some of these articles have already been sold for the benefit of the house, and a farther supply will be provided if the public will give encouragement to this branch of the trade. In weather which does not admit of exercise in the open air, the patients are sometimes employed in teasing hemp and ropes; and though the employment be tedious and uninteresting, yet it has been found to be a happy substitute for complete idleness and vacuity. In an extensive establishment there must be daily services to perform,—such as pumping water, carrying coals, cleaning and white-washing the rooms; and these exercises afford a constant resource against the influence of languor and ennui. The formation of a washing-green, a new airing-ground, and alterations on the old ones, opened up a new source of recreation to the patients during the last spring. It may likewise be mentioned, that some of them have been permitted to go several miles beyond the premises, to prepare gravel for the walks. But the grand field of operation is the garden and adjoining grounds; and there are to be seen, at the proper seasons, in well organized bands, inmates of the establishment sowing and planting, digging and raking, hoeing and wheeling, with a calmness and decorum undistinguished from the scenes of common life.

“ But though the field be not quite so extensive on the female side, yet there the spectacle is equally inviting and attractive. The kitchen, laundry, washing-house, and the extraordinary neatness which is universally admired throughout all the departments of this establishment, afford considerable scope to female industry. Many ply at the wheel with that activity and diligence which they had acquired when they derived from this exercise the means of their subsistence; and a workshop is now erecting, to give employment to those who had been formerly engaged in manufacturing pursuits. The needle, however, is the instrument most congenial to female taste; and knitting also is an exercise in which many of them are not unwilling to beguile their lonely hours. The higher classes amuse themselves with fancy work. Some are readily induced to make for themselves different articles of dress; others labour as cheerfully for the public benefit; and not only has a plentiful supply of female clothing been provided, but the contract for furnishing

shirts for the males has been suspended by the industry excited within the House. The subjoined list will illustrate this statement, and shew the nature and variety of the employment of the patients, and the quantity of work executed by them in the course of the last year.

"The Directors are not aware that these exercises have been introduced into any institution to so great an extent as into the Dundee Asylum; and it is with much satisfaction that they announce the extraordinary fact, that it happens not unfrequently, that out of one hundred and thirty patients, not a single individual is to be found subjected to any restraint whatever, but that all of them are pursuing, as nearly as may be, those avocations to which they had been accustomed during the period of health. The picture has lost much of its repulsive aspect—in many points of view, it is most interesting and attractive. The cell is abandoned, the chain is burst, the frown of the keeper is changed into an expression of satisfaction, the tone of command has passed into the voice of companionship, while keeper and patient join hand to hand in the same task, and unite their spirits in the same pursuits.

"The effect of these exercises is apparent to all who are acquainted with this establishment. The condition of the patient has been greatly ameliorated; his cure is more effectually promoted; his labour has been a source of considerable emolument during the last year, and may in future be considered as constituting a permanent portion of the revenue of this institution. These are results that will be hailed by every one as most salutary and beneficial. Who can fail to be pleased with seeing the prisoner in the enjoyment of freedom, the languor of idleness converted into the cheerfulness of activity, and a permanent source of income opened up to an institution labouring under pecuniary difficulties? In these improvements the Directors claim no farther praise, than that of giving a willing and cordial assent to their introduction; to the Superintendent and Matron, by whom they were suggested, and by whose care and activity they have been carried into effect, is justly due all the credit, and all the reward."

ARTICLE IX.

OBSERVATIONS ON COMBATIVENESS, BEING AN ATTEMPT TO DETERMINE THE ELEMENTARY FACULTY TO WHICH THAT NAME IS GENERALLY APPLIED. By Mr ROBERT COX.

ONE of the most efficacious methods employed by Dr Gall to determine the functions of the different parts of the brain, was

to observe, at every opportunity, the heads of persons distinguished by any peculiarity of disposition or talent, and to note in what particular region a large development appeared in them all. Having, in the course of his researches, collected in his house a number of persons belonging to the lower ranks, such as porters and hackney-coachmen; his attention was drawn to the fact, that while some individuals were spoken of by their comrades as remarkable for provoking disputes and contentions, there were others, of a pacific disposition, whom they regarded with contempt, and called poltrons. "As the most quarrelsome," says Gall, "found great pleasure in giving me very circumstantial narratives of their exploits, I was anxious to see whether any thing was to be found in the heads of these heroes which distinguished them from those of the poltrons. I ranged the quarrelers on one side, and the peaceable on the other, and examined carefully the heads of both. I found that, in all the quarrelers, the head, immediately behind and on a level with the top of the ears, was much broader than in the poltrons. On other occasions, I assembled, separately, those who were most distinguished for their bravery, and those who were most distinguished for their cowardice. I repeated my researches, and found my first observations confirmed. I therefore began to conjecture that an inclination to contention (*penchant aux rixes*) might really be the result of a particular organ. I endeavoured to find out, on the one hand, men of acknowledged superior bravery, and, on the other, men known to be great cowards. At the combats of wild beasts, at that time still exhibited in Vienna, there appeared a first-rate fighter of extreme intrepidity, who often presented himself in the arena, to sustain alone a fight with a wild boar or a bull, or any ferocious animal whatever. I found in him the region of the head just pointed out very broad and rounded (*bombée*). I took a cast of this head, and likewise of those of some other *braves*, that I might run no risk of forgetting their particular conformations. I examined also the heads of some of my comrades, who had been expelled from several universities for continual duel-fighting. Among these was one who knew no greater pleasure than that of establishing himself in an ale-house, and mocking the workmen who came thither to drink,—and when he saw them disposed to come to blows, putting out the lights, and giving them battle in the dark, chair in hand. He was, in appearance, a little and weakly man. He reminded me of another of my comrades, a Swiss, who used to amuse himself at Strasburg by provoking quarrels with men much stronger and bigger than himself. I visited several schools, and had pointed out to me the scholars who were the most quarrelsome, and those who were the most cowardly. I prosecuted the same observations in the families of my acquaint-

ance. In the course of my researches, my attention was arrested by a very handsome young woman, who, from her childhood, had been fond of dressing herself in male attire, and going secretly out of doors to fight with the blackguards in the streets. After her marriage, she constantly sought occasion to fight with men. When she had guests at dinner, she challenged the strongest of them, after the repast, to wrestle with her. I likewise knew a lady, who, although of small stature and delicate constitution, was often judicially summoned, because of her custom of striking her domestics of both sexes. When she was on a journey, two drunk waggoners, having lost their way in the inn during the night, entered the chamber where she was sleeping alone: she received them with such vigour with the candlesticks, which she hurled at their heads, and the chairs, with which she struck them, that they were forced to betake themselves to flight. In all these persons, I found the region in question formed in the manner above described, although the heads were shaped in other respects quite differently. These observations emboldened me, and I began thenceforward to speak, in my lectures, of an *organ of courage*, as I then called it.* The existence of this organ has since been fully established.

Let us now attend to its manifestations in a state of disease. Pinel mentions several cases. One of these is that of a man affected with a very inveterate periodical mania. "His paroxysms," says Pinel, "generally continue for eight or ten days every month, and seem to present the most perfect contrast to his natural state. During his lucid intervals, his physiognomy is calm—his air mild and reserved—his answers to questions put to him timid and proper. He manifests urbanity of manners, rigid probity, and even a desire to oblige others, and expresses the most ardent wishes for the cure of his disease; but on the return of the paroxysm, particularly when marked by a certain redness of the face, excessive heat in the head, and a violent thirst, his walk is precipitate, his tone of voice is strong and arrogant, his look is full of audacity, and he experiences the most violent propensity to provoke those who approach him, and to fight with them furiously.†"

When the organ of Combativeness is deficient, the character is altogether pacific; the individual hates contention, and never willingly gets into a brawl. To this branch of the subject I shall have occasion to advert at greater length hereafter.

Gall and Spurzheim confine their remarks on Combativeness almost entirely to what may be termed its physical functions; the consideration of its effects in a moral point of view being

* Gall sur les Fonctions du Cerveau, tome iv. pp. 3—6.

† Pinel sur l'Aliénation Mentale. Seconde Edit. p. 101, sect. 116.

dismissed in a single brief sentence. "Learned men who find every where occasion for bitter controversy, and impassioned pleaders, have probably," says Gall; "this organ very much developed.*" To this topic, also, I shall afterwards return.

Having thus seen the effect of great vigour of the organ No. V., both in health and in disease, let us proceed to inquire what is the elementary faculty which prompts to the performance of actions such as those above described.

The attention of Dr Gall having been at first always fixed on the extraordinary manifestation of a quality or faculty, and consequently on the result of an excessive development of an organ, it is obvious that it was impossible for him to discover any fundamental power in its primitive destination. "In certain cases," as he himself observes, "it is much more easy to discover the organ which determines a certain mode of action, than the fundamental quality or faculty itself. Actions which are the result of the extraordinary activity of an organ are much more obvious than the primitive destination of that organ, and its ordinary manner of acting. It is for this reason that at first I observed almost all the organs, and all the faculties, in their *excessive activity*. When faculties are once recognised as peculiar and independent, it is possible thence to infer, by degrees, the primitive destination of an organ.†" *Courage*, we have seen, was the name which Dr Gall at first gave to the propensity now under discussion. Afterwards, however, he substituted for this name that of *Quarrelsomeness*, and then that of the *Instinct of Self-Defence and Defence of Property* (*Instinct de la Défense de soi-même et de la Propriété; penchant aux rixes; Courage*), which appellation he retained till his death. None of these designations of the faculty met the approval of Dr Spurzheim. "Physical courage," says he, "and the capacity to meet and repel attack, is necessary to animals, as soon as they are attached to females, to progeny, to dwellings, or to friends; for, according to the arrangements of nature, it is necessary to fight in order to defend. Such a propensity must therefore exist for the purposes of defence; but it seems to me that it is, like all others, of general application, and not limited to self-defence: I therefore call the cerebral part in which it inheres the organ of the *Propensity to Fight*, or of *Combativeness*.‡"

With all deference, it appears to me that Dr Spurzheim here falls into an error of the same kind, though perhaps not the same in degree, with that which he points out in the appellation bestowed on the organ by Gall. To employ—*mutatis mutandis*—the expressions used by himself in objecting to Gall's appellation of

* Sur les Fonctions du Cerveau, tome iv. p. 14.

† Ibid. tome iv. p. 1.

‡ Spurzheim's Phrenology, section on Combativeness.

another primitive faculty,—the organ No. V. is certainly essential to fighting, but it often acts without there being any intention to fight, and is also satisfied in various ways not necessarily connected with such a purpose. “We do not usually speak,” says Dr S., “of the nerves of the instinct of nutrition, but of those of hunger and thirst. The same language should be used, when speaking of the organ in question. Gall’s name does not express the whole sphere of activity of the faculty. Now, I constantly insist on the importance of adopting titles which do not designate determinate actions.”*

To the soundness of these principles I cordially assent, and Dr Spurzheim seems to have applied them successfully in analyzing the faculty No. VII. which Gall termed *Cunning*, but to which he gave the name *Secretiveness*. “I grant,” says he, “that this power too often acts as cunning, but I do not think that this name indicates the special propensity itself. This was to be determined without considering the objects upon which, and the manner in which, it acts; and in considering the proceedings of sly animals and cunning men, and all the functions depending on this power, I conceived it to be the propensity to conceal—to be secret in thoughts, words, things, or projects.”†

I cannot avoid thinking, that Dr Spurzheim somewhat overlooks his own principles, when he speaks of an “organ of the propensity to fight.” On the one hand, this name, to use his own phrase, “does not express the whole sphere of activity of the faculty;” and on the other, it is very like an expression which “designates a determinate action.” Fighting, in the case of man, is most frequently the result of the faculty when ill regulated or too energetic; or rather, as I shall afterwards endeavour to shew, it is the effect of such an endowment, in combination with another propensity—Destructiveness. “The most exalted action of an organ,” however, as Dr Gall well remarks, “is merely a gradation of the fundamental power, but not that fundamental power itself. The fundamental quality or faculty,” says he, “is common to all the individuals of the species; but the degrees of its manifestation vary in one individual and another, according as the organ is more or less developed. If we disregard all the accidental modifications, and pay attention only to what in that quality is common to all individuals, we shall have found the fundamental quality or faculty.”‡ This, I am persuaded, is the only mode in which elementary faculties can

* Phrenology; section on Amativeness.—Gall’s term is “The instinct of propagation.”

† Phrenology; section on Secretiveness.

‡ Tome iv. p. 20, 21.—Gall adds: “As, in this matter, much is left to the sagacity of each philosopher who devotes himself to it, there will always be a great diversity of opinions, even among organologists, on the subject of the denomination of the fundamental qualities or faculties.”

be arrived at ; and before the phrenological nomenclature can be accurate, we must designate each faculty by a term which, in the words of Dr Spurzheim, already repeatedly cited, shall " express the whole sphere of its activity."

It appears to me that both Gall and Spurzheim have failed to discover, or at least to expound, what in the faculty under discussion " is common to all individuals." This elementary, ultimate, primary, or fundamental quality or faculty, I have been led by much reflection to conclude, is, when stripped of all its " accidental modifications," neither more nor less than THE INSTINCT OR PROPENSITY TO OPPOSE ; or, as it may be shortly expressed, OPPOSIVENESS.

The word OPPOSE I use both in its primitive and in its secondary sense ; applying it to acts both physical and moral.

To OPPOSE literally signifies *to set one's self against*. According to Dr Johnson, it means, *to act against ; to be adverse ; to hinder ; to resist ; to place as an obstacle* : And OROGON he explains to be *one that opposes ; antagonist ; enemy ; rival*.

OPPOSITION may be either aggressive or defensive : we may *act against* another either by *attacking* or by *resisting*.

Let us now examine how far OPPOSITION characterises the actions to which, according to Phrenologists, Combativeness leads. Mr Scott's acute and comprehensive essay on this faculty, in the Transactions of the Phrenological Society, may be selected as the best subject for comment. That gentleman has the merit of having first clearly elucidated the *moral* functions of the faculty.

" By itself," says Mr Scott, " it is a blind impulse; delighting in OPPOSITION for its own sake."—*Obs.* Every faculty delights in the performance of actions prompted by itself.

Mr Scott.—" A restless spirit of contention, without end or object."—*Obs.* Contention is the action of two or more parties in OPPOSITION to each other. There can be no contention without OPPOSITION and *resistance*.

Mr Scott.—" Under the direction of higher powers, it gives boldness and force to the character, and enables these to act with energy and effect."—*Obs.* Here, also, there must be OPPOSITION. " Boldness" is an impulse to face dangerous objects ; to *set one's self against* them. Large No. V. enables a man to meet them without shrinking, nay even with pleasure. It matters not whether the dangerous object be a living creature or an inanimate object. In swimming against a rapid stream, persons in whom this faculty is weak will speedily become faint-hearted, if indeed they venture into the water at all ; while they who are amply endowed will continue, so long as their muscles are capable of resisting the torrent, to

and dishonest men. Where the organ is small, and Cautiousness full, the individual is utterly dismayed when he is under the necessity of competing with an opponent. "On the approach of a conflict, Cautiousness utterly overpowers him, and if possessed of sensibility, he is rendered exquisitely miserable: "his countenance is changed; his thoughts trouble him, so that the joints of his loins are loosed; and his knees smite one against another." When, on the other hand, the organ is large, opposition is a powerful incentive to redoubled exertion, and is felt to be positively agreeable. Men of this class are able to bring whatever talent they possess into operation; they execute their plans in a dashing and vigorous style, and frequently impress the shallow and inexperienced with a mistaken idea of their great intellectual superiority, and even men of high talent but deficient Combativeness with admiration of the ease and vigour with which they act in circumstances that paralyze and unnerve the minds of persons differently constituted. This idea is forcibly expressed by Lord Bacon, in his Essay on Boldness. "It is a trivial grammar-school text," says he, "but yet worthy a wise man's consideration:—A question was asked of Demosthenes, what was the chief part of an orator? He answered, action: What next? Action: What next again? Action. He said it that knew best, and had by nature himself no advantage in that he commended. A strange thing, that that part of an orator which is but superficial, and rather the virtue of a player, should be placed so high above those other noble parts of invention, elocution, and the rest; nay almost alone, as if it were all in all. But the reason is plain. There is in human nature generally more of the fool than of the wise; and therefore those faculties by which the foolish part of men's minds is taken, are most potent. Wonderful like is the case of boldness in civil business: What first? Boldness: What second and third? Boldness. And yet boldness is a child of ignorance and baseness, far inferior to other parts: but, nevertheless, it doth fascinate and bind hand and foot those that are either shallow in judgment or weak in courage, which are the greatest part; yea, and prevaileth with wise men at weak times."

In private society, also, individuals with large Combativeness and Self-esteem often make a far greater figure in the eyes of superficial and ignorant observers, than men whose moral and intellectual qualities are vastly superior. An excellent illustration of this occurs in an amusing paper of Addison's, in the *Tatler*, where he treats of the various sorts of conversation which are current in society, and likens the speakers to different musical instruments, according to the nature and manner of the conversation of each. The first sort mentioned is the drum.—"Your drums," says he, "are the blusterers in conversation,

that with a loud laugh, unnatural mirth, and a torrent of noise, domineer in public assemblies; overbear men of sense; stun their companions; and fill the place they are in with a rattling sound, that hath seldom any wit, humour, or good breeding in it. The drum, notwithstanding, by this haisterous vivacity, is very proper to impose upon the ignorant; and, in conversation with ladies who are not of the finest taste, often passes for a man of mirth and wit, and for wonderful pleasant company. I need not observe, that the emptiness of the drum very much contributes to its noise. The author next proceeds to the lute, which, says he, "is a character directly opposite to the drum, that sounds very finely by itself, or in a very small concert. Its notes are exquisitely sweet, and very low, easily drowned in a multitude of instruments, and even lost among a few, unless you give a particular attention to it. A lute is seldom heard in a company of more than five; whereas a drum will show itself to advantage in an assembly of five hundred. The lutenists, therefore, are men of fine genius, uncommon reflection, great affability, and esteemed chiefly by persons of good taste, who are the only proper judges of so delightful and soft a melody." In this description of the lute, it is not difficult to recognise an admirable and strikingly accurate picture of the character of Addison himself. In large mixed companies, he was silent and reserved; but among a few choice friends, he freely gave vent to that wit and humour, which, embodied, during his solitary hours, in essays contributed to the *Tatler*, *Spectator*, and *Guardian*, have since delighted millions, and will yet add to the enjoyment of many generations.

Phrenology is of great use in helping us to see through the blustering surface of presumptuous but ignorant and narrow-minded men, and to discover merit in persons whose modesty and diffidence are apt to prevent the display of the talents which they possess. Many young men of excellent parts, but deficient in Combativeness, and, it may be, in the quickness of perception which Individuality confers, feel themselves brow-beaten and cast down when brought into collision with persons of the *drum* species, and readily take up the impression that their own intellectual qualities are of a much inferior grade. To such youths Phrenology is of the highest service, by enabling them to discriminate between reckless pretension and solid ability, and also to form a just estimate of their own characters. An opposite illustration of this is published in the fourth Number of the *Phrenological Journal*, in an article entitled, "Phrenology applied to the Education of a Youth." In childhood, the individual in question was remarkable for good nature, simplicity, diffidence, and bluntness of manner, and at school was uniformly made the sag of boys more roughly constituted than himself.

Having only a moderate development of the knowing organs, he made extremely little progress in his education till after the age of puberty. He then studied, among other branches of science, Phrenology; and his observations on this topic are particularly deserving of attention. "As to Phrenology," says he, "I am convinced I owe as much, if not more, to it, than to any other of my studies. The extreme diffidence, which formed so remarkable a feature of my disposition, arose partly from natural timidity; but it was greatly aggravated by my being conscious of deficiency in some intellectual powers, compared with other persons, and entertaining most exaggerated notions of the impediments which these defects threw in the way of my attaining even ordinary proficiency in any thing. In short, before I knew Phrenology, I was persuaded that I was a blockhead; and my whole character and conduct were on the point of being formed and regulated on this principle. When, however, I was told that my timidity arose from a deficiency of Combativeness, joined with large Cautiousness, Conscientiousness, and Love of Approbation, I felt the truth of the observation instinctively; and as I have a good Self-Esteem, and no deficiency of Firmness, I felt as if a mountain had been taken off my shoulders, and hoped that I should yet be able to hold up my head in society. The knowledge, also, that the confidence of many of my associates, whose presence of mind I had envied and attributed to great intellectual superiority, arose merely from larger Combativeness and less Cautiousness than mine, gave me additional courage; and I found that this theory of their dispositions was correct, not only by observing their heads, but by comparing with these their manner and conduct when boys, and discovering how beautifully it explained them. I had a natural tendency to implicit belief in all that was presented to my mind, and took every one's pretensions for actual attainments; and in this way could never feel that I was half wise enough to act on my own opinion, if any human being chose to call it in question. Phrenology gave me an invaluable insight into character, and enabled me to distinguish the chaff from the wheat; and also to try my own views by the standard of nature, and not by the mere notions of other men. The knowledge of character which it has communicated, is as valuable as at least ten years' experience of the world would have been to a mind such as mine. My timidity and want of confidence are naturally so great, that I can scarcely imagine the time when I would have had courage to place myself in situations calculated to afford experience. Possessed of Phrenology, I feel myself invested with something like the invisible ring of the fairy tales; I enter into society with an instrument which enables me to appreciate individuals with truth and accuracy; this knowledge makes me know my real

situation, and feel safe; and then I am enabled to act without fear or embarrassment. Phrenology has placed my mind at peace also with itself. I know my deficiencies, and avoid reliance upon them; while I know also the powers that are given, and the purposes to which they may be applied; and gratitude to Providence, with a due feeling of responsibility, have succeeded to fear and diffidence, which can never exist in a high degree, without some portion of discontent. Much, therefore, as Phrenology is depised, I must always regard an acquaintance with it as one of the happiest circumstances of my life; and have no doubt that others will entertain the same opinion when they are practically acquainted with its truths." But it is time to return to Mr Scott's analysis.

Mr Scott.—"This propensity sometimes manifests itself very strongly, where there is no opportunity or pretext for any serious or actual opposition. There are some men in whom it appears in the course of the lightest or most amicable conversation. Such men are your great arguers. The spirit of contention and opposition is so strong in them, that they cannot prevail upon themselves to assent to the simplest proposition. There are men who make a point of contradicting almost every thing that is said; who, whatever question is broached, are sure to take the opposite, and even though vanquished they can argue still. Such persons cannot endure to have their opinions assented to. If you are convinced by their arguments, they will go over to the opinion you have left,—'Confute, change sides, and still confute.'"

Obs. This is a pure tendency to oppress. Such persons love to contradict aggressively, and to resist defensively. With large Destructiveness and Self-Esteem, and little Benevolence, a great endowment of Combativeness gives rise to that species of detractor described by Dr Johnson in the *Rambler* under the title of *The Roarer*. "If the wealth of a trader is mentioned, the Roarer without hesitation devotes him to bankruptcy; if the beauty and elegance of a lady be commended, he wonders how the town can fall in love with rustic deformity; if a new performance of genius happens to be celebrated, he pronounces the writer a hopeless idiot, without knowledge of books or life; and without the understanding by which it must be acquired. His exaggerations are generally without effect upon those whom he compels to hear them; and though it will sometimes happen that the timorous are awed by his violence, and the credulous mistake his confidence for knowledge, yet the opinions which he endeavours to suppress soon recover their former strength, as the trees that bend to the tempest erect themselves again when its force is past."

From a similar cause proceeds that peevish disposition, which

Having only a moderate development of the knowing organs, he made extremely little progress in his education till after the age of puberty. He then studied, among other branches of science, Phrenology; and his observations on this topic are particularly deserving of attention. "As to Phrenology," says he, "I am convinced I owe as much, if not more, to it, than to any other of my studies. The extreme diffidence, which formed so remarkable a feature of my disposition, arose partly from natural timidity; but it was greatly aggravated by my being conscious of deficiency in some intellectual powers, compared with other persons, and entertaining most exaggerated notions of the impediments which these defects threw in the way of my attaining even ordinary proficiency in any thing. In short, before I knew Phrenology, I was persuaded that I was a blockhead; and my whole character and conduct were on the point of being formed and regulated on this principle. When, however, I was told that my timidity arose from a deficiency of Combativeness, joined with large Cautiousness, Conscientiousness, and Love of Approbation, I felt the truth of the observation instinctively; and as I have a good Self-Esteem, and no deficiency of Firmness, I felt as if a mountain had been taken off my shoulders, and hoped that I should yet be able to hold up my head in society. The knowledge, also, that the confidence of many of my associates, whose presence of mind I had envied and attributed to great intellectual superiority, arose merely from larger Combativeness and less Cautiousness than mine, gave me additional courage; and I found that this theory of their dispositions was correct, not only by observing their heads, but by comparing with these their manner and conduct when boys, and discovering how beautifully it explained them. I had a natural tendency to implicit belief in all that was presented to my mind, and took every one's pretensions for actual attainments; and in this way could never feel that I was half wise enough to act on my own opinion, if any human being chose to call it in question. Phrenology gave me an invaluable insight into character, and enabled me to distinguish the chaff from the wheat; and also to try my own views by the standard of nature, and not by the mere notions of other men. The knowledge of character which it has communicated, is as valuable as at least ten years' experience of the world would have been to a mind such as mine. My timidity and want of confidence are naturally so great, that I can scarcely imagine the time when I would have had courage to place myself in situations calculated to afford experience. Possessed of Phrenology, I feel myself invested with something like the invisible ring of the fairy tales; I enter into society with an instrument which enables me to appreciate individuals with truth and accuracy; this knowledge makes me know my real

situation, and feel safe; and then I am enabled to act without fear or embarrassment. Phrenology has placed my mind at peace also with itself. I know my deficiencies, and avoid reliance upon them; while I know also the powers that are given, and the purposes to which they may be applied; and gratitude to Providence, with a due feeling of responsibility, have succeeded to fear and diffidence, which can never exist in a high degree, without some portion of discontent. Much, therefore, as Phrenology is depised, I must always regard an acquaintance with it as one of the happiest circumstances of my life; and have no doubt that others will entertain the same opinion when they are practically acquainted with its truths." But it is time to return to Mr Scott's analysis.

Mr Scott.—"This propensity sometimes manifests itself very strongly, where there is no opportunity or pretext for any serious or actual opposition. There are some men in whom it appears in the course of the lightest or most amicable conversation. Such men are your great arguers. The spirit of contention and opposition is so strong in them, that they cannot prevail upon themselves to assent to the simplest proposition. There are men who make a point of contradicting almost every thing that is said; who, whatever question is broached, are sure to take the opposite, 'and even though vanquished they can argue still.' Such persons cannot endure to have their opinions assented to. If you are convinced by their arguments, they will go over to the opinion you have left,—'Confute, change sides, and still confute.'"

Obs. This is a pure tendency to oppose. Such persons love to contradict aggressively, and to resist defensively. With large Destructiveness and Self-Esteem, and little Benevolence, a great endowment of Combativeness gives rise to that species of detractor described by Dr Johnson in the Rambler under the title of *The Roarer*. "If the wealth of a trader is mentioned, the Roarer without hesitation devotes him to bankruptcy; if the beauty and elegance of a lady be commended, he wonders how the town can fall in love with rustic deformity; if a new performance of genius happens to be celebrated, he pronounces the writer a hopeless idiot, without knowledge of books or life, and without the understanding by which it must be acquired. His exaggerations are generally without effect upon those whom he compels to hear them; and though it will sometimes happen that the timorous are awed by his violence, and the credulous mistake his confidence for knowledge, yet the opinions which he endeavours to suppress soon recover their former strength, as the trees that bend to the tempest erect themselves again when its force is past."

From a similar cause proceeds that peevish disposition, which

Having only a moderate development of the knowing organs, he made extremely little progress in his education till after the age of puberty. He then studied, among other branches of science, Phrenology; and his observations on this topic are particularly deserving of attention. "As to Phrenology," says he, "I am convinced I owe as much, if not more, to it, than to any other of my studies. The extreme diffidence, which formed so remarkable a feature of my disposition, arose partly from natural timidity; but it was greatly aggravated by my being conscious of deficiency in some intellectual powers, compared with other persons, and entertaining most exaggerated notions of the impediments which these defects threw in the way of my attaining even ordinary proficiency in any thing. In short, before I knew Phrenology, I was persuaded that I was a blockhead; and my whole character and conduct were on the point of being formed and regulated on this principle. When, however, I was told that my timidity arose from a deficiency of Combativeness, joined with large Cautiousness, Conscientiousness, and Love of Approbation, I felt the truth of the observation instinctively; and as I have a good Self-Esteem, and no deficiency of Firmness, I felt as if a mountain had been taken off my shoulders, and hoped that I should yet be able to hold up my head in society. The knowledge, also, that the confidence of many of my associates, whose presence of mind I had envied and attributed to great intellectual superiority, arose merely from larger Combativeness and less Cautiousness than mine, gave me additional courage; and I found that this theory of their dispositions was correct, not only by observing their heads, but by comparing with these their manner and conduct when boys, and discovering how beautifully it explained them. I had a natural tendency to implicit belief in all that was presented to my mind, and took every one's pretensions for actual attainments; and in this way could never feel that I was half wise enough to act on my own opinion, if any human being chose to call it in question. Phrenology gave me an invaluable insight into character, and enabled me to distinguish the chaff from the wheat; and also to try my own views by the standard of nature, and not by the mere notions of other men. The knowledge of character which it has communicated, is as valuable as at least ten years' experience of the world would have been to a mind such as mine. My timidity and want of confidence are naturally so great, that I can scarcely imagine the time when I would have had courage to place myself in situations calculated to afford experience. Possessed of Phrenology, I feel myself invested with something like the invisible ring of the fairy tales; I enter into society with an instrument which enables me to appreciate individuals with truth and accuracy; this knowledge makes me know my real

situation, and feel safe ; and then I am enabled to act without fear or embarrassment. Phrenology has placed my mind at peace also with itself. I know my deficiencies, and avoid reliance upon them ; while I know also the powers that are given, and the purposes to which they may be applied ; and gratitude to Providence, with a due feeling of responsibility, have succeeded to fear and diffidence, which can never exist in a high degree, without some portion of discontent. Much, therefore, as Phrenology is depised, I must always regard an acquaintance with it as one of the happiest circumstances of my life ; and have no doubt that others will entertain the same opinion when they are practically acquainted with its truths." But it is time to return to Mr Scott's analysis.

Mr Scott.—"This propensity sometimes manifests itself very strongly, where there is no opportunity or pretext for any serious or actual opposition. There are some men in whom it appears in the course of the lightest or most amicable conversation. Such men are your great arguers. The spirit of contention and opposition is so strong in them, that they cannot prevail upon themselves to assent to the simplest proposition. There are men who make a point of contradicting almost every thing that is said ; who, whatever question is broached, are sure to take the opposite, 'and even though vanquished they can argue still.' Such persons cannot endure to have their opinions assented to. If you are convinced by their arguments, they will go over to the opinion you have left,—'Confute, change sides, and still confute.'"

Obs. This is a pure tendency to oppose. Such persons love to contradict aggressively, and to resist defensively. With large Destructiveness and Self-Esteem, and little Benevolence, a great endowment of Combativeness gives rise to that species of detractor described by Dr Johnson in the *Rambler* under the title of *The Roarer*. "If the wealth of a trader is mentioned, the Roarer without hesitation devotes him to bankruptcy ; if the beauty and elegance of a lady be commended, he wonders how the town can fall in love with rustic deformity ; if a new performance of genius happens to be celebrated, he pronounces the writer a hopeless idiot, without knowledge of books or life, and without the understanding by which it must be acquired. His exaggerations are generally without effect upon those whom he compels to hear them ; and though it will sometimes happen that the timorous are awed by his violence, and the credulous mistake his confidence for knowledge, yet the opinions which he endeavours to suppress soon recover their former strength, as the trees that bend to the tempest erect themselves again when its force is past."

From a similar cause proceeds that peevish disposition, which

revenge. It is to be observed, however, that a remarkable sympathy exists between the two organs in question, probably from their juxtaposition in the brain. When one of them is highly excited, the other seldom remains quiescent. It is with great difficulty that persons who engage in contention avoid becoming angry and ill-natured; while, on the other hand—as Dr Thomas Brown has remarked, though in too unqualified terms—“when anger arises, fear is gone;—there is no coward, for all are brave.”* This simultaneousness of action appears to be the principal cause why the functions of Combativeness and Destructiveness have hitherto been so much confounded.

The skulls and dispositions of the Peruvian Indians afford a strong confirmation of the views now proposed. The Phrenological Society possesses several of these, closely resembling each other. Combativeness is in them very little developed, while Destructiveness and Cautiousness are quite enormous. In accordance with this, we are told in the *Edinburgh Review*, (vol. ix. p. 437), that the Peruvian Indians are “dastardly in moments of danger, savage and cruel after victory, and severe and inexorable in the exercise of authority.” Equally striking are the following remarks of that most sagacious observer of human character, Montaigne. “I have often heard it said, that cowardice is the mother of cruelty; and I have found by experience, that malicious and inhuman animosity and fierceness is usually accompanied with feminine faintness. . . . Valour, whose effect is only to be exercised against resistance, stops when it sees the enemy at its mercy; but Pusillanimity, not having dared to meddle in the first act of danger, rushes into the second of blood and massacre: . . . like cowardly house-curs, that in the house worry and tear the skins of wild beasts they durst not come near in the field.”†

Combativeness, then, is a chief element in the propensity to fight; but Destructiveness is not less indispensable. When the latter is deficient, or when Cautiousness is very large, Combativeness will incline to seek gratification in some of the bloodless and blowless fields above adverted to—in moral rather than physical contention—and in wrestling rather than fighting. If Language be greatly developed, a love of verbal disputation will be the probable result.

If man be destined—as there is good reason to believe that he is—to reach that point in the scale of civilization where the propensities will act under the guidance of the higher sentiments and intellect, physical contention will altogether cease, except in

* Lectures on the Philosophy of the Human Mind, iii. 24.

† Essays, vol. ii. ch. 27.

those countries where fierce and ravenous animals remain. When this period shall arrive, what sphere of activity will there be for Dr Spurzheim's "propensity to fight?" The only field which will then exist, is that of mental opposition and discussion.

For these reasons I humbly submit, 1st, That Dr Spurzheim's definition of the function of the organ No. V. is incorrect and incomplete; and, 2dly, That the word *OPPOSIVENESS*, as above defined, includes every form of action to which the propensity leads, expresses the fundamental or elementary function with precision and clearness, and ought therefore to be substituted for the term *Combativeness*, now almost universally in use. At all events, it is superior to the present name, by embracing the moral as well as physical actions to which the faculty prompts. The title *Courage*, originally bestowed by Gall, is objectionable as not sufficiently comprehensive, and also because it expresses a state of mind in which the tendency to oppose prevails over the dictate of Cautiousness; for it seems to me that the same development of the organ No. V. may render one man courageous, but fail to produce this effect on another in whom Cautiousness predominates. It may be said that a name is of little importance, provided the real nature of the faculty is understood. To this I reply, first, that Dr Spurzheim's definition gives an erroneous view of the real nature of the faculty; secondly, that though advanced phrenologists may, notwithstanding, have accurate notions about the faculty, students of the science are puzzled and misled; and, lastly, that people who judge of the nature of the faculties merely from their names, have their prejudices against Phrenology increased by the belief, needlessly forced upon them, that phrenologists have discovered an organ, the natural and legitimate function of which is to induce mankind to fight.

Whether the foregoing observations be well founded or not, they may at least be useful in drawing more of the attention of phrenologists than has of late been given, to the analysis of the fundamental faculties, and to the mode in which such inquiries ought to be pursued.

ARTICLE X.

REMARKS ON TWO CASES OF CEREBRAL DISEASE, PUBLISHED BY DR MOIR IN THE EDINBURGH MEDICAL AND SURGICAL JOURNAL, AND IMAGINED TO BE SUBVERSIVE OF THE CONCLUSIONS OF PHRENOLOGISTS AS TO THE SEAT OF THE ORGAN OF LANGUAGE. By W. A. F. BROWNE, Esq.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,—It is necessary to direct the attention of your readers to an article in the last number of the Medical and Surgical Journal, entitled, "Report of cases communicated to the Anatomical Society of Edinburgh;" in consequence of the palpable mistakes into which the author has fallen as to the nature and scope of certain observations published by me on "Derangement of the Faculty of Language." These errors must proceed either from ignorance of the principles which the author attempts to prove are erroneous, or from never having perused the paper in which these principles were explained and advocated. The observations in question consisted of a series of papers written expressly for the Phrenological Journal.* In the first of these, and the only one it would appear that Dr Moir has examined, it is shewn that the power by which we employ signs to represent our ideas and feelings is connected, not merely, as Dr Moir states, with the anterior lobes of the brain, but with that portion of these lobes which rests on the centre of the orbital plate. It is likewise established, that when these convolutions are destroyed or seriously injured in *both* hemispheres, the extinction of this power invariably and inevitably follows; but that various conditions of this faculty have been noticed, such as an inability to use certain classes of words, the propensity to employ one class in place of another, &c., of the organic cause of which, if any such exist, pathologists are as yet ignorant. In the succeeding essays, a detail is given of instances of rapidity of voluntary utterance, involuntary utterance, rapidity of involuntary utterance, total loss of verbal memory, partial loss of memory of all words indiscriminately, and so forth; with the suggestion that such symptoms may, in general, be traced to cerebral excitement, inflammation, or congestion, or some other cause affecting the brain generally or locally; guarded, however, by the acknowledgement, that even this much cannot be asserted without the aid of pathology.

The object of Dr Moir is to prove, that the conclusions at

* Published in Nos. 36, 37, and 38; vol. viii. pp. 250, 308, 414.

which I have arrived are erroneous, or "do not hold good in all cases." I need not comment on the logic of holding that conclusions may be true at one time and false at another. To accomplish this object two cases are given, one of which is obviously an example of disease originating in disturbance of the cerebral functions; the other, which is so triumphantly advanced, it will astonish Dr Moir to learn, does not bear in the most remote degree on the point at issue. The first is that of a paralytic woman, who gradually "lost the power of expressing her ideas in *proper* language, using sometimes words conveying a meaning quite different from what she intended," but who preserved her intelligence unimpaired. After death, tumors were discovered in the middle and posterior part of the brain. I will not attempt to associate the defective power with the *indirect* irritation occasioned by the extensive disease under which the patient laboured, but content myself with referring to the phenomena which so frequently attend paralysis, epilepsy, and insanity, and with demanding if the symptom here particularised is not to be regarded in the same light—as an indication of the *general* affection of the nervous system. That the part of the brain regarded as the organ of Language is, even in such a case, implicated and specially affected, I believe: but this belief does not imply that the implication shall be organic, or at least appreciable by the senses. The optic nerve becomes insensible, although no change in its structure can be perceived. In all, or nearly all, the instances which I have adduced, no organic lesion existed, or was actually proved to exist—simply because the symptoms proceeded from disorder rather than from extinction of the power. Of many, the duration was brief, and the recovery complete; of others, the continuance appeared to depend on the intensity of other maladies; and of all, with the exception of those illustrative of total destruction of the faculty, it was confessed that we knew not the organic cause—a confession equivalent to saying that they depended on *functional* disease. Dr Moir's first case, then, appears to be precisely of this description; and if he will condescend to examine the paper which he has undertaken to criticise, he will find that many cases almost precisely similar have been there recorded, and attributed, not to ramollissement or structural alteration of the convolutions proved to be the organ of Language, but to some morbid action affecting the brain as a whole.

The second case is that of a boy who received a wound in the orbit from the birch end of a scavenger's broom; and whose brain after death presented the following, among other morbid appearances: "Adhesion of brain to the dura mater, corresponding to an opening in the *left* orbital plate of the frontal bone, about half an

inch posterior to its internal angle. The cerebral matter adhered only round the edge of this opening, &c. The olfactory nerve of the left side was pushed aside towards the mesial line, and at the anterior part of the bulb was, along with a small part of the brain adjoining to it, dark-coloured and softened." This individual, although in a state of coma or delirium during the whole period between the infliction of the injury and his death, is reported to have answered questions distinctly when roused; and his condition is THEREFORE assumed as proving that no connection subsisted between the preservation of the power of language and integrity of the inferior portion of the anterior lobes. The presence of organic degeneration in the anterior lobes, however, is not sufficient: it must extend to those convolutions resting on the CENTRE of the orbital plate; and moreover, the change must be present on the same spot IN BOTH HEMISPHERES. In Bouillaud's cases, this condition of the brain was observed, and in them the loss of language was complete and permanent. Where the injury is limited to ONE side, as in the case under discussion, we can no more expect that the faculty should be destroyed, than that, from the loss of *one* eye, blindness should ensue. But supposing for a moment that the *softening* described had been detected in the *right* hemisphere likewise, the fact could not have invalidated Dr Gall's conclusions, inasmuch as the change does not appear to have involved the organ of Language at all. It is stated to have been situate "*about half an inch posterior* to the internal angle of the orbital plate," and to have included the portion of brain adjoining to the olfactory bulb. Had Dr Moir consulted *any* of the works treating of the principles which he aspires to oppose, he would have found that the point here indicated corresponds to the *organ of Form*, and not to that of Language.

I need not say that this case likewise must be regarded as altogether irrelevant. I am, &c.

W. A. F. BROWNE.

Montrose, 5th Nov. 1834.

ARTICLE XI.

PROXIMATE CAUSE OF SLEEP.

1. Mr ANDREW CARMICHAEL's *Reconsideration of his "Conjectures" in reference to Mr MACNISH's "Philosophy of Sleep."* Read before the Dublin Phrenological Society.

IN the Phrenological Journal, No. XXXIX, is an able and interesting review of Mr Macnish's "*Philosophy of Sleep.*" I

participate in every sentiment it expresses of this admirable work. I think it "worthy of a place in every well-furnished library;" and I am sure it will interest equally the reader for amusement and the philosophical thinker. But there is one little passage, and perhaps the only one in the book, or the review, in which I very widely differ from Mr. Macnish, and the reviewer; and this confession will perhaps be considered an unqualified compliment to both, as even that passage might not have proved any exception, if it had concerned any other essayist but myself. Be that as it may, I dissent from Mr. Macnish, because he confounds the essence of my theory with an inference drawn from it, — a corollary, which may be false even though the theory be true; and I dissent from the reviewer, because he adopts the mistake, and judges of me and my hypothesis accordingly. The following paragraph from the Review comprises the whole of the passage to which I have adverted.

"In treating of the uses of sleep, the author comments on the views of Mr. Andrew Carmichael, of which we gave some account at page 268 of this volume. Mr. Carmichael supposes sleep to be the period, when assimilation goes on in the brain. In this respect (says Mr. Macnish), I believe that the brain is not differently circumstanced from the rest of the body. There, as elsewhere, the assimilative process proceeds both in the slumbering and in the waking state; but that it is at work in the brain only during sleep, analogy forbids us to admit. So long, as circulation continues, a deposition of matter is going on; and circulation, we all know, is at work in the brain, as in other organs, whether we be asleep or awake." Mr. Carmichael's theory (the Reviewer continues), is certainly an *unsupported conjecture*, and we are inclined to agree with Mr. Macnish in thinking analogy against it."

I never proposed my theory as any thing else but a *conjecture*; but it can scarcely be said to be *unsupported*, when it naturally accounts for all the various phenomena of sleep, and has stood its ground in defiance of every objection which my own reflections or the ingenuity of others have as yet started against it. My simple hypothesis, divested of all inference or corollary, is this: *not that sleep is the period when assimilation goes on in the brain, BUT THAT THE PROCESS OF ASSIMILATION IN THE BRAIN IS THE ACTUAL CAUSE OF SLEEP.*

We know that *that* must be something more than rest which involves so intense and predominant a change as that which locks up the senses and the intellect, and induces an oblivion of all we knew, an annihilation to us of all that existed. Such a change can only be caused by some important vital process, so indispensable as to be of daily recurrence, and of such general influence as to engage every part of the frame, but particularly the organs

of thinking, sensation, and voluntary motion. Such a process is that which repairs the waste of the brain and nerves, and preserves their consistence and vigour; and powerful and overwhelming must be its effects upon the delicate and fragile instruments of thought, feeling, and motion. It would be, in my mind, irrational to suppose that a change which affects their very structure, by the deposit of new particles, if that deposit be extensive and considerable, must not be attended by a cessation of their functions—an actual, though a natural paralysis—**THE PARALYSIS OF SLEEP.**

If small in quantity, and while the brain and nerves are in a state of active energy, the matter deposited may be hurried unobserved into the existing activity of the living matter; but if large in quantity, and while these organs are resting from their labours, can it be that the extraneous and unassimilated mass does not press its increasing weight on their fragile machinery, and produce an EFFECT something like the pressure of the over-swollen bloodvessels—but natural, necessary, and healthful,—what we have already termed **THE PARALYSIS OF SLEEP?**

A large deposit of those particles not yet employed in the functions of feeling or thinking, must have a similar effect as the imposition of an extraneous body on those tender and exquisite organs; and their paralyzing compression must continue under the form of sleep until the assimilation is complete, and the new mass of nervous particles as fit as the old for the operations and uses designed by the Creator. The function then commences; internal organ after organ, nerve after nerve, enters into activity; the external senses resume their daily occupations; the mind is in communication with the external world; we are, to all intents and purposes, awake.

In this account of the principal component part of my theory, I have borrowed, in some degree, from my *Memoir of Spurzheim*. The passages in that work express, with a few exceptions, the views which I still entertain upon this subject. But where those exceptions occur, I have modified my exposition so far as was necessary to convey the opinions I would be now understood to profess. I am indebted to Mr Macnish for forcing upon me the reconsideration of the hypothesis. Neither he nor I can have any object beyond the attainment of truth; and, to this happy result, nothing is more conducive than the collision of minds.

It is not necessary to my theory, that the assimilative process should be at work in the brain only during sleep. It may proceed there, as elsewhere, both in the slumbering and in the waking state, without affecting, in the slightest degree, my hypothesis. But it is necessary to its truth, that *there, as elsewhere*, this process should operate with more energy, or at least more effect,

during our sleeping than our waking hours : and that this is the fact, appears in many passages of Mr Macnish's own work. " When the body," says Mr Macnish, " is in a state of INCREASE, as in the advance from infancy to boyhood, so MUCH SLEEP is required; that the greater portion of existence may be fairly stated to be absorbed in this way. It is *not* mere *repose from action* that is capable of securing the wasted powers, or restoring the nervous energy. Along with this is required that *oblivion of feeling* and *imagination* which is essential to; and which in a great measure constitutes, sleep. But if, in mature years, the body is adding to its bulk by the accumulation of adipose matter, a greater tendency to somnolency occurs than when the powers of the absorbents and exhalants are so balanced as to prevent such accession of bulk *." †

I cannot agree with Mr Macnish in his observation, that oblivion of feeling and imagination in a great measure constitutes sleep. Whatever causes sleep, causes also the oblivion with which it is attended. But, to a certain extent, I agree with his subsequent observation, that, while one set of organs is laying down particles, another is taking them up with such exquisite nicety, that, for the continual *momentary* waste, there is continual *momentary* repair ‡. This appears to me to require a little qualification to meet the admitted fact of, the " renovating influence of sleep §;" but I should not dissent from the expression " diurnal waste, and diurnal repair;"—a form which more accurately connects itself with Mr Macnish's observation, that " this is capable of going on *with the strictest equality* for half a century ¶."

This renovating influence of sleep is more distinctly explained by Mr Macnish, where he remarks—" That it increases digestion, and as a natural consequence nutrition, is rendered probable by many circumstances; hence it is *the period in which the regeneration of the body chiefly takes place*. Were there even no augmentation given to the assimilative function, as is maintained by Broussais and some other physiologists, it is clear that the body would be more thoroughly nourished than when awake; for all those actions which exhaust it in the latter condition are quiescent, and it remains in a state of rest, silently *accumulating* power without expending *any* ¶;" in other words, silently accumulating new particles, or rather masses of particles, without expending the old in the same proportion.

I have already adverted to the effect of this accumulation on the entire brain; and, did space permit, I might notice the consequences of partial release of the brain and nerves from this influence—namely, nightmare, somnambulism, and sleep with

* Philosophy of Sleep, 2d edit. p. 4.

† Id. p. 5.

‡ Id. p. 6.

¶ Id. p. 5.

¶ Id. p. 21.

dreams. There is one condition, however, that ought not to be passed over in silence; that in which the brain and nerves of sense are in a waking state, and the nerves of voluntary motion are still shackled under the weight of the new and unassimilated deposit of the nervous particles. This is a state that but seldom presents itself. These nerves, in our waking moments, appear to be always ready to obey the will, except when they are labouring under paralysis; but the natural paralysis of sleep is so easily dissipated that it rarely can maintain its power after the mind issues its mandate that the limbs shall move. I should have been without an example of this peculiar condition, if Mr Macnish had not furnished me with a most satisfactory instance, in which he himself is delineator, subject, and sufferer.

"During the intensely hot summer of 1825," says this graphic and lively writer, "I experienced an attack of DAY-MARE. Immediately *after dinner*, I threw myself on my back upon a sofa, and, before I was aware, was seized with difficult respiration, extreme dread, and *utter incapability of motion or speech*. I could *neither move nor cry*; while the breath came from my chest in broken and suffocating paroxysms. During all this time, I was *perfectly awake*; I *saw* the light glaring in at the windows in broad sultry streams; I *felt* the intense heat of the day pervading my frame; and *heard* distinctly the different noises in the street, and even the ticking of my own watch, which I had placed on the cushion beside me. I had, at the same time, the consciousness of flies buzzing around, and settling, with annoying pertinacity, upon my face. During the whole fit, *judgment was never for a moment suspended*. I felt assured that I laboured under a species of incubus. I even endeavoured to reason myself out of the feeling of dread which filled my mind; and longed, with insufferable ardour, for some one to open the door, and *dissolve the spell which bound me in its fetters*. The fit did not continue above five minutes: *by degrees I recovered the use of speech and motion*; and, as soon as they were so far restored as to enable me *to call out and move my limbs*, it wore *insensibly away* *."

"Upon the whole," continues Mr Macnish, "I consider DAYMARE and NIGHTMARE identical. They proceed from the same cause, and must be treated in a similar manner †." It must be admitted that they are nearly, but not altogether, identical. In both, if I am right in my views, the nerves of voluntary motion are under the influence of the new deposit of nervous matter. In *nightmare* the nerves of sense are under the same influence. In *daymare* they are *not*; they are perfectly awake, and the individual is in full communication with the external

* Philosophy of Sleep, 2d edit. p. 157.

† Id. p. 158.

world. Both of these instances differ from common dreams in this peculiarity. In *these* instances, the mind actually issues its mandates whether obeyed or disobeyed. In common dreams, a current of thought passes through the mind like a train of realities, but the mandates of the mind and the motions of the limbs are equally imaginary.

In his chapter upon Trance, Mr. Macnish details a similar case, but in which the symptoms were much more aggravated and protracted. Both cases differ altogether from the six cases of protracted sleep detailed in Mr. Macnish's eleventh chapter. There is no reason for supposing that these persons were not under the influence of intense slumber, during the greater part of the interval engaged in the paroxysm. Nor is there any reason for rejecting as its cause the continued deposition of new nervous substance to an unusual extent. "The right hand and arm of Mary Lyall appeared completely dead and bereft of feeling; and even when pricked with a pin, so as to draw blood, never shrank in the least degree. At the same time she instantly drew back her left arm whenever it was touched by the point of the pin. After an interval of seven days she began to move her left hand, and, by pointing to her mouth, signified a wish for food. She took readily what was given to her; still she discovered no symptoms of hearing, and made no other kind of bodily movement than of her left hand.*"

Thus, according to my theory, every kind of nerve connected with the organs of digestion, and the nerves of volition of the left arm, were occasionally released from the oppression of the assimilative particles, while the other nerves of the body continued under their influence, and particularly the nerves of sensation of the right arm. As to those last mentioned nerves, I would not be understood as maintaining that this cause alone occasioned the numbness of the limb in question.

The case of Elizabeth Perkins differs from the others in its fatal termination: After a profound slumber of eleven or twelve days, she "awoke of her own accord, to the great joy of her relatives, and wonder of the neighbourhood. On recovering, she went about her usual business; but this was only for a short period, for in a week after she relapsed again into a sleep which lasted some days. She continued, with occasional intervals of wakefulness, in a dozing state for several months, when she expired."† Is it not natural to suppose that, in this case, the secreting vessels of the head were in such a diseased state as to effuse upon the brain much more than the quantity of nervous matter usual in the healthy state? If the torpor had arisen from the pressure of overloaded bloodvessels, or an effusion either of

* Philosophy of Sleep, p. 200.

† Id. p. 210.

water or blood, it would have been called apoplexy, and not sleep.

Mr Macnish observes, that the cause of drowsiness, or the "constitutional disposition to doze upon every occasion, seems to be a certain want of activity in the brain, the result of which is, that the individual is singularly void of fire, energy, and passion. He is of a phlegmatic temperament, generally a great eater, and very destitute of imagination. Such are the general characteristics of those who are predisposed to drowsiness. The cases where such a state coexists with intellectual energy, are few in number."* Every word of this description reminds you of the assimilating process, and its effects; and affords a marked difference to another cause, which he notices; of a similar result, viz. that "drowsiness sometimes proceeds from a fullness of blood in the head, or a disordered state of the digestive organs."† It sometimes, however, arises from both these causes, as in that instance which Mr Macnish, but without reference to either of them, adduces from Boerhaave, of an eccentric physician who took it into his head that sleep was the natural state of man, and accordingly slept eighteen hours out of the twenty-four, till he died of *apoplexy*, a disease which, according to Mr Macnish, is always apt to be produced by excessive sleep.‡

Mr Macnish adverts to many facts, tending to support my theory, and particularly those respecting the use of food, the very material which supplies and puts in motion the assimilating process. "*A heavy meal*" (he says), "especially if the stomach be, at the same time weak, is apt to induce sleep."§ "Those who eat heartily, and have *strong digestive powers*, usually sleep much. The great portion of sleep required by infants, is owing, in part, to the prodigious activity of their digestive powers. The majority of animals sleep after eating; and man has a strong tendency to do the same thing, especially when oppressed with heat. In the summer season, a strong inclination is often felt to sleep after dinner, when the weather is very warm. A heavy meal, which produces no uneasy feeling while the person is awake, will often do so if he fall asleep."|| Besides the effects of the assimilating process, may we not, in the two latter instances, look to the effects of heat and of a heavy meal as increasing the velocity or the quantum of the blood, and thus creating a pressure more than natural on the substance of the brain, and partaking more of the character of apoplexy than of sleep?

His contrast of Dr Reid with General Elliot has also the same tendency. The former "could take as much food, and immediately afterwards as much sleep, as were sufficient for two days."¶ The latter "never slept more than four hours out of

* Philosophy of Sleep, p. 205.

† Id. p. 206.

‡ Id. p. 206.

§ Id. p. 16.

|| Id. pp. 35, 36.

¶ Id. p. 32.

the twenty-four. In all other respects he was *strikingly abstinent*; his food consisting wholly of bread, water, and vegetables.*

The very purposes which he ascribes to SLEEP, correspond in every particular with my theory. "Its main object is to *restore the strength expended during wakefulness*, to *recruit the body* by promoting *nutrition* and giving rest to the muscles, and to *renovate the mind* by the repose which it affords the brain. *Action is necessarily followed by exhaustion*; SLEEP, by checking the one, restrains the other, and *keeps the animal machine* in due *vigour*."† The strength expended during wakefulness can only be restored by replacing, with new particles, those carried off by the wear and tear of exertion. Nutrition can only recruit the body by replacing the substance it has lost—the mind can only be renovated in a metaphorical sense; it is the brain which is really renovated, and *that* by means of the assimilating process. Action is necessarily followed by exhaustion; but the very operation which causes sleep remedies the exhaustion, while it restrains the action; and, by repeatedly renewing their composition, keeps every nerve, every muscle, every bone, every organ of the animal machine, in due and healthy vigour.

He throws considerable light on the subject when he observes, that "where there is no excitement, sleep is sure to follow. We are all kept awake by some mental or bodily stimulus, and when that is removed our wakefulness is at an end."‡ "The finished gratification of all ardent desires has the effect of inducing slumber. Hence, after any keen excitement, the mind becomes exhausted, and speedily relapses into this state." "Remove those stimuli which keep it employed, and sleep ensues at any time."§ Not that these stimuli can prevent or interrupt the usual progress of the assimilative process. They merely urge in to the vortex of their influence each particle as it is deposited, and do not permit the accumulating matter to paralyse the energy and activity of the thinking brain. But when these stimuli are withdrawn, when desire or reflection ceases, then the new and scarcely-assimilated substance acts with a dead weight on the living nervous texture,—every moment adds to its mass and power, and the seat of thought and feeling feels and thinks no longer—it is paralysed—IT SLEEPS.

All that I ascribe to the presence of the ASSIMILATING PROCESS, Mr Macnish attributes to the absence of the SENSORIAL POWER,—all that I attribute to the diminution of the former, he ascribes to the increase of the latter. In this respect we are like Lavoisier and Stahl, contending for the presence or absence of oxygen and phlogiston in their respective theories of combustion. Thus, in his chapter on Sleeplessness, he says, "Sleep takes

* Philosophy of Sleep, p. 33.

† Id. p. 39.

‡ Id. p. 13.

§ Id. p. 15.

place as soon as the *sensorial power* that keeps the brain awake is expended, which, under common circumstances, occurs at our ordinary hour of going to rest, or even sooner, if any soporific cause, sufficiently strong, should chance to operate.

"But the above *power* may be increased by various means, as in cases of physical suffering or excited imagination, and consequently is not expended at the usual time. In this case the person remains awake, and continues so till the period of its expenditure, which may not happen for several hours after he lies down, or even not at all during the whole night. Now," he continues, "whatever increases the *sensorial power*, whether it be balls, concerts, grief, joy, or bodily pain, is prejudicial to repose. By them the mind is exalted to a pitch of unnatural action, from which it is necessary to descend before it can roll into the calm channel of sleep."^{*}

Does not the excitement of music and dancing, pleasure and pain, joy and grief, sufficiently account for the continued activity of the cerebral organization, which prevents the accession of sleep (let the cause of sleep be what it may) without resorting to the *sensorial power* for an explanation? What we want to account for is the accession of sleep, not the continuance of wakefulness. Will the subtraction of the *sensorial power* account for any thing that is not as readily accounted for by the gradual subsidence of the activity of the cerebral organization, after the excitement has been weakened or extinguished? In either case, the brain may be ready to submit to the dominion of sleep; but it has not yet submitted. Another event is necessary to succeed either the increased absorption of the particles of the brain, or the co-relative subtraction of the *sensorial power*, thus occasioned by the active exertion of the organ; and that event is, I maintain, the accession of new particles to supply the place of the old,—these particles deriving no energy from the exhausted mass on which they are deposited, and creating a paralysis of that mass, like any other foreign body.

Again, says Mr Macnish, "Certain *stimulating* agents, such as tea or coffee, taken shortly before going to bed, have often the effect of preventing sleep. I would impute this to their *irritative properties*, which, by supplying the brain with fresh *sensorial power*, enable it to carry on uninterruptedly all its functions longer than it would otherwise do, and, consequently, prevent it from relapsing into slumber at the usual period."[†]

Here also an appeal to the *sensorial power* seems unnecessary. The irritative properties of these stimulating agents are alone sufficient to account for the phenomena. It is *obvious* that they excite the nervous system; and it is *probable* they thereby continue its power to engage in its own state of activity the new

^{*} Philosophy of Sleep, p. 193.

[†] Id. p. 195.

particles which are deposited,—which, if it were in an inactive state, would, in accumulating, press upon the cerebral organization, and thus, as in so many former instances, involve the frame in sleep.

It may not be out of place here to observe, that these stimulating agents, tea and coffee, seem to have an opposite effect to that produced by other food, and even to counteract the natural tendency of less enlivening nutriment to promote the assimilating process, and the encouragement of Somnolency. It is therefore probable, that civilized society has found them of advantage after the substantial meal of the day, which might otherwise “steep the senses in forgetfulness,” while we ought yet to be awake; and no doubt the breakfast of Elizabeth’s golden reign, beef-steaks and ale, has, for the same prudential reason, given way to the more light and elegant *déjeuné* of later times.

Mr. Macnish observes, that Gooch gives an instance of a man who slept only for fifteen minutes out of the twenty-four hours; and even this was only a kind of dozing, and not a perfect sleep; notwithstanding which he enjoyed good health, and reached the seventy-third year. He adds, “I strongly suspect there must be some mistake in this case, for it is not conceivable that human nature could subsist upon such a limited portion of repose. Instances have been related of persons who never slept; but these must be regarded as purely fabulous*.”

I am ready to agree with Mr. Macnish in his suspicion as to Gooch’s case, and his decision as to the others. If, however, these cases were beyond a doubt authenticated, there would be no other mode of accounting for these extraordinary facts, than by boldly maintaining that such a renewal of the brain and nervous system as took place in the waking moments of these individuals, was sufficient for *them*, though not for other men; and that they did not sleep, because the new mass of nervous particles was never so great as to resist a co-operation with the old, or act like an extraneous body by creating a paralysis. To say that the *sensorial power* was never exhausted in these individuals, would be merely to say that the power of remaining awake was never exhausted,—a discovery which would not add much to our information.

One instance more of this exuberant employment of the *sensorial power*. “A heavy meal,” says Mr. Macnish, “especially if the stomach is at the same time weak, is apt to induce sleep. In ordinary circumstances, the *nervous energy* or *sensorial power* of this viscus is sufficient to carry on its functions; but when an excess of food is thrown upon it, it is then un-

* Philosophy of Sleep, p. 34.

able to furnish from its own resources the powers requisite for digestion. In such case it draws upon the whole body—upon the chest, the limbs, &c., from whence it is supplied with the sensorial power of which it is deficient, and is thus enabled to perform that which by its own unassisted means it never could have accomplished. But mark the consequences of such accommodation! Those parts, by communicating vigour to the stomach, become themselves debilitated in a corresponding ratio, and get into a state analogous to that from which they have extricated this viscus. The extremities become cold, the respiration heavy and stertorous, and the brain torpid*.

There is nothing in these circumstances calling for the intervention of such a machine as the sensorial power. If the brain be torpid, the increased flow of blood and the pressure of the bloodvessels sufficiently explain it. But if the meal be not so heavy as to induce these apoplectic symptoms, it may at least produce sleep by promoting the assimilating process†. If the respiration be heavy and stertorous, the apoplectic state of the brain will at once account for it—or if there be no apoplectic tendency, the very pressure of the overloaded stomach against the diaphragm and lungs will disturb and oppress the breathing. And, in fine, if the extremities become cold, it is not by parting with their sensorial power, but their caloric—an agent with which we are much better acquainted; and which, according to Richerand, “seems to increase, and in a manner to concentrate itself in the epigastric region, as long as the stomach is engaged in digestion‡,” a fact confirmed by Blumenbach, who states that the high temperature maintained in the stomach by the quantity of blood in the neighbouring viscera and bloodvessels, is of such importance that at one time the word *cocction* was synonymous with digestion||.

From these observations we may perceive that the term “sensorial power,” does not signify an efficient and definite cause of the phenomena it is brought to explain; but appears to be rather a general term including many causes. Thus in the instance before us, this power (and occasionally its absence) indicates five different things, and never once itself:—1. Caloric, 2. The natural cause of sleep, whatever that may be; 3. The pressure of the bloodvessels on the brain; 4. The effects of such a state of the brain on the lungs; and, 5. The pressure of an over-distended stomach on the same organ. There is no

* Philosophy of Sleep, p. 16.

† See my Essay on Sleep in Tilloch's Phil. Mag. liv. 253, or Transactions of the King and Queen's College of Physicians, ii. 60. t. 62.

‡ Richerand's Physiology, p. 100.

|| Blumenbach's Physiology, p. 322.

thing so common as deceptions practised on us by words. We are led every day to mistake them for knowledge. Spurzheim and Combe were not so to be deluded. *Can* we read their motto on a seal, without feeling its force as of a talisman, "*RES, NON VERBA, QUÆSO.*" It may be a defect, but the constitution of my mind is such, that I have no pleasure in a theory that cannot, as it were, be felt and handled.

Even the sensible, pleasing, tranquil, unpretending words of Mr Macnish cannot persuade me—and my constitutional defects must plead my excuse with him, if I continue to prefer my conjecture to his. For his theory, like my own, is not more than a conjecture. But I have not advanced a single observation intended to depreciate his most valuable essay. On the contrary, my anxious desire would be to impress on others my sense of the obligation I owe him for much amusement, and much information, abounding with candour, good nature, and originality. Not to disparage his views, but merely to support my own, has been my object throughout this disquisition: and I owe him still another obligation for furnishing me not only with the opportunity, but the means. Indeed I have not been under the necessity of seeking elsewhere than in his own volume, for the proofs of the reasonableness, if not the validity, of my hypothesis,—and an acute friend of mine, on reading "*The Philosophy of Sleep,*" observed that he supposed it to have been written with a view to recommend my theory, until he unexpectedly lighted on the passage in which it is impugned.

But perhaps the greatest obligation I owe Mr Macnish is the indispensable task he imposed upon me to reconsider my hypothesis and all its corollaries, thus affording me the opportunity of weeding out (if this were a possible achievement) every thing superfluous, inaccurate, and erroneous, that encumbered it. Still I must repeat, that, with all its apparent consistency, I am aware that it is but a conjecture, and can never be any thing more,—yet, I trust, a conjecture that future physiologists will not be disposed to pass by as unworthy of notice, or unsupported by a due harmony with nature, and a requisite array of facts and arguments*.

2. Notes on Mr Carmichael's Essay, by Mr Macnish.

On perusing Mr Carmichael's *Life of Spurzheim*, I had certainly the impression that this gentleman meant to represent sleep as the *sole* period during which assimilation takes place

* We have been under the necessity of considerably abridging Mr Carmichael's essay, but are confident that this has not materially diminished the force of his arguments. The MS. was with his permission submitted to Mr Macnish, who has kindly favoured us with the following Notes.—Ed.

in the brain ; nor, on again consulting this work, am I certain that such is not the interpretation which may be legitimately put upon his words. However, as he disclaims such an inference, I shall pass from it, and examine the ground which he has taken up in his present interesting and very ably written essay.

Though I dissent from Mr Carmichael's proposition, " that the process of assimilation in the brain is the actual cause of sleep," yet I have nowhere in my work made any allusion to this particular doctrine. My remarks refer solely to what I, at the time, conceived to be his meaning, viz. that assimilation occurs in the brain only during sleep. This I objected to on the strong ground of its being at variance with analogy. The question of the assimilative process occasioning sleep is not touched upon at all ; nor from any thing that has been said could it be inferred that I either admitted or disallowed the truth of this hypothesis. I am glad, nevertheless, that Mr Carmichael has resumed the subject, as it has turned my attention to a point which did not formerly suggest itself, and given me an opportunity of stating several facts which I think are directly opposed to the opinion he has formed with regard to the proximate cause of sleep.

I cannot conceive how a natural and healthy deposition of new particles should occasion a cessation in the functions of any organ. Before such a deposition can take place, there must be an augmented circulation of blood in the part ; and it is generally understood that the greater the quantity of blood sent to an organ, the greater is the energy of its manifestations. During sleep, the blood is propelled in greater abundance into the liver and stomach than in the waking state ; the consequence of which is, that these viscera act more vigorously, and that digestion is carried on with increased activity. Why should the brain be an exception to this general law ? Why should its functions be suspended, when the very principle which invigorates other parts must be more actively at work within it ? When a man is engaged in keen thought ; when his passions are violently excited ; when he labours under the influence of joy, or love, or revenge, is the blood less vehemently sent to the sensorium, than when his mind is in an unexcited state of tranquillity ? When the brain is roused to its utmost energy, as in madness or delirium, is there less force in its circulation than when it is in perfect repose ? Common observation forces us to answer these questions in the negative. There is more vehement action in the circulating mass, and in proportion to this vehemence is the power of the cerebral manifestations. Mr Carmichael's theory, however, leads us to conclude that the brain is least active when the circulation is most urgently at work within its substance. If he can show, indeed, that assimilation may proceed with in-

creased activity without any additional impulse being given to the circulation, his doctrine may acquire plausibility ; but such a phenomenon is at variance with every thing we know both in the animal and in the vegetable kingdoms. As well may we suppose that plants will grow better without than with water, and that the urine will be as copiously secreted from kidneys that are torpid as from these organs in a case of diabetes.

Mr Carmichael looks upon sleep as being occasioned purely by mechanical compression, or something so closely resembling it, that I must regard the two circumstances as identical, so far as the present argument is concerned. I am perfectly aware that such compression will occasion sleep ; but this I hold to be the sleep of disease, and not of health. Effusion of blood, of serum, or of purulent matter upon the brain,—a torpid state of the bloodvessels of this organ,—or the beating in of a portion of the skull cap,—will throw the person into stupor or sleep, by paralyzing, with their pressure, the cerebral texture. Eating or drinking to excess, by inducing congestion approaching to apoplexy, will do the same ; so will foul air or narcotics ; but the pure sleep of health has no affinity to these adventitious conditions. So far from there being any increase of blood in the brain during healthy sleep, it is proved that the circulating fluid in that organ is actually lessened, as I have had occasion to shew in a case related by Blumenbach, of a person who had been trepanned, and whose brain was observed to *sink* when he was *asleep*, and *swell out* when he was *awake*. The abolition of the cerebral functions is, to my mind, sufficient evidence of diminished action going on in the brain. I cannot conceive increased assimilation without increased circulation, nor increased circulation without augmented functional energy. To admit the first without allowing the second, is to presume the existence of an effect without any corresponding cause.

Supposing, however, that healthy sleep is always occasioned by the mechanical compression, or similar cause, spoken of by Mr C., how are we to account for people being so easily awakened ? Sleep should be like apoplexy : it should be difficult or impossible to arouse a man till the pressure is removed.—Yet we constantly see people awakened from the most perfect sleep by very trifling causes. What, in such a case, becomes of this pressure ? Is the load at once lifted off the person's brain ? What becomes of the assimilative particles which are squeezing his senses out of him, and submerging him under the billows of sleep ? It is as difficult to conceive that such mechanical pressure could be instantaneously removed, as that any deposit of new matter which ever takes place could have the effect of a foreign body acting upon the brain.

Dreaming is inconsistent with this gentleman's theory. Assi-

milation is a general process ; but, according to him, one part of the brain may be fattening while another is starving. It seems as rational to infer that the assimilative operation is at work in one leg, and at a stand in the other.

Mr C. endeavours to strengthen his case by the instances of General Elliot and Dr Reid, but these must be looked upon as idiosyncrasies. Generally speaking, the more sleep a man takes the less food can he do with ; and a hard-working, active, light-sleeping man will require more food than a great dozer. Dr Reid seems to have acted on the principle of the boa constrictor. By over-eating himself, he induced a plethoric state of the brain, the mechanical compression upon which threw him into a ~~comor~~ similar to that which falls over the snake monster of the wilderness, when gorged with food. His two days' ~~alumber~~ was not the repose of health—not the sound sleep induced by the spontaneous and periodical exhaustion of nervous energy.

The theory of the nervous energy, or sensorial power, to which Mr C. objects as not sufficiently definite and expressive, appears to me singularly adapted to explain the different phenomena of sleep. I conceive this power to exist in a state corresponding to the activity of the circulation. In fever, phrenitis, or mental excitement of any kind, it is excessive, and the person remains awake. My view of the case is, that, to induce sleep, we have only to quell the action of the sensorial power—in other words, to relax the force or irritability of the vascular system : According to Mr C. it is necessary that the brain should be compressed by a physical agent operating upon it. (This agent is the deposit of new particles, the result of increased activity in the assimilating vessels of the brain. Now, as such an increased action in these vessels cannot take place without augmented energy in the local circulation, it follows that the very circumstances which, according to me, occasion wakefulness, according to him give rise to sleep.

Mr C. has, with no small ingenuity, endeavoured to shew that the facts stated by me, especially those with regard to the effect of food in inducing sleep, bear out his hypothesis ; but on this point I think it will not be difficult to shew that he labours under a mistake. I impute the soporific propensity of great eaters to the large quantity of food in the stomach draining the nervous energy of the brain, or inducing an apoplectic state : it may often act in both ways. I do not employ the sensorial power as a mere imaginary agent for the explanation of phenomena which cannot be easily accounted for without it ; for I hold its existence, and the way in which circumstances are modified by it, perfectly susceptible of demonstration. We can shew that one organ may have an excess, and another a deficiency, with as much ease as that one body may be positively,

and another negatively, electrified. There are particular times when certain organs require a larger share of sensorial power than at others, and when material injury is done if any violation is offered to this necessary law. After eating, for instance, it is perfectly well ascertained that digestion never proceeds so well as when we give ease to the brain, and do not employ it in study; while the digestive process is impaired by working the brain immediately after taking food. To what are these circumstances to be attributed, but to the law that when food is thrown upon the stomach this viscus digests better if it be supplied from some other source with additional nervous energy? For the same reason, exercise of any kind is bad shortly after eating, as the sensorial power not only of the brain but of the muscles is at work, and so much is thus lost to the parts concerned in digestion. These are not solitary facts: a hundred more might be brought in support of the point which is here contended for.

Circumstances, indeed, would rather induce us to infer, not only that increased assimilation in the brain is not the cause of sleep, but that the assimilative process is never so feeble in that viscus as when its functions are locked up in slumber. In this respect the brain differs from other organs; but the analogy between it and them is not, on that account, less complete, is so far as in all cases an organ is most liberally supplied with the circulating fluid when the greatest efforts are demanded from it. The brain works in the waking state, and is then most highly vascularized—the stomach and liver labour hardest while we are asleep, and are consequently at that time most copiously excited with the stimulating nutriment of the circulation.

Active-minded, deep-thinking, or care-worn men have often, perhaps generally, a bad digestion. The stomach does not act well even when the appetite (a rare case) is unimpaired; and they are in the habit of using medicines to stimulate the torpid action of the alimentary canal. They sleep ill—perhaps they lie half of the night before slumber visits their eyelids—perhaps the other half is spent in dreams. Men of dull, easy, contented minds, are in every respect the reverse. They eat like horses, and think of nothing but the next meal. At night they lay their stupid heavy heads upon the pillow, and instantly fall into a profound slumber—a slumber unbroken even by the slightest glimpse of a dream. Why are not these men alike? Why does not the pale, thin, care-worn, deep thinker sleep as soundly as the sluggish obtuse glutton? Why does his stomach not perform its functions as kindly, and digest the food with the same ready alacrity? The cause is obvious. The brain of the first absorbs so much of the nervous energy of the stomach as not only to keep his mind active when it ought to

be reposing, but to prevent the stomach from performing its functions with due vigour—and thus digestion suffers. The second thinks not at all. The sensorial power which kept his brain awake is transferred by an easy process to the stomach, which, reinforced in this manner, acts vigorously, and enables him to fatten upon its labours. The two organs are here re-acting upon each other;—in the one case the brain starving the stomach, in the other the stomach starving the brain, and giving a practical vindication of the truth of the Shakspearian aphorism, that “fat paunches make lean pates.”

The endless phenomena of dreams, “for ever varying—never the same,” are easily and beautifully explained by means of the sensorial power. Partial assimilation (by which means alone can they be accounted for, according to the doctrine of Mr Carmichael) is a phenomenon unknown to nature in a state of health. We have no reason to suppose that particles are deposited in one part and not in another at the same time—none that such an operation is at work in *this* portion of the brain and not in *that*, its immediate neighbour. Assimilation is a slow process, and cannot keep pace with the airy and fleeting character of visions, or account for their evanescent lights and shades. The nervous energy coming vividly into play in one organ while it is suspended in another, accounts readily and felicitously for dreams—their incongruities, rapid transitions, and other odd and miscellaneous features.

I shall conclude by mentioning one physiological fact, which, of itself, and without reference to any of the foregoing arguments, strikes with fatal effect at the theory of Mr Carmichael. The drowsiness that takes place shortly after eating, seldom lasts above an hour or two. This, Mr C. would say, arises from the brain being oppressed by the deposit within it of new particles, which must necessarily be derived from the food lately taken. Here we must suppose that assimilation commences immediately. Now, it is an admitted fact, that the preliminary step of chylification does not begin till the food quits the stomach and passes into the duodenum, and that about three hours generally elapse before this transfer is effected. As soon as the mass is fairly out of the stomach and lodged in the intestines, the lacteal vessels begin to act upon it, absorbing its nutriment in the form of chyle, and sending it, by means of the thoracic duct, into the left subclavian vein. The chyle here enters into combination with the blood, and it is from this general mass that the particles which constitute the substance of the body are formed. The formation of these is what is called assimilation—a process which Mr C.’s theory leads us to infer commences immediately, and is brought to a conclusion before the food has really got out of the stomach, or the preparatory step of chyli-

fication begun. If a man, after eating, feels drowsy in consequence of his brain being compressed by the deposit of new particles of matter, this deposit and the accompanying drowsiness must be simultaneous, whereas we find that the latter precedes the former by several hours. How much more simple and easy is it to suppose that the nervous energy which keeps the brain awake is transferred to the stomach, and that so soon as the purposes of the latter are served, it returns to the brain, which it puts into a state of activity, and thus dispels the tendency to sleep.

There are some other points in Mr C.'s essay which I think could also be made the subject of criticism ; but the principal positions having been taken up, it is perhaps not necessary to dwell on minor details. I shall therefore conclude with expressing the great pleasure I have had in perusing that gentleman's paper, which is written not only with great ability, but in a spirit of fairness, candour, and good feeling, that do him the greatest credit.

ROBERT MACNISH.

29. WEST GEORGE STREET,
GLASGOW.

ARTICLE XII.

LETTER FROM MR J. L. LEVISON.

TO THE EDITOR OF THE EDINBURGH PHRENOLOGICAL JOURNAL.

SIR,

DONCASTER, September 17. 1864.

I SHOULD not trouble you with the following remarks, but am bound to do so in common justice to myself and others. In your Journal for June, my work on Mental Culture was reviewed, and other phrenologists beside myself consider the article characterised by a want of fairness and candour. I was at Reading at the time, and felt annoyed at the direct implication of my moral character, viz. "*that I had misstated facts and doctrines,*" and also substituted Spurzheim's ideas for my own, charges which were not substantiated by a single proof. Hence it was that I penned the angry epistle which appeared in the Berkshire Chronicle; and I will admit, that, like all such warm productions, my language and assertions were too intemperate and, in some measure, call for an apology on my part to Mr Combe and Mr Simpson, particularly as I attributed the obnoxious article to either the one or the other of these gentlemen.

What I said concerning the Constitution of Man, were inerey reiterations of the statements of others; and, therefore, if I have unwittingly done an injustice to Mr Combe, I am very sorry for it. Dr Spurzheim complained to me himself, and afterwards said to me, (in a letter which I still retain,) "that Mr Combe still insisted on publishing on the Natural Laws," &c. Nevertheless, I have myself always preferred the Constitution of Man to the Natural Laws, believing the former to be more generally useful, the diction and style being most popular, and most likely to obtain converts. The same might be said of Mr Simpson's "Necessity for Popular Education," when compared with other works on Phrenology. But does this concession alter the truth that, in both these instances, *the Phrenology of Gull and Spurzheim, and the philosophical deductions of the latter*, are just as much used by these authors, and with the same latitude, as I have done in my work on Mental Culture? An honest and impartial judge could not pronounce a different opinion.

My reviewer charges me with giving Spurzheim's ideas, particularly in the practical part of the work. This is indeed a greater compliment than he intended it should be, and a higher panegyric on Phrenology than he contemplated! for I had never read either Spurzheim's Education or his Philosophical Principles, although I attended his lectures, wherein he treats on both these subjects. Let me not be misunderstood. In studying Phrenology, I adopted the plan of reading men and their actions, (after I made myself acquainted with its philosophy,) and when I proposed writing on Education, I purposely avoided reading works upon the subject, believing, as I did then and do now, that as Phrenology furnishes true data for a system of mental philosophy, by applying its principles, either analytically or systematically, no one could err. My work was delayed more than a year after it was sent to the press, owing to my professional engagements, and many domestic calamities; and it was not until after it had been nearly printed, that I read works on education. I subsequently read Rousseau's Emile, &c., Helvetius, Mrs Moore, &c. &c., and was often surprised, that in these works I found many of the ideas which I had prized most had been already published by these authors.

In the reply of my reviewer in the Berkshire Chronicle, he endeavoured to substantiate the charges of misstating facts, &c., by saying "that Pizarro did not conquer Montezuma, and that the Phrenological Society had not a single Mexican skull," and similar specimens of hypercriticism; and for these venial errors he would have allowed the phrenological public to believe that I purposely mutilated truth, and had given garbled and vitiated principles for phrenological doctrines. Again, this candid scribe

is quite unmerciful, because I said, when speaking of the brain, that it had diversified faculties, instead of saying diversified organs, &c. This may suit the dignified precision of a reviewer who splits hairs, but it does not invalidate the practical importance of the views I have advocated. One thing I have to thank this gentleman for,—that he has exculpated Messrs Combe and Simpson, and has said that the former never said or wrote concerning me but in kindness. It is a great error to be betrayed into anger, and this I have been guilty of; but in my cooler moments I have always felt gratitude to Mr Combe for his kind and epistolary communications; and Dr Arnot assured me that Mr Simpson spoke of me with great kindness. To both gentlemen I owe, then, my best thanks; but if either of them had power to alter or modify articles which appear in the Journal, I might have expected that they would have rendered me something more like justice than I experienced from the pen of the reviewer. Allow me to ask, Sir, as an honourable judge, to whom I submit my cause, that supposing the reviewer's charges against me to be proved, that I have given *Spurzheim's* ideas, without rendering to him what was his due, in what have I differed from Mr Simpson? May not both of us have been actuated by the same motives? May we not have been both induced to render Phrenology more in accordance with popular language? And if, in my case there is moral delinquency, surely the same rod should castigate both. In my *Mental Culture* I acknowledge the importance of Phrenology, and assert that no correct system of education can be generally acted upon, until its metaphysical views of man are universally adopted; and the whole tenor of the work is an attempt to demonstrate these assertions. In Mr Simpson's work, which I read with pleasure, Phrenology is only incidentally mentioned in connexion with the Constitution of Man, although this gentleman has given the whole of the philosophy of the mental faculties. It is most true that he has said, "the reader who is familiar with works on education, will scarcely discover a thought which in substance he has not met before," &c., yet this is not rendering unto *Cæsar* what is *Cæsar's due*. For most ideas have been given or expressed in some form by others, could we become acquainted with the thoughts of men when contemplating subjects we may be treating of; and the recent writer can only represent them in new

* I very much regret, after what has occurred, that I did not publish, as I had proposed, an historical preface, because in it I had done ample justice to Gall and Spurzheim, and all subsequent writers. A friend who read the MS. said, "Why so publish the history of your data, when you ask the public to admit them without proof, &c.;" and he added, "If you still persist in doing so, the casual person will think the work a treatise on Phrenology, and will feel no interest in perusing it." As a witness to this statement, I may appeal to my respected friend Urquhart of Liverpool, to whom I shewed the article when in that town in December last.

phases. If we have a correct knowledge of psychology, and we can comprehend the number of the mental faculties and their relative importance, the means of training these faculties seems to me not a work of great labour.

But let me ask, who can trace any particular idea to the source from whence it has been derived, as nearly all our knowledge arises from the productions and experiences of others, which we mentally assimilate, (like the food we digest, and which in time forms part of our body,) so, ultimately, other persons' ideas form part and parcel of our mental constitution? On this obvious truism I would rest my whole defence, and ask, what is the moral difference, then, between other writers on Phrenology and myself? All I have written in all probability I owe to reading and conversation, and a habit of observing passing events, and therefore it is unjust to state that I have taken the mental property of others to adorn myself, and allow another writer to have done actually the same thing, and that he should enjoy an impunity, because he has the saving clause, the merely saying, most probably these ideas may have been met with in other works. Any impartial man will give me credit in reading my work, that in no instance does it appear that I have attempted to foist upon the public views which are only adopted; he will recognise that my great object had been to render obvious the advantages of Phrenology. That this is no mere illusion of an excited Self-esteem, I may appeal to the talented members of the Manchester and Liverpool Phrenological Societies, (and I am sure they are well acquainted with all the phrenological works); and yet the latter society made me an honorary member, "having proved the *cui bono* of the science," &c. If the principle upon which I am so unjustly attacked be admitted, there is not a recent writer that would escape. Even Gall may be charged with receiving his first ideas of the true physiology of the brain from Herder's "History of a Philosophy of Man." Herder makes many interesting observations, which might be strictly called phrenological*. And Spurzheim may be charged with borrowing largely from the same source, and from *Helvetius*, Rousseau, and Volney, and from the writings of the Jewish philosopher, Mendlesohn! But who would dare to charge these philosophers (Gall and Spurzheim) with wilful plagiarism?

"I must apologise for the length of this article; but, in conclusion, must request that the whole of it may be inserted in the

* I will just trouble you with a single instance, it is as follows: "Great Parent Nature, with what trifles hast thou connected the fate of the human species! With a change in the form of the head and brain, with a little alteration in the structure of the nerves and the organization, effected by climate, descent, and habit, the fate of the world, the whole sum of what mankind do and suffer throughout the earth, is also changed."—*Vide Herder on the Philosophy of a History of Man.*

Journal, for I would not have any thing like a mere selection. In case it should be withheld, I shall deem the Journal as partial as it will prove itself unjust; and however repugnant to my feelings, shall be obliged to have recourse to some other channel for doing myself justice.—I am, Sir, your obedient servant,

J. L. LEVISON.

P.S.—Having removed from London to this town was the cause of my not seeing the *reply* in the Berkshire Chronicle until a few days since, having sent for one after having read the notice in the September number of your Journal.

The foregoing communication, which we have no inducement to withhold, compels us, at the risk of being egotistical, to offer a few remarks.

On commencing the perusal of Mr Levison's book, we had the full expectation of thereby adding to our knowledge on the subject of education, or at least of finding previous ideas set in a new and striking light; and we had no doubt of discovering in it grounds for publishing—what it was our sincere wish to publish—a favourable opinion of its merits. We were, however, considerably disappointed; and, though unwilling to cause uneasiness to Mr Levison, of course could not, consistently with that spirit of honesty and independence in which we have always endeavoured to act, bestow much commendation on his work. Accordingly, we spoke of it in the following terms—the mildest we felt ourselves authorised to employ:—"Mr Levison's style is neither so accurate nor so precise as we should have liked to see it, and it is rather deficient in method; but the work exhibits not a few indications of good feeling and philanthropy, and contains some useful practical suggestions. Want of space prevents us from giving any thing like an analysis of its contents; but this is the less to be regretted, *as the author's ideas seem, in many instances, borrowed from Dr Spurzheim.* We can merely extract a few of the more instructive passages. . . .

We regret our inability to speak favourably of the phrenological portion of Mr Levison's treatise. It is far from being calculated to convey accurate notions concerning the mental faculties, or the evidence on which Phrenology rests. *Facts as well as doctrines are occasionally misstated*; a fault which it is the duty of every writer on controverted subjects like Phrenology to avoid with peculiar care." (No. 40, pp. 647-649.)

These sentences were so unpleasant to Mr Levison, that, as mentioned in our last number, he published, in the Berkshire Chronicle of 14th June 1834, a hasty attack on the Edinburgh phrenologists in general; to this we replied in the same paper on 12th July, and also in our 41st number; and, finally, the pre-

sent communication from Mr Levison has been elicited. We have marked in italics the two clauses which he has made the subject of an *anmadversion*.

With regard to the first of these, we would ask, what is the obvious meaning expressed by it? "Simply, that as our readers were already acquainted with Dr Spurzheim's views on education, from having either read his own work or the analysis of it given in this Journal, they had little cause to regret the want of an abstract of Mr Levison's book, in which the same ideas are expressed in an inferior manner. This is the sense in which the words *were intended* to be understood, and we humbly think they will bear no other interpretation." Such being the statement of our meaning given in the 41st Number of this Journal, Mr Levison acts inconsiderately in persisting to argue on the assumption that we accused him of "moral delinquency" and "willful plagiarism." "We merely stated as a fact, that 'his ideas seem, in many instances, borrowed from Dr Spurzheim;' and that many of them *are* so borrowed, he fully admits, not only in the Berkshire Chronicle, but also in his present letter. In the former he says:—'With gratitude I confess, that my first clear notions upon mental philosophy and education, were obtained by attending the lectures of Spurzheim, and from *viva voce* communications with him. When a man is charged with repeating the ideas he has received from the master he affectionately respected and honoured, it would be rather creditable to him than otherwise, particularly if he regarded the views as containing important truths. . . . A thirst for originality rather indicates the *approbative* man than one of great profundity of thought, there being often greater merit in illustrating subjects, and shewing them in new phases, than in furnishing fine shewy speculations.' This is a most explicit admission of the whole amount of our averment, and, moreover, expresses sentiments in which we entirely concur. Thus, as we have never doubted the "obvious truism" on which Mr Levison "rests his whole defence," it is clear that, in the greater portion of his letter, he is fighting with a phantom which has no existence but in his own imagination.

The second ground of complaint is the averment, that "facts as well as doctrines are occasionally misstated." In using these words, our whole meaning was, that Mr Levison occasionally erred in his statement of phrenological doctrines and relative facts; but it never occurred to us either to suppose or to say that he had "purposely mutilated truth," nor did we cast the slightest "imputation on his moral character." We have always believed that Mr Levison *intended* to give an accurate representation of facts and doctrines; and if our words have conveyed to any reader a different impression, we sincerely regret it. From

delicacy to Mr Levison, no details were originally entered into regarding his mistakes, and inaccuracies, and, from the same motive, they are still withheld. Should Mr Levison, however, request us to publish them, this shall be instantly done.

There are other two subjects, adverted to in Mr Levison's letter, which we cannot pass over in silence. To render intelligible his allusion to Mr Combe's work on the "Constitution of Man," it is necessary to quote two passages from the Berkshire Chronicle. Mr Levison's statement was this:—"Mr Combe's most celebrated work is the 'Constitution of Man'; but *Mr Combe had Dr Spurzheim's 'Natural Laws of Man' in his possession some months even before he contemplated writing* the above justly celebrated work. But this is the ground of my complaint:—Mr C. returned the MS. suggesting to the Doctor the impropriety of publishing it, 'society not being in a state for such refined and exalted opinions on the philosophy of man,' and then afterwards published the above work, in which will be found *Spurzheim's ideas* in a new dress!" The following was our reply:—"In all Mr Combe's works there is a direct acknowledgment of his obligations to Gall and Spurzheim. This is particularly the case in the prefaces to his 'System of Phrenology,' and 'Constitution of Man.' In the latter work, the very fact, triumphantly adverted to by Mr Levison, of his having read an unpublished MS. of Dr Spurzheim on the Natural Laws, is distinctly acknowledged. Mr Levison imputes to Mr Combe disingenuous if not dishonest motives, in publishing his work after reading that MS. It is a pitiful way of defending a man's self to state unfounded charges against another who has in no way offended him. Neither Mr Combe nor Mr Simpson is the author of the review, nor did either of them ever write a word about Mr Levison but in kindness. The *facts* of the circumstance from which Mr Levison fishes out a charge against Mr Combe are as follows. In 1824 Mr Combe recommended to Dr Spurzheim to allow the Edinburgh phrenologists to go on establishing the doctrines in the public mind till they became too firmly fixed to be shaken by any thing short of direct counter-evidence, and that then he might apply them in any way he pleased with advantage and success; but gave it as his opinion that the publication of his work on the Natural Laws *at that time* would excite religious prejudices and retard the advance of the science. On this advice Dr Spurzheim acted. In 1827, Mr Combe printed, for private distribution, his own work on the Natural Laws (the 'Constitution of Man'), in which all interference with religion is scrupulously avoided, and sent a copy to Dr Spurzheim. It was not till twelve months afterwards that the work was published. During the whole interval Dr S. had ample opportunity of objecting to Mr Combe's proceedings, but

he did not do so. He published his own work on the Natural Laws in June 1828, and Mr Combe published his at the same time. They continued on terms of uninterrupted friendship with each other until Dr Spurzheim's death."

Finally, we do not think that any reason exists for charging Gall "with receiving his first ideas of the true physiology of the brain from Herder's History of a Philosophy of Man." Herder was the contemporary of Gall (who was born in 1757), and published his work in 1784-1794. At the commencement of its publication, therefore, Gall was twenty-seven years of age, at which time it is well known he had advanced a great way in his discoveries. It is infinitely more probable that Herder borrowed from Gall than Gall from Herder.

ARTICLE XIII.

EPILEPSY, A CASE OF TWENTY YEARS STANDING CURED; WITH THE TREATMENT AND REMARKS THEREON. By JOHN EPPS, M.D., &c. London: Palmer. 1834.

THIS pamphlet contains an account of an interesting case of epilepsy, about which Dr Epps was consulted after a number of eminent practitioners had prescribed in vain. Some of the patient's friends "concluding that a phrenologist must know more of the diseased conditions of the nervous system than others not acquainted with the science, recommended him to consult" Dr Epps as a last resource. He did so, and the result was not less satisfactory to himself than highly creditable to Dr Epps.

It would be out of place to give any details of the medical treatment here; but it may be mentioned generally, that Dr Epps was led to consider the disease as depending on a *want of power in the nervous fibres of the cerebellum*, and that the remedies which he successfully prescribed were selected in reference to this principle. So satisfied, indeed, is Dr Epps of its general truth, that he comes to the conclusion that "length of time in reference to epilepsy is no obstacle to the attempt at cure," and adds, that he has "no hesitation in undertaking any case of epilepsy of whatever duration, if *general fatuity* is not present." When that is the case, the organization of the brain is generally so far injured that recovery is impossible. Dr Epps does not consider this to be indicated unless the fatuity is constant. "In judging of the constancy of the fatuity," he says, "I find that the analysis of mental manifestations afforded by Phrenology is the only safe guide. Thus a person may not remember his friends; he may not know them one week, and he may know

them the next. This would be a kind of fatuity, but not a constant and not a general one. This would be an affection of only one faculty, as Phrenology establishes; and I should have hopes of this case, if the power of remembering size, shape, colour, succession, of the textures of bodies still remained."

Dr Epps mentions that subsequent accounts lead him to believe that the cure will prove permanent. We recommend the careful consideration of the case to our medical readers, and think it creditable to Dr Epps' professional skill and discrimination. We shall be glad to find his sanguine expectations of future success confirmed by farther experience. When, as in this instance, medical men find their advice required *because* they are phrenologists, our science will speedily become more popular amongst them.

MISCELLANEOUS NOTICES.

EDINBURGH.—The Phrenological Society met for the first time this Session in Clyde Street Hall on 13th November, on which occasion Mr Simpson read an interesting essay, entitled, "Reasons for concluding that the function hitherto attributed to a faculty of weight, resistance, or equilibrium, is twofold, and belongs to two distinct endowments, namely, a sense for resistance, and a faculty for force." The following donations were laid on the table:—Cast of the skull of Robert Burns, presented by John Macdiarmid, Esq.—Cast of the head of an Idiot, aged 20; presented by the Manchester Phrenological Society.—Casts of the heads of Mrs Grimstone, Miss Martineau, Mr Godwin (1829), Mr Coleridge (1828), the same (July 1834, within twelve hours after death), Mr H., Surgeon (1829), the same (August 1832), Mr G. Wright, Painter and Engraver (1829), and the same (1833); also masks of Mr Godwin (1806), and Mr Coleridge (1810); presented by I. D. Holm, Esq. London.—Cast of the anterior half of the head of Bonaparte, and mask of Lord Brougham; presented by James Wardrop, Esq., London.—Dr Epps's *Horæ Phrenologicæ*, second edition; presented by the author.—Casts of the head of Sir Walter Scott, and of the anterior part of the head of Napoleon; presented by Mr Anthony O'Neill. For these valuable donations, the best thanks of the Society were voted to the donors.

THE EDINBURGH ETHICAL SOCIETY for the Study and Practical Application of Phrenology meets in the University every Friday evening, at half-past eight o'clock. The following office-bearers were elected on 14th November: Robert Cox, and A. G. Hunter, *Presidents*; R. Duncan Douglas, *Secretary*; Thomas Moffatt, *Treasurer*; George Cruickshank, *Librarian*; Alexander Ireland, J. Montgomery Stuart, James Walker, H. M. Sinclair, and Abram Cox, *Councillors*.

Mr Combe is lecturing on Phrenology to a large audience in the Waterloo Rooms, on the evenings of Monday and Thursday.

GLASGOW.—Dr Weir concluded several weeks ago his course of Lectures on Phrenology in the Mechanics' Institution. The number of hearers was one hundred and twenty, besides a hundred visitors to individual lectures. Throughout the course, a lively interest was manifested by the audience, and the attendance continued undiminished to the last. In the end of October, Dr Wood commenced his annual course of Popular Lectures on Anatomy and Physiology; at least twelve of which will be devoted to the consideration of Phrenology.

ALYTH.—We are happy to learn that the members of the Alyth Phrenological Society, under the guidance of their benevolent president Mr Fenton, are steadily persevering in their studies, and anxious to reduce Phrenology to practice, by making it their guide in the performance of the duties of life. The number of members is increasing, and, from the circumstance that several of them come from Lintrathen, eight miles distant, to the meetings, it is evident that no small interest has been excited. The Forfar mechanics, we understand, are mustering to form a Phrenological Society in that town.

WARWICK.—The following communication, dated 5th November, has been received from Mr W. D. Watson, Secretary of the Warwick and Leamington Phrenological Society:—"On the 8th of August, the third meeting of our Society took place, on which occasion we had several visitors. Dr Connolly gave us a most interesting lecture on the brain and nervous system, which was listened to with the deepest attention. After the lecture, the following gentlemen were elected members:—Dr Andrew Combe, and Dr Barlow of Bath, honorary; Mr James Tibbets, solicitor, Warwick, and Mr John Prichard, surgeon, Leamington, ordinary; and the Rev. H. T. Woodington, Hampton-in-Arden, corresponding. The organ of the faculty of Tune was announced as the subject for discussion at the next meeting.—The fourth meeting took place on the 3d of October, by permission of the Mayor, at the Court-House, my rooms being too small for our numbers. There was a very good attendance of members, and many visitors were present. Dr Kennedy of Ashby having forwarded a handsome donation to the Society, it was presented, and consisted of busts of Drs Gall and Spurzheim—cast of King Robert Bruce's skull and coffin plate—cast of a brain, and a copy of the Exposure of Dr Wayte's Antiphrenology. After some other preliminary business, the debate for the evening commenced, and, considering the novelty of the thing to most of the members, it was carried on with considerable spirit. The following gentlemen, having signified their wish to become members, will be ballotted for at the next meeting of the Society, which will take place on the 5th of December:—W. B. Costills, Esq. of London; George Hayes, Esq., barrister, London; W. M. Shillitoe, Esq., Birmingham; George Matthew Paget Kitchen, Esq., solicitor, Barford; Samuel Bucknill, Esq., surgeon, Rugby; D'Arcy Boulton, Esq., surgeon, Leamington; Sidney Field, Esq., solicitor, Leamington; John Lee, Esq., surgeon, Market Bosworth, Leicestershire; William Blenkinsop, Esq., surgeon, Warwick; Henry Blenkinsop, Esq., surgeon, Warwick. I have every reason to hope that our meetings will now be held at the Court-House, and the Corporation have kindly furnished us with a proper place there for our casts."

DUBLIN.—We have been favoured with a sight of "A concluding Address delivered before the Richmond Medical Society, at the close of the session ending 28th June 1834. By W. P. C., Member of the Committee. Dublin: E. Madden, 1834." This Address, which has been printed in consequence of an unanimous resolution of the Society, furnishes a gratifying proof that Phrenology is not asleep among the medical gentlemen of Dublin. After alluding to an Essay read during the session by Mr James Duncan, "On the Importance of the Consideration of Mental Disease as a subject of Medical Education," the Address thus proceeds:—"Gentlemen, it is not here my intention to enter upon an investigation of the proper treatment of these truly awful maladies; but the every day enlarging views of this truly enlightened age, and the confident anticipation that an accurate and diligent record will yet be kept of cases observed in reference to this very subject, warrant my expectation that the nature of those wonderful and appalling diseases may yet be ascertained, and their treatment be conducted on truly scientific principles. Do not turn from me as a fanciful theorist, when I express my humble conviction, that from the further development of the rapidly advancing science of Phrenology (long a chosen theme of vituperation, but now gradually acquiring that influence which must ever arise from truth,) those results are to be anticipated; compared with which the profound discoveries of an Archimedes or Newton—the wondrous mechanical inventions of a Watt—sink into

comparative insignificance in point of utility and practical benefit to mankind."—As the two leading medical men of Dublin, Dr Marsh and Mr Richard Carmichael, are avowed phrenologists, it is natural to look for a considerable number of converts among their professional brethren and fellow-citizens.

GERMANY.—The following is translated from a review of Dr Hirschfeld's German translation of Mr Combe's System of Phrenology, in the *Medizinische Zeitung*, No. 10, 1834. The writer is Professor Ideler, physician to the great Hospital for the Insane at Berlin.—"We certainly will not say that the phrenologists have succeeded in determining *every* individual faculty, or that they have entirely avoided mistakes; but the defects in their science will easily be remedied by its further progress, and in no degree affect its spirit. It already offers a treasure of well-founded reflections on the formation of individual characters by predominating faculties of the mind, and on the means by which these are excited, directed, and restrained. Since no system of mental philosophy can be of any practical utility where individual peculiarities are neglected for the *general* consideration of the faculties of the mind, it is beyond all doubt that a doctrine which reduces the study of difference of character to scientific principles, must be welcome to us. Combe's work gives a clear, well-arranged, and compendious account of Phrenology, and is therefore well adapted to direct the attention of psychologists on this subject."

UNITED STATES.—The first number of the American Annals of Phrenology appeared at Boston in October 1833, but, owing to some miscarriage, has only now reached us. It contains a vehement outpouring of Dr Caldwell's logic and indignation upon the North American Reviewer, whom it utterly and irretrievably annihilates. Dr C. has lately published at Boston a Discourse on Physical Education, a copy of which we are expecting with much interest. The subject is one to which few are so well qualified to do justice. His vigorous "Thoughts on the Study of the Greek and Latin Languages" (reprinted from the New England Magazine,) have been received. We have never seen Classical Learning more ably exposed.

Our American correspondents are requested to observe, that *small* parcels transmitted to Britain ought to contain no letters; as such parcels are occasionally put into the ship's letter-bag, and hence are charged with a very high postage. Letters, in cases of this sort, should be sent separately by post; and the words "To be put into the ship's *parcel bag*" ought to be written on the parcel. It is ruinous to us to receive *double* letters by the *Post-Office* from abroad, and we beg our correspondents to bear this in mind.

MADRAS SYSTEM OF EDUCATION.—On this subject a correspondent has sent us the following observations, suggested by an article in our last number:—"Give me leave to make a remark upon what is said in the review of Mr Simpson's work on Education, respecting priority of promulgation by Bell and Lancaster. Bell has the merit of being the first European, as far as I know, who adopted the Hindostanee mode of teaching—but, both in conversation and in such of his tracts as I have seen, he cautiously used the word *discovery* not *invention*. Speaking phrenologically, I would say, that his Acquisitiveness and Love of Approbation induced him to wish that the world would give him credit for what his Conscientiousness would not allow him decidedly to claim. In India, the teacher seats himself upon the ground; his pupils are squatted before him in a semicircle, each with a bit of chalk in his hand; and when he enunciates a letter or word, each of the scholars pronounces and writes it upon the floor, which is smoothed like the floor of a barn—consequently the eyes, ears, tongues and hands of all are employed—hence, speaking, reading and writing are simultaneously acquired, and each lesson is effaced with the palms of the hands, and rewritten and pronounced, till facility and correctness be acquired.

"Lancaster, having heard that, in India, poverty or economy had suggested the use of sand in place of paper and slates, persevered for some time most preposterously in covering his tables with ~~wet~~ sand! Which of his phrenological organs was at fault?—Your obedient, R. S."

Our correspondent does not allude to the method of teaching by monitors, which is the grand distinctive feature of Dr Bell's system, and which we believe to have been strictly *invented* by him, not borrowed from the Hindoos.

HANWELL LUNATIC ASYLUM.—In our last number, we copied from the Athenæum an account of a visit to this Asylum by a scientific gentleman in England, in which reference was made to a description of the same establishment in Tait's Magazine, by Miss H. Martineau. Having ourselves visited Hanwell, we intended to have then offered some remarks of our own, but want of time prevented us. We now refer to the subject for the purpose of adding, that while Miss Martineau does no more than justice to Hanwell, she underrates the advance made in other asylums throughout the country, and speaks of them as if they were all in the same dreary and prison-like condition in which they existed twenty or thirty years ago. This is so far unjust, that some have complained of the injury done them. Generally speaking, an immense improvement has taken place. We pointed out the error at the time to some of Miss Martineau's friends, and had determined to correct it, but it was somehow overlooked. We know one instance, however, of a public establishment, to which even the worst of her censure was then far from being inapplicable.

A FIELD FOR PHRENOLOGISTS IN SWITZERLAND.—"At the site of the cemetery of Zug is a *Golgotha*, where are thousands of skulls piled upon one another, each with a label bearing the name of the owner. What a field this for the Phrenologist! And with such advantages, what a blaze of light would be thrown upon the science by the establishment of a Phrenological Society at Zug!"—*Switzerland, &c. in 1830, by Derwent Conway*, vol. i. p. 49. (The foregoing statement is not perfectly accurate; for comparatively few of the skulls have labels on them.)

ORGAN OF FORM.—The following paragraph, which bears to be extracted from the *Chester Courant*, fell several months ago under our notice. If the case be authentic, it deserves the attention of the Liverpool phrenologists. Supposing the brain to be healthy, the manifestations are those of a large organ of Form.—"The celebrated child, Wm. Manual, who is able, at the age of 3½ years, to read with fluency either Welsh or English placed before him in the usual or in an inverted position, on Monday was brought to our office, by his father, who is a miner from Holywell, and with much ease read passages from books in four different positions; but he appears to prefer reading upside down. His father stated that his attention was first attracted by the reading of this singularly gifted child when only two years of age, and he has continued to make progress to the present period without any particular instruction, not having been at school a single day. He is a fine child, the picture of good health. During the past week he has been examined by the Bishop of the diocese and most of the gentry in the neighbourhood, who have all expressed their astonishment and pleasure. It is sometimes with difficulty he is persuaded to read, as he takes great delight in running about: but when his reluctance is overcome he appears to read with great avidity." See an analogous case in our 34th number, vol. viii. p. 66.

Reviews of Abbot's "Teacher" and Mr Dean's "Lectures on Phrenology," with several other articles intended for this number, are unavoidably postponed.—We have not yet succeeded in adapting Mr Hun's excellent essay for publication in our *not exclusively medical Journal*.—The letter of a "Phrenologist" in Paris, relative to Dr Foissac's article on General Lamarque in the fifth number of the Journal of the Phrenological Society of that city, would not be intelligible to any but those who have read the article alluded to. The writer thinks that the Doctor "has shewn too much nationality and party spirit," and that "some parts of the General's life are far from favourable to Conscientiousness."—We have in types a notice of "Chambers's Information for the People, No. 45," where Phrenology is treated with great candour; also a short article about Rammohun Roy.

THE
PHRENOLOGICAL JOURNAL.

No. XLIII.

ARTICLE I.

REASONS FOR CONCLUDING THAT THE FUNCTION ATTRIBUTED TO A FACULTY FOR MECHANICAL RESISTANCE, IS TWOFOLD, VIZ.—THE FUNCTION OF AN EXTERNAL SENSE FOR RESISTANCE, AND OF AN INTERNAL FACULTY FOR FORCE.

(TO THE EDITOR.)

SIR,—Ten years ago I attempted a speculation upon the fundamental function of the faculty for mechanical Resistance, or, as it was then, and frequently still is, called, Weight; and three years thereafter was led to resume it, in consequence of the light thrown upon it by a then recent physiological discovery. Occasional short papers have appeared in the Phrenological Journal, with facts and illustrations, contributed from different quarters, confirmatory of the same views; so that the doctrine has been noticed in seven of the nine volumes which the work has reached.* I am now induced to revert to the subject, from a conviction that I have arrived at clearer views, with regard to both the function and its material instruments, than at either period alluded to I had attained. If truth shall be traced out with regard to this element of mind, Phrenology will have held the torch and explored the path; and really, at least beneficially, discovered a power, although essential to animal existence, previously all but unsuspected and unknown. A few words on the successive steps of this inquiry are here called for.

* Vol. ii. pages 297, 412, 645; iii. 211, 451; iv. 266, 314; v. 222; vi. 134, 343; vii. 106; ix. 142.

In the year 1811, Dr Thomas Brown, Professor of Moral Philosophy in the University of Edinburgh, taught to his students the doctrine, that Resistance is a sensation, not cognised by the sense of touch, but having a *specific sense, of which the entire muscular frame is the external organ.**

Dr Spurzheim in his "Physiognomical System," published in 1815, comes, so far, to the same conclusion, viz. that Resistance is not cognised by Touch; but differs from Dr Brown in so far as he denies that its cognition is the result of an external sense, and refers it to an *internal faculty.* *I beg it may be kept in mind* that both philosophers, however they differ as to the nature of the power cognising, consider the thing cognised as RESISTANCE. The use of such a power is partially and incidentally hinted at by both writers, as necessary for the guidance of our muscular frame, but by neither in a manner suitable to the extent and importance of the subject.†

I was accidentally led to think on the subject of the use, in the economy of nature, of a power for the cognition of Resistance, or Weight, by the occurrence of two very trivial incidents to be afterwards mentioned; and on 15th April 1824, read to the Phrenological Society in Edinburgh, and subsequently to that of London, a paper entitled, "*Some reasons for concluding that the cerebral convolution hitherto called the organ of Weight, is the organ of that instinctive perception of equilibrium and the mechanical relations of matter, which is essential to the exertion of animal power.*"‡ The speculation, with its accompanying illustrations, excited among phrenologists something like the interest of a discovery. It was at once felt that we *must* have a power or instinct by which we place our bodies in accordance with the laws of gravitation and mechanical resistance in general; that without such a faculty no animal could stand, walk, fly, or swim; that in man, the same faculty is the foundation of mechanical skill, from the rudest use of tools up to the highest effort of the engineer and the mechanic; that there is an appetite or necessity for equilibrium, or that due balance of resistance and counter-resistance which is essential to the ease and comfort of every animal; and that, even without relation to his own body, man is offended with any violation of mechanical equilibrium which he sees in external nature. It was im-

* Dr Brown's Lectures, vol. i. page 496, published in 1820.

† There is every reason to conclude that the doctrine of the cognition of Resistance being the function of a specific power, was an original thought in both philosophers. Although Dr Brown propounded it in his lectures in 1811, these lectures were not published till 1820; hence, Dr Spurzheim was not likely to have known of his views till five years after his own publication. The agreement between them being only partial, is an additional proof that the views of the one did not influence those of the other.

‡ Phrenological Journal, vol. ii. p. 412.

mediately seen and acknowledged by phrenologists that these views had an application as extensive as important ; and that, as it was expressed by Mr Combe in his Letter to Mr Jeffrey, they “ added a chapter of some importance to the philosophy of Mind.” I endeavoured to confirm the conclusion that there exists a power to cognise and preserve equilibrium, by adducing some interesting instances of the suspension of it by disease. Miss S. L. for example, in a singular affection, experienced giddiness, believed floors and ceilings to have changed their horizontal for an inclined position, and felt the sensation of being lifted up, and of falling down, and forwards, “ as if she had been *tipsy*.” Mr John Hunter, the great anatomist, when attacked by a particular affection, felt as if he had drunk too much ; as if suspended in the air, whirled round with great rapidity, and sinking down : he also saw perpendiculars inclined, and “ did not receive from his own feelings information respecting his centre of gravity.” The celebrated Opium-eater, among other dreadful feelings which resulted from his miserable habit, “ seemed every night to descend, not metaphorically, but literally to descend, in chasms and sunless abysses, depths below depths, from which,” says he, “ it seemed hopeless that I could ever reascend ; nor did I, by waking, *feel* that I had reascended.”

At first my attention was called to the power in question as an internal faculty exclusively, and I concluded that it must be indicated by a corresponding cerebral organ. This organ had been conjectured by Dr Spurzheim to be the convolution of brain lying upon the orbital plate between the organs of Size and Colouring. The paper above alluded to adduced a great number of instances of eminent mechanicians in whom that convolution is remarkable for its development, and of persons noted for skill in those arts and accomplishments—as billiards, bowls, archery, &c.—which imply a fine perception of mechanical relations. The organ was held by Dr Spurzheim to be *conjectural* only ; but from the confirmatory observations of a number of phrenologists, it was about this time promoted into the grade of *probable*, and is so classed in the third edition of Mr Combe’s System of Phrenology. Yet, though thus cautiously rated in the books, there can be no doubt that it has for some years been practically believed to be the organ of mechanical perception, with as much assurance as its neighbours on both sides have been trusted to for indicating their respective knowing faculties. The instances are too numerous to be noticed, in which talented engineers and mechanicians have been, at a glance, pointed out even by persons of moderate practice in organology, from the large and particularly easily observed development of this part of the brain. Deficiency has likewise been noticed ; though this, to be striking, is rare. Very large development is much more common than very small ;

but a medium fulness is chiefly observable,—and there is a reason for this. An endowment under average in this power would be attended not only with suffering, but with danger: the sensibility to disturbed equilibrium must be acute, and the muscular response prompt and instantaneous, otherwise fatal accidents would often be the consequence. An individual may have a weak perception of some other qualities, such as colour, yet live in safety, and even not discover his defect; but there is something *to do* in obedience to the calls of equilibrium, and an instant's delay may sometimes be fatal to life. In short, like the sense of sight, it is too important a faculty to admit of prevalent deficiency. Deficiencies are, however, sometimes observed. A very intelligible and valuable instance was furnished to the *Phrenological Journal* by Mr Levison of Hull.* He observed in the forehead of a gentleman, with whom he travelled in a stage-coach, so great a depression at the organ of Weight, that the spot, according to Mr Levison, resembled a valley, bounded on one side by the high ground of Size, and on the other by the acclivity of Colouring; and the contrast gave a curious expression to the eyebrows, which were otherwise extremely fine. Mr Levison very judiciously resolved not to question the stranger directly, but to watch his manifestations. He had a large organ of Individuality, and manifested it in the extent of his knowledge and the accuracy of his observative power. "When we had nearly reached Grimsby, he expressed great regret that the rest of the journey to Hull must, per force, take place in a steam packet. My dislike, he said, does not spring from any sensation of fear; but I experience, when on the water, a kind of dizziness and nausea, very like that felt in intoxication; *I seem as if I could not balance myself.*" Presuming this case to have been accurately observed, I consider it as one of the most pointed confirmations of the organ, of the many which have come to my knowledge. I may add, that Miss S. L. had acute pain in the spot where the organ exists, when the perplexing symptoms of its disease were experienced by her.

I have anachronised a little in regard to the history of the *organ*, that I may dismiss it, and proceed unembarrassed with the faculty. Of the organ, I shall at present say no more than humbly to suggest, that, in respect of its claims being quite as good as those of its neighbours Colouring and Size, it may now be held to be *very* probable, if not established.

Dr Thomas Brown's doctrine, that the power in question is an external sense, had not attracted the particular attention of phrenologists: not themselves arrived at a discriminate knowledge of the function of the power, they viewed Dr Brown's *sense*, and Dr Spurzheim's *internal faculty*, as only different expressions

* Vol. vi. p. 134.

for the same thing. They ought, however, to have been aware, that it is metaphysically erroneous to confound an external sense with an internal intellectual faculty. All metaphysicians agree, that a sense receives *passively* an impression, communicated from an external material object to the brain by a specific nerve, and that there its function ends. An internal intellectual faculty is an *active power*, to which the sense ministers; and although it has a marked prominence of brain, and corresponding development of cranium, it has of itself no direct organic communication with the external material world. Hence it should have been recollected and noticed, that Dr Brown and Dr Spurzheim, if speaking of the same thing, could not both be right, when the one called this power *only* a sense, and the other *only* an internal faculty.

In the harmonious relation of the Creator's works, which renders true science, however branched for human convenience, really one and indivisible, a new and brilliant light was soon to be shed on this difficult question, by talent engaged in a different pursuit, and expecting a different result and a different reward. On the 16th February 1826, Sir Charles Bell, in a paper read before the Royal Society of London,* announced the discovery of the fact that each muscle of the body is supplied with *two* nerves,—one, the motor nerve as formerly known, to contract and move the muscle; and the other to convey a sensation to the brain of the *state* of the muscle, that the necessary power may be transmitted, through the motor nerve, for adequate contraction or relaxation, as may be required. It is physiologically true that the same nerve cannot act in both directions. By satisfactory experiments on these two nerves, separately and alternately, as mentioned in his paper, Sir Charles Bell demonstrated the existence and the distinct and different function of each; and although he found this new nerve of muscular sensation likewise associated with the nerve which supplies sensibility to the skin,—viz. of pain, and heat, and cold (for the bared muscle does not feel pain acutely, and heat and cold not at all,)—he concluded it *probable*, that these two nerves are as distinct from each other, as is the motor nerve from the nerve of muscular sensation.† Be this, however, as it may, he has demonstrated that there is a muscular sensation which informs the brain of the state of the muscle, in other words its demand for motive power; and that that power is conveyed by the motor nerve, the other part of what he calls a nervous circle connecting every voluntary muscle with the brain. In the note referred to below, I adduced an instructive instance communicated by a medical gentleman of Edinburgh, of the alternate failure of the energy of the motor nerve and nerve of muscular sensation. It is at once so illustrative and so decisive, that I

* Transactions, vol. cxvi, page 163.

† Note in Phren. Journ. vol. iv. page 314.

am tempted to give it again. "I was consulted by the son of a gentleman in the country, who has had a singular paralytic affection. He lost the power of *motion* in his arms, but retained *sensation* acutely, and felt another person's hand cold or warm, as the case might be. [This concerns the sensitive nerves of the skin.] Now, at the distance of three weeks, he has regained the power of motion, but has lost *the sense of the state of the muscles* so completely, that he cannot *adapt his muscular contractions* to the purposes he has in view. [This is the proper nerve of muscular sensation:] In seizing a small object, he bears down upon it with his extended hand, gathers it in, and grasps it like a vice, not aware of the disproportion of his effort. He has at the same time the complete command of his muscles as to *contractions and relaxations* [another word for the energy of the motor nerve], but wants only *the sense of their state*."

The discovery of Sir Charles Bell,* is broad enough to reconcile Dr Brown and Dr Spurzheim, not as having given different and incompatible names to the same thing, but as having each furnished a name for which there is a distinct corresponding thing: in other words, the constituent part of man in question is compounded of both a passive sense and an active internal faculty; and this I humbly think is demonstrable. The nerve of muscular sensation conveys to the brain information of the state of the muscle, and does no more; it neither has nor can have an ulterior function. The state of the muscles is another phrase for the degrees of the impression of resistance upon the muscular frame, a sensation produced by an external material cause, and therefore beyond all question as much a sense as smelling or tasting. The will is under no moral necessity to act upon the sensation or message from the muscle conveyed by the nerve of muscular sensibility, and to command the motor nerve to do its duty, and change the state of the muscle. That it invariably does so, and with the speed of electricity †, is nothing to the purpose: not only are we able to conceive the sensation without the responsive action, but we can suspend that action, and endure the sensation, provided it be not intolerably painful or dangerous, quite long enough to

* This discovery is claimed by a physician of Turin, named, by singular coincidence, Carlo Bellingeri; and the medical journals have lately maintained a warm controversy on the question of priority. Bellingeri claims to have distinguished the motor nerves from what he vaguely calls the *sensitive nerves*. From him therefore, I never should have got the idea of a nerve conveying to the brain a sense of the state of the muscle as to contraction; of this important function, which is every thing for my purpose, I owe my knowledge to Sir Charles Bell. Bellingeri may have discovered two nerves formerly believed to be one; but Sir Charles Bell has thrown greatly more light on their respective functions.

† Mr Wheatstone, Professor of Experimental Philosophy in King's College, London, has discovered a means of measuring the velocity of electricity, which he declares to be equal to that of light, 190,000 miles in a second.

demonstrate that it is a sensation independent of any action whatever—in short, that the newly discovered nerve of muscular sensation is as much the nerve of a *sense*, of which the whole muscular frame is the external organ, as the optic, auditory, or olfactory, are the nerves of their respective senses. That this sense was so long unobserved may be accounted for by the fact of the universality of its external organ: a limited organ, like the eye or ear, points out a sense by the sense's failure when its organ is destroyed; but there was much less obvious reason to refer a sense to the entire muscular frame, in other words to know that it is a sense at all.

At the point where the passive sensation of the muscular state ends, and something to be done at the command of the will begins, there is a necessary and most evident distinction of agents as well as operations. Here commences a function for which an external sense is altogether inadequate, an act of the will for which the higher power of an active internal faculty is necessary; and for this faculty there is a specific servant, namely the motor nerve. The conclusion appears to me unavoidable, that in every change, produced by an act of the will through the instrumentality of the motor nerves, in the state of the minutest of above four hundred muscles with which the human body is furnished, two distinct functions are exercised, two separate operations performed: *the muscular sense* does its specific duty, and reports to the brain the *state* of the muscle, whether in repose or tension, and in what degree of tension; and subsequently, although instantaneously, the *faculty of muscular adaptation* performs its part, and, with the most perfect calculation of the counter resistance required, changes the degree of contraction, in other words the state of the muscle.

Important consequences follow from this distinction between the sense and the internal faculty. While the precise function and extent of function of both are philosophically discriminated, the discovery of their almost invariably *joint* operation will render yet clearer than hitherto, the manifold phenomena of the relation of animals to the mechanical laws of the material world. Take, for example, those two most constant of all resistances, gravitation and the impenetrability of the earth's surface, for, *to the sense*, they are both resistances. Gravitation, by attracting our bodies in the line of the earth's centre, prevents them from flying off as portions of matter into infinite space; while the resistance of the solid ground antagonises that attraction, and saves our bodies from being actually carried to the centre; the result being that they are retained on the surface. These joint though counter resistances are felt by us in consequence of their producing a certain state of our muscular frame. Suppose us at rest, sitting upon a chair, the whole frame in equilibrio—the muscular sense informs the

brain, whether we are attending to the information or not, that the muscles are in a certain satisfactory state; a state the disturbance of which is painful to us, by failure of support, or the sense, however brief, of falling; for falling is nothing else but the operation of gravitation, not antagonised by the counter resistance of the earth's surface, or something solid resting thereon, as a chair, a floor, a horse, or a carriage. The fall or prostration of our body itself, from the vertical to the horizontal position, depends upon the failure of another kind of antagonising power, to be presently adverted to. We wish to change our position and stand erect: the sensation of the state of the muscular frame, at the moment of forming this resolution, in other words the mere sense, would never enable us to perform the act of standing erect; under its province we should simply continue to feel passively the state of the muscular frame which gravitation and the earth's resistance produce, and this without the slightest possible variation. But a distinct power comes now into action, and let us see what it does for us. The instant the will resolves that we shall rise up from the sitting posture, not only is a message sped by the faculty under consideration to those muscles which, by their contraction, draw the legs close to our chair, but, to the end of aiding and antagonising, the muscles of the trunk, neck, and arms, are subjected to a new contraction; perhaps few muscles in the body are left totally unsummoned and unchanged for the important and complicated feat of standing erect. That this is an exertion, and a great exertion, of muscular power, is familiar to every one who has experienced the fatigue of long standing, when the muscles are successively appealed to in vain for a posture of ease, and the sufferer longs to sit or lie down. Suppose us erect, the duty of the faculty is by no means done: it has mounted guard, and it never deserts its post or relaxes its watchfulness. All unconscious as we may be, our instinct of calculated force is active, and, in a manner which would excite our wonder and admiration could we but see and comprehend it, is keeping to their duty some hundred muscles, each performing, by nicest calculation of its directing power, the precise part allotted it, and exercising the exact measure of force which is necessary to antagonise the power with which gravitation is unceasingly endeavouring to bring our body, so much longer than it is broad, and placed on so narrow a base as the feet, down to the safer base of its back, breast, or side, on the ground. The muscular frame antagonises the resistance of gravitation; but this latter resistance itself assists in keeping us erect, and we could not stand without it: it is the basis of the whole operation,—the perpendicular support, antagonised by the resistance of the ground in the vertical direction; while it is the duty of the muscles to keep the body *laterally* in that position in which the resistance of

gravitation and of the earth's surface are vertically applied. If the muscles lack strength to preserve that position in which a perpendicular from the centre of gravity of the whole body shall fall within the space occupied by the feet, the body will fall; and it falls instantly, in consequence either of weak muscular power, or of the suspension by some cause of unconsciousness, as syncope, intoxication, or death, of the faculty for applying the necessary force to preserve the balance. We have an appetite for the perpendicular, and any defect of it is painful, and instantly felt by the muscular frame; this will be apparent to any one who is pushed or pressed out of his perpendicular, and staggers to save himself from falling; and this it is which renders the mere sensation of *falling*, independent of and before the blow to be received, so alarming and painful.

Again, it may be that having succeeded in standing erect, we desire to walk. To produce motion it is evident that equilibrium must be disturbed, for equilibrium is essentially rest. In standing erect, so long as the muscles have force to keep the body in that position in which the two resistances of gravitation and the ground are vertically applied to it, there is, theoretically at least, a state of rest. What, then, is our first movement to attain the end of walking? Before we move, the brain is cognisant, by the nerves of muscular sensation—and there are no such faithfully minute and prompt informers,—of a certain state of tension of the muscles, necessary, and no more than necessary, to preserve at rest the upright position; but their state must be changed, else there would be no change from the vertical position, and therefore no advance. The faculty under consideration changes the state of almost every muscle in the body, by the required contraction, and no more, and the body is slightly thrown forward. This inclination in walking is so slight that it is scarcely recognised; but its necessity can be put to the test, by any one attempting to advance by merely planting the foot forward, without an accompanying forward movement of the body. By the inclination of the body, the equilibrium of the standing position is destroyed; but the faculty, in obedience to the necessity of equilibrium, instantly restores the disturbed balance, by that specific muscular contraction which advances the foot. This, which is the first step of walking, is a new position of equilibrium or rest, and, because of an enlarged base, a stronger position than that which the body before occupied. A second step is to be taken, and the faculty, informed by the sense of the state requiring to be changed, repeats the first operation, and does so again and again till the walk is finished, and we change the state of the muscles to prepare for standing still and erect, and again for sitting or lying down. Nothing can be imagined more exquisitely precise than the measure of force allotted to the muscles by this wonderful instinct, for each and all

of these operations. Gravitation, the resistance of the ground, and the contraction of the muscles, are all instantaneously and unerringly calculated. If a false step follows, it is not the fault of either the sense or the internal faculty; it is ignorance of some external condition: for example, the ground, which was believed to be level, is uneven; there is a step down or a step up not allowed for; there is a hole covered by a thin turf; and the unprepared frame receives a shock or jar of the most unpleasant and alarming kind. When the external conditions are true the faculty is unerring. In short, if there be any of our intellectual powers from which we can obtain an idea of those instincts of animals which produce the most certain and complicated results, like that perfect piece of mathematical workmanship the cell of the honeycomb, and all the varied architecture, as it is called, of insects and birds, it is this our almost automatical power of disturbing and restoring equilibrium,—a feat performed almost without consciousness, yet as complicated, as precise, as mathematical in its result, as the cell of the bee. Short way, indeed, do we even yet see into the Scriptural truth, that we are “wonderfully made.”

I have instanced only standing and walking; but it must be obvious that the sense of the muscular state, and the faculty for changing that state, must both be concerned in the simplest and in the most complicated animal movements; and in each and all of these movements, however rapidly performed; must both be in vigilant operation. To the minutest movement in the magical flight of the fingers over the keys, strings, or stops of a musical instrument, the sense and the faculty have both, with exquisite precision, done their duty a thousand times over, before the piece of execution is finished; and in the speed of the race-horse, the ostrich, or the antelope, every movement is calculated by the animal, the state of the muscles at every spring felt, and the exact force to be applied to the next correctly estimated. The inferior animals, not less than man, must possess both the sense and the instinct, for both are essential to their existence: they could not attain equilibrium without them, and would perish, lying like dead matter on the ground, or floating, if lighter than these media, in the water or air; but the moment they crawl, or creep, or walk, or run, or leap, or fly, or swim, both this sense and this faculty *must* be possessed and exerted by them. Some have thought these almost unconsciously performed muscular movements automatic; but this is an error, for the motor nerves connected with the voluntary muscles are servants of the will. Bellingeri himself observes that the motor nerve, but not the sensitive, obeys the will; which is the same as if he had said that the former is the medium of an active faculty, and the latter of a passive sense.

On 1st March 1827 I read another paper to the Phrenological Society *, in which I endeavoured to apply Sir Charles Bell's discovery, that the nerve of muscular sensation is distinct from the motor nerve, to the views which, nearly two years before the publication of that discovery, I had entertained of an instinct for adapting animal movements to the mechanical laws. I had not, even in 1827, clear views of the necessity of both a sense and an internal faculty; yet that paper virtually embraced both. It predicated that an animal would speedily be destroyed which either had no *sense* of resistance, or had no *more* than a sense without a *power* to act on its suggestions! Sir Charles Bell points out two nerves, the one precisely *suiting* a sense, and the other fitted to serve an active instinct or faculty. This sense and instinct are analogous to the sensation of hunger and the instinct to relieve it by food. The infant, a few hours old, experiences the sensation, and relieves it; it has no power to relieve any other uneasiness, but it has at its command a complicated, pneumatic, and hydrodynamic operation in the act of sucking, to remove that specific pain called hunger. Sir C. Bell has pointed out "that the sensitive nerves convey a *sense* of the state of the muscles necessary for the regulation of their activity;" but this regulation, itself, is not a sense but an active power, and Sir C. Bell sees its use in balancing the body and governing the muscular frame. "This activity," I stated in my paper last referred to, "is dependent upon the operation of the nerves of motion, and its regulation is essentially an animal instinct. The *state* of the muscle is the degree of contraction which suits it to the mechanical force applied to it; and this relation perfected is another word for equilibrium. Now, as there is often bodily danger in disturbed equilibrium, nature *compels* the animal to preserve that muscular balance which is essential to its safety, by rendering the disturbance of it so intolerable to its feelings, as to produce an instant muscular effort for its restoration. Nature has, as it were, established an appetite for equilibrium, to which the nerves of motion are the ready ministers."

In the same paper there are several proofs and illustrations, which, by brief repetition here, will have a fresh interest in their relation to the sense and the internal faculty respectively, as now more clearly distinguished; the reader will at once make the distinction for himself, and see how much in each instance is the operation of the one, and how much that of the other. I may first adduce a few examples of the sudden struggle to restore equilibrium, when disturbed by a change in what may be called the angle of gravitation. If a horizontal platform on which we stand, the deck of a ship for instance, be suddenly sloped, our whole muscular frame feels, *as a sensation*, the change of the angle of gravita-

* Phrenological Journal, vol. iv. p. 266.

tion, and the consequent disturbance of our equilibrium. So far the sense. But we instinctively lie down and *hold on*, as the sailors say, by every possible exertion of our muscular power, which the sense alone would not enable us to do, without the instinctive active faculty. This is neither, as some may think, knowledge of the danger nor fear; for a kitten or a puppy a few hours old will do the same thing, while an infant shrinks when the nurse's support is lessened; in which cases, fear of consequences is out of the question. Nature did not trust to that tardy safeguard, but established a more prompt means of safety, by giving the animal a salutary uneasiness in its muscular frame, and moreover endowing it with an impulse and a capacity instantly to exert itself to remove that uneasiness. The descent in the car of the Montagne Russe, once famous in Paris, is perfectly safe, but its effects on the state of the muscles of some persons,—and the same is true of the descent in a swing,—is utterly insupportable. Sleep and total intoxication have both the effect of relaxing the muscles. Garrick was told that he had failed to imitate complete drunkenness on horseback, as his left leg was sober, keeping, as it did, a rigid position in the stirrup. The sleeper awakes, and the state of his muscles is instantly changed to that of tension; he stands, he walks, and I have already described the changes his muscles undergo by these operations, and the manner in which he alternately disturbs and restores his equilibrium.

The *preparation* of the muscles for the intended exertion, which we make in our confidence in the uniformity of mechanical nature, is an interesting field of observation. Our success passes unnoticed by us, but our miscalculations give us good reason to mark them. Such mistakes, as already observed, originate not in preparing too much or too little force for a *known* resistance, but invariably in some misapprehension of the true nature of the resistance itself. The mistake may be our own, as when there is an unexpected step at the foot of a stair, or a step expected but not found at the top, for the first of which the muscles are unprepared, and for the second over prepared; and there is little difference in these in the shock experienced. A vessel full of water, it may be, is often lifted by us; if it chance to be empty when we believe it full as usual, we over prepare the muscles to lift it,—we put on too much force, and it starts up, with an unpleasant feeling, in our hands. Sometimes our miscalculations are produced by others suddenly changing the resistance upon which we counted. Thus a dragoon falls forward when his enemy alertly avoids the stroke of his sabre; he flies over his horse's head when the animal at speed suddenly stops; when pulling a rope against an antagonist, we fall on our back if he suddenly relaxes his hold; yet, in all these

cases, a moment's warning of what was to happen would have prepared the muscles to antagonise the force, and none of the three results would have taken place. Practical jokes, often very dangerous experiments, for the most part consist in deceptions which lead us to over or under-prepare the muscles. What we hold loosely is knocked out of our hands, our muscles being unprepared; while slacking a rope, eluding a push, avoiding a blow, and many other modes of balking a powerful effort, take advantage of our over-prepared muscles.

Some animals that spring, especially of the feline species, such as the cat, the lion, the tiger, &c. seem to possess more power than others over their muscles; in other words, to have a more acute perception of their state, and the changes in them necessary to execute the required movement. In them both the sense and the instinct are powerful. The cat falling on her feet, often from a great height, and in such a case of course unexpectedly, seems to prepare her muscles for the resistance she is to meet with on finishing her descent, and reaps the full benefit of the elastic cushions which fortify her feet, on which she always lights.

I have mentioned some failures both of the sense and of the internal faculty occasioned by disease. An intoxicated person suffers severely from the sense of disturbed equilibrium; while the faculty of restoring it, although laborious efforts are often made by him, is greatly abridged. Much of the muscular power, or, in other words, the energy of the faculty, is gone; his tongue refuses its office; his eyes either will not open or will not shut; he misses his lips with his half spilt glass; and can neither keep a straight course nor reach a desired object. In palsy and St Vitus's dance the sense remains, but the motor nerves refuse to obey the internal faculty. In palsy the limb affected is often, from a false perception of gravitation, felt to be very heavy. An additional instance to those furnished by the English Opium-eater, is mentioned in the Phrenological Journal;* a single experiment, for a philosophical purpose, was made by Mr Madden, the traveller in Turkey; and the effects of the drug, on the muscular frame of others as well as on his own, are vividly described, and are strikingly confirmatory of all I have advanced. He concludes—"I made my way home as fast as possible, dreading, at every step, that I should commit some extravagance. In walking, I was *hardly sensible of my feet touching the ground*; it seemed as if I slid along the street, impelled by some invisible agent, and that my blood was composed of some ethereal fluid which rendered my body *lighter than air*." In Mr Madden's state, neither the resistance of the ground, nor that of gravitation, was properly *perceived* by him; which proves that we not only

* Vol. vi. page 139.

require to be *subjected* to these resistances, but the faculties which were given us in relation to them must be in a sound condition to *perceive* them, in order to the regulation of our muscular movements.

The following passage, slightly varied from a paper in the *Phrenological Journal**, on the agreement between the cerebral development of Ducrow the noted equestrian and his wonderful powers, well illustrates the operation of both the sense and the internal faculty:—"Let us consider Ducrow's easy and never-failing maintenance of his balance, in the critical position of standing on the back of a horse at full speed. The more nice the perception of a changed state of the muscles, the more readily will their equilibrium be restored; and it is only supposing this *sensation* very exquisite, and the *motor nerve* and muscles very obedient, to conceive equilibrium not only recovered when endangered by great variations of gravitation, but so steadily preserved, as never to be lost, or even appear to be lost. It requires no inconsiderable degree of the sensation of resistance or its failure and the response of muscular contractility, for the human body to stand erect on the ground; it is an increased degree of the quality to preserve the balance of the body on a moving support, as on a cart in motion; but when the ever-varying and muscle-changing forces, of which the motion of a horse at full gallop is the cause to Ducrow standing on the saddle, nay, of six horses at once, and the same time, produce no perceptible change on the steady, easy, and even graceful attitudes of the rider, the highest degree of the *equilibrium-preserving* power is attained." In Ducrow, the organ for Weight, or more correctly for the application of Mechanical Force, is unusually large. It is likewise very large in a gentleman of my acquaintance, who, among other talents, possesses that of mechanics and engineering very remarkably. He assures me that he has great power of balancing his body; and when a boy, was the wonder of his companions for the *chamois-like* ease, and safety from wet feet, with which he skipped about from stone to stone in a shallow river.

The knowledge of resistance being acquired from gravitation and impenetrability, and of force from the instinct of muscular counter-resistance, the combined effect, probably as the result of experience, is much more extensive than the regulation of our muscular movements. We can perceive the mechanical relations of external matter to external matter, and provide for our safety and increase our power by taking advantage of these relations. We find the different relative powers of resistance, called their density, in different kinds of matter, and, availing ourselves of this knowledge, and exercising another faculty, namely, Con-

structiveness, which manually fashions, forms, and constructs *, we make tools and instruments; hence we know and prize iron as the most valuable of metals, and form the axe, the chisel, the knife, and the saw. The mechanical powers, in their rudest state, are applied instinctively, in other words under the impulse of the faculty in question. "We can scarcely," says Sir David Brewster, † "conceive a state of society so rude as to have been entirely destitute of some of those mechanical resources which seem to be absolutely necessary for supplying the very earliest of our wants. In detaching a stone from the ground, and in subsequently raising and removing it for the purpose of erecting (i. e. *constructing*) a habitation, the savage could scarcely fail, under the influence of *natural instinct*, to employ some means that involved the principle of the lever." The other mechanical powers would naturally offer themselves to man, as his knowledge advanced. Sir D. Brewster, like the metaphysicians of the old school who deal in generalities, speaks of natural instinct as directing these applications of power; it was reserved for Phrenology to trace that instinct to a well marked specific intellectual power. There can be no doubt that the science of mechanics owes its principles, combinations, systems, and progress, to higher intellectual powers; but the basis of all this will be found in the faculty under discussion. The military engines of the Greeks and Romans, which involved much of compound machinery, were used long before any attempt was made to explain the simplest principles of mechanical equilibrium. Aristotle made some progress in the theory of mechanics; but Archimedes, who demonstrated the laws of the equilibrium of the lever, may be considered the father of that science. The science of mechanics goes far beyond natural instinct; it discovers the laws of equilibrium, and the laws of the motion of solid bodies, of the forces by which bodies may be made to act on each other, and of the means of employing one force to overcome another. The term mechanics has been lately extended to embrace the equilibrium of all bodies, solid, fluid, and aeriform; and to include dynamics, hydrodynamics, pneumatics, statics, hydrostatics, and hydraulics; yet, in every step of the most complicated mechanical operations,—as of the construction of the steam-engine itself,—the faculty under consideration is in constant requisition.

* The faculty for Force is not Constructiveness; for the ablest mechanician is often obliged to employ more expert workmen than himself to construct what he suggests—to realise his principles in a construction, as patentees say. McLauchlan, the Saltcoats weaver, mentioned in the Phrenological Journal, vol. ii. p. 416. and 431, in the energy of his perception of momentum, engaged for years in making experiments on the stroke of a pump, and ruined himself by employing others to make what he invented; and accordingly in him the organ of Weight is large, and that of Constructiveness small.

† Edinburgh Encyclopædia, *vide* Mechanics.

Nay, that faculty is necessary to the original impulse, or turn, as it is called, which guides mechanical genius in its specific direction; and, accordingly, we find the faculty powerfully manifested by eminent engineers and ingenious mechanics, and in them, as formerly stated, the organ largely developed. The greatest differences are observable among individuals in the degrees of the instinct itself,—in the perception of equilibrium, not only in their own persons but in the relations of external objects, and in the feelings they manifest when they see equilibrium in danger, or force erroneously applied. I stated, in another paper, that I once witnessed an incident in a stage-coach which arrested my attention, though at the time to no purpose; long after, another occurred, and it was on connecting the two that I was led to think, I trust more beneficially, on the subject. I promised, in the outset of this letter, to narrate the two occurrences. A gentleman was making very awkward attempts to let down the carriage window, holding the strap at least a foot from its junction with the glass, when a very young girl, offended by such a misapplication of power, snatched the strap out of his hand and impatiently said “Take it shorter.” The other incident, which recalled that of the stage-coach, was the interference of a lady, with something of the same impatience,—for awkward movements in mechanics are painful, and even irritating, to the better endowed,—with the endeavours of a servant to fix a tea-kettle trivet on the bar of a grate which was a little too large for it. The lady took the trivet out of the servant’s bungling hands, and applying the poker as a lever to the hooks of the trivet, while she used the bar as a fulcrum, in a moment enlarged them so that they held. There can be no doubt that we *see* equilibrium, in external objects, as well as feel it in our own persons, and this vision likewise is necessary to our safety. The safest and strongest position of external objects is in the line of the earth’s centre, or, in other words, perpendicular to its surface. We instinctively place objects, which it is meant to erect from recumbency, as nearly vertical as possible, being painfully offended with *seeing* any material variation from the perpendicular; we have a visual perception of the vertical, and an instinctive desire to see it preserved. A paper, which was afterwards contributed to the Phrenological Journal, was read to the Manchester Phrenological Society, on 26th Nov. 1880, by Mr Richard Edmondson,* on a function of this faculty, which he calls “the perception (that is the visual perception) of the

* Vol. vii. page 106.—Mr Edmondson has sent to the Journal another paper (vol. ix. p. 142,) in which he adduces additional evidence, both from endowment and deficiency of the organ, that the power of *seeing* the perpendicular depends on the organ of Weight.

position of objects, relative to their centre of gravity." This perception some persons possess more acutely than others, so as to be able, with the eye alone, to test the perpendicular in spires, towers, and other buildings, with the accuracy of a plumb-line. This is quite true, and shews that the equilibrium of external objects is observed by the sense of sight, in addition to the primitive perception in our personal sense of resistance. That the faculty enables us to see objects in their relation to gravitation and mechanical resistance, is farther proved by the effects of its derangement in intoxication and vertigo, when horizontals *appear* perpendiculars, and *vice versa*, as occurred to Miss S. L. and Mr John Hunter. Every one has seen a drunk man holding fast by the carpet, in the belief that he should fall from an inclined or perpendicular wall; while the occurrence is not uncommon of the drunkard's conviction that the pavement upon which he falls has risen up and struck him on the forehead. This illusion is instructive: we learn from it that a faculty is required for forming just notions of position in relation to gravitation; and we farther learn that that faculty must not be deranged, else it will mislead us. In a sound state, it *feels* that the securest position for our bodies—when not lying horizontal, which last position, itself, is only a multiplication of vertical lines on an extended base,—is the perpendicular; as that is the direction of the most powerful attraction. It *sees* that this is also true of a tower or a wall. Whatever may be the relation of that perpendicular to the heavens, it is vertical to the perception of the faculty in question; and when our own body is the attracted object, the line of the strongest attraction must constitute, to us, what is called *up and down*. Although our position changes its relation to the heavens at the rate of 1000 miles an hour at the equator, and 560 at Edinburgh, it remains perpendicular, or in the line of the earth's centre, and therefore, *to our feelings*, never can change. There is no *up and down* absolutely in space. It is a sensation produced by gravitation on a sense provided for it; and, when that sense is deranged, the perceptions of up and down are no longer to be trusted. It matters not where our heads point; if our feet, or, more properly, the centre of gravity of our bodies, be subject, as it must be, to gravitation in the line of the earth's centre, we will have the feeling of the spot of earth we tread on being permanently below us, and the opposite point of the heavens for the moment, vertically above us. It puzzled the learned, in the days of Galileo, to conceive how our opposites the antipodes, and we in our turn, *stuck* on the inverted earth's surface. The witty Buchanan, tutor of James I., wrote a long satirical poem, in Latin hexameters, on the incredible theory; and, with precisely the same degree of light, a young woman

lately changed her mind about going as a colonist to Van Diemen's Land, because she saw plainly that there she would live with her head down and her feet up, like a fly on the ceiling; the world, as was shewn to her, being as round as an apple, and while we possess the great advantage of having our heads up, those opposite to us having, of necessity, theirs the other way; a change which no prudent person, especially in female attire, would think of making.

All the engineer's notions of the strength and strain of the materials with which he works, and their adaptation to the desired resistances and counter-resistances, originate in this faculty; the carpenter uses it in every direction of his trade; so does the shipbuilder; for all the improvements by Sir Robert Seppings in that important art, are skilful adaptations and applications of his materials to produce resistance and counter-resistance, strain and counter-strain.

Finally, The distinction between the external sense and the internal faculty at once removes the objection that the convolution between Size and Colouring cannot be the organ of the faculty, because the nerve of muscular feeling is not traced into it; for neither is the optic nerve traced into the organ of Colouring, nor the auditory nerve into the organ of Tune; which organs, respectively, these nerves nevertheless subserve. My position is, that the faculty for applying Force, and for maintaining equilibrium, is as different from the sense of Resistance, as the faculties of Colouring and Tune are from the senses of Sight and Hearing, however close their dependence on these senses; and, if we can and do observe the degree of endowment of Colouring and Tune, by the development of two distinct organs, into neither of which the optic or auditory nerve is traced, so we may observe the degree of endowment of mechanical Force by its own organ, although the nerve of Resistance is not traced into it.

I shall conclude this letter with some remarks on the most appropriate names for the sense and the faculty, respectively; for I have, as yet, rather described than named them, thinking it advisable that their nature should be clearly unfolded before they were definitively named. Dr Spurzheim, denominated his power the faculty of Weight or *Resistance*, and considered it as cognising momentum, consistency, density, ductility, softness, and hardness. Nothing was changed in the notion of *resistance* by any of these terms; for, including weight itself, they are all varieties of resistance. Dr Brown likewise adopted *Resistance* as the sensation of his sagaciously conjectured sense, and concluded that the muscular frame,—which, he said truly, “is not merely a part of the living machinery of motion, but also an organ of sense,”—is the external organ of that sense. Under the generic term resistance Dr Brown includes hard-

ness, softness, roughness, smoothness, liquidity, viscosity, solidity, &c. Sir George Mackenzie's speculations on the name are most instructive: his very uncertainties doubts and variations maintain a progress towards truth; and when, in one of his papers, he modestly gives up the research as beyond his powers, he alludes, in quitting it, to the possibility of the very hypothesis which, with powers far inferior to his, I have above offered reasons for concluding to be the true one. This process in Sir George Mackenzie's mind is curious, and extremely interesting. 1st In his *Illustrations of Phrenology*, p. 160, he suggests the name *Resistance*, as designating the only impression which is left with us by the qualities of weight, hardness, &c. In the same work, he conjectures that there may be a faculty which gives us perceptions of Force or power. 2^d In an ingenious paper contributed to the *Phrenological Journal*, on the faculties exercised in playing at billiards, chess, and other games of skill*, Sir George Mackenzie's conjecture of a *faculty for Force* has gathered strength, and he is much disposed to abandon altogether his first love *Resistance*, which he erroneously imputes to the sense of Touch. "I am at present," he says, "inclined to think that the organ called that of *Weight* may be the organ of a *faculty* which gives us the notion of *force*, or *mechanical power*; that which is required to overcome resistance. Resistance appears to be discovered but by the sense of touch, from which we derive all our notions of hardness, softness, roughness, and smoothness, and which are all of them modes of resistance†. But there is something required to overcome resistance or balance, of which our ideas are perfectly distinct, and which is capable of being compared in degree. This, I apprehend, is not momentum, or vis inertiae, because this is a quality or property not elicited or known until a body is set in motion. What I look for is that which produces or prevents motion. It is not resistance itself which overcomes resistance, because a body at rest is capable of resisting without exertion being made. *Force* is the only word that occurs to me at present, for expressing the function of the faculty I suppose to exist, and I must distinguish the special

* Vol. iii. p. 211.

† This error mainly prevented Sir George Mackenzie from clearly seeing all the truth. I may here take occasion to remark, that the same error has probably retarded for many years the realization of the benevolent project of a tangible alphabet for the Blind. Characters raised above the level of the paper, are held to be addressed to their sense of Touch. In truth they are addressed to their sense of Resistance, and affect the muscles of their fingers, while no appeal is made to their proper surface sensations of Touch. This last would be done by a judicious disposal of points and edges, to pique, though not to pain or wound, the fingers; and thus two means, instead of one, of distinguishing characters, would be enjoyed by them. As one application of the doctrine of this letter, I hope at a future time to offer you some views on this curious and interesting subject.

nature of the force I have in view, to be, 1st, that derived from muscular exertion, that which we can produce by will. The discovery that, to a certain extent, we have the power to overcome mechanical resistance, may be called instinctive; but still the consciousness of this power must be derived from the intervention of a power of the cerebrum. The notion of muscular power is abstract, i. e. we know it, though we are not exerting it. 2d, I refer the knowledge of force produced from other sources, such as the force produced by expansion, as in the examples of steam, the inflammation of gunpowder, and the force of gravitation and attraction, to the same faculty. We see no causes producing such forces; we are quite ignorant of the nature of that which produces will, and of the manner in which will produces muscular exertion. We know not *how* the expansive force is brought into action; we only know the fact; that its production follows certain conditions into which matter may be brought. We know nothing of the causes of attractive forces, or what it is that causes weight or gravitation. On the whole, I am induced to consider that there is a faculty which takes cognizance of *force* generally, and I think that this may be what Mr Simpson was in search of when he made his ingenious speculations on the organ of Weight, and that this organ may be that of the faculty of Force." "The notion of resistance appears to be *necessary* to us. We know, from experience, that a billiard-ball has something in it that resists, and we cannot make it move merely by willing it to change its position; we apply force to remove it. RESISTANCE AND FORCE APPEAR, THEREFORE, TO BE DIFFERENT THINGS, EACH REQUIRING A SEPARATE FACULTY BY WHICH WE ARE ENABLED TO ESTIMATE THEM. Motion is a fact learned through the medium of our senses; and experience tells us that motion is the effect of force applied. We farther learn that force is communicated by motion; and perhaps we may say, that motion is force in action, after having overcome resistance. I now begin to be sensible that my powers will not enable me to carry on this analysis farther, and I must leave my ideas of *resistance and force being cognisable* BY TWO DISTINCT FACULTIES, to the consideration of our highly gifted phrenologists."* It will be observed that Sir George Mackenzie has again taken Resistance into favour, and formed the happy conjecture of the possibility of there being two faculties concerned in the phenomena of motion and equilibrium; in short, of the very truth which I am now offering to your consideration as demonstrable. 3d, In a subsequent communication†, Resistance is once more at a discount, though

* The words in the above page distinguished by capitals were not so marked by Sir G. M.; for he was not sufficiently assured of the truth, at which he had nevertheless arrived, to be so emphatic.

† Phren. Journ. vol. iv. p. 284.

still admitted as playing a subordinate part. "On farther reflection," he says, "I am satisfied that resistance is too narrow an expression *yet* for the perception in question, although resistance must be included in any more extensive term, just as weight is included in resistance. In a former communication, I stated some reasons for thinking that the more general perception in question is *force*; I now offer you some farther considerations in support of that conclusion." Referring to the paper itself for the statement at length, I will endeavour to give the substance of Sir G. M.'s argument. Every knowing faculty, he thinks, cognises something constant and invariable in nature,—as space, time, order, number, light, sound. Resistance, weight, equilibrium, are not constant, but force is*. Motion is the effect of force overcoming resistance; it is the sensible exhibition of the effect of force. But we find all nature in motion; no body is at rest except relatively to other bodies. Force is in constant operation; different forces always acting keep the planets in their orbits. Force may be estimated by Causality, but Causality would never of itself cognise force, more than it would light or sound. Equilibrium is the harmony of forces, just as concord is the harmony of sounds. In equilibrium, forces are combined with resistance in such a manner as to be equally divided around it. "Being thus an effect," says Sir G. Mackenzie, "arising out of *combined causes*, and discovered to us after we acquire a knowledge of force *and* resistance, the perception of equilibrium appears to me a subordinate function. *I give up* my notion that resistance is cognisable by a distinct faculty. It is not peculiar to the sense of touch, for we know resistance by seeing its effects as well as by feeling them. I now consider it as subordinate, and including various qualities of matter, as will be seen in the following arrangement:—

" FACULTY OF FORCE.

Primary Function.	Subordinate Functions.
Force in General.	<div style="display: flex; align-items: flex-start;"> <div style="flex: 1;"> Gravitation Resistance, including Weight, Equilibrium, </div> <div style="flex: 1; margin-left: 10px;"> } Adhesion, Friction, Elasticity, Density, Hardness, Softness, Roughness, Smoothness. </div> </div> <div style="margin-top: 10px;"> Expansion, Contraction, Buoyancy, Projection, Attraction, Repulsion, </div> <div style="margin-top: 10px; flex: 1;"> These are degrees of resistance; and each is subdivisible into degrees; and indeed they may be considered as degrees of each other. </div>

In all these Forces is the Index."

The above process of metaphysical thinking is most in-

* With due deference to Sir George Mackenzie, I am inclined to think that his doctrine of constant force without constant resistance, is an error, if not a

structive. Sir George Mackenzie repeatedly approaches the truth, and again flies off from it, misled by a defect in his knowledge. First, he considers resistance alone to be the quality cognised. Next, he conjectures that it is possible there may be distinct faculties for the cognisance of resistance and force. Then resistance is deprived entirely of its honours as a primitive function, nay, with it the idea of *two* faculties is dismissed, and force remains the sole constant primitive function. Yet the process of reasoning by which this conclusion is come to is, to my mind, the clearest demonstration of the actual truth, namely, not that force is the sole function; but that resistance and force are co-existent but distinct objects of cognition, each requiring, in order to cognition, its own power; they are the very conditions which, as Sir George Mackenzie says, when combined, produce equilibrium, the equilibrium of the planetary system itself. Sir G. M.'s gradual depreciation of resistance, with one or two qualms which bring it to a higher quotation only to drop again and finally to fall, is evidently the result of his having long imputed it to the sense of Touch: his own sagacity, for he was not then aware of Sir Charles Bell's nerve of muscular sensation, discovered that this was an error; and, finding that resistance is not cognised by Touch, and apparently being unaware of any other faculty for it, he dismissed it altogether as the object of a primitive function.

I feel assured that if Sir George Mackenzie shall acknowledge the sense conjectured by Dr Thomas Brown, and provided with a nerve by Sir Charles Bell, he must recall resistance to his favour as the only conceivable sensation of that sense. Whether affected by impulse or pressure, the sense cognises resistance alone. Impulse is only sudden pressure; an object in motion may impinge upon my body, or my body in motion may, as in a fall, impinge upon a resisting body at rest. The sense would never have given us the notion of force, or of any thing beyond the sensation of a pressure or a blow, except the negative of pressure, namely, its removal when its presence was necessary for support.

But we *have* the notion of force, and where do we obtain it? Not from motion, for motion would never suggest its own origin. Not even from the pressure or impulse of one external object upon another followed by motion, for we neither see nor feel their connection. But we have a clear notion of the force we ourselves can create and originate by the contraction of our own

solecism. If force be constant, so necessarily must resistance, otherwise force were a superfluity. Force never totally overcomes resistance. It is enough to say that a billiard ball or a planet offers its density to the moving force, to conclude that its resistance, though to a certain extent overcome, is as constant as the force that moves it. Force and resistance are co-relative and co-existent qualities; and, if there be a power to cognise each, Sir George Mackenzie's condition of constancy *must* be fulfilled in both. In truth, Sir George's argument assumes the very point he denies.

muscles. We can push, squeeze, strike, and draw, and motion and consequent change instantly follow the effort. Experience teaches us that there are external forces which can push, squeeze, strike and draw, and we see motion follow; but our own muscular power, I humbly think, is the origin of all our notions of force as a cause of motion, or as a counter-resistance to resistance. We instinctively apply it to keep our balance when sensation informs us that that operation is necessary. The operation itself is an act of force, for we are conscious of the energetic cause as well as of its effect. Resistance, then, being a mere sensation, and force a positive act, they cannot be results of the same power or faculty; the one requires no more than an external passive sense, while the other requires an internal active faculty*. I would therefore humbly propose to give to the sense—which is a sixth in our constitution—the name of the SENSE OF RESISTANCE, and to the internal faculty that of the FACULTY OF FORCE. As a corollary, I would conclude that EQUILIBRIUM, which I have hitherto erroneously held to be a *quality* cognised by a special faculty, is nothing more than a *state*, the state of balance between force and resistance. It is essentially rest; while the disturbance of that balance produces MOTION.

The analogy, to which I formerly alluded†, between the connection of the sense of Resistance with the faculty of Force, and the connection of the sense of Sight with the faculty of Colouring, or of the sense of Hearing with the faculty of Tune, appears, to me, to be correct; and it is a valuable analogy for my

* I request very particular attention to the above reasoning; for it has been stated to me as a difficulty, that as there must be force exerted to produce resistance, force and resistance are inseparable, in other words, identical, and therefore do not require separate faculties. Now, in dealing with the sense, I have considered, and could only consider, the impression we receive, not the cause of it. However produced, resistance is the sole impression which an external object makes upon our passive sense. It matters not to this that the object—be it a solid rock or water—is exerting force, in the division of its particles, in order to resist us; for we do not cognise this force by the impressions we receive from it, more than we cognise a red and solid rose from smell alone; and we should never, but for our own muscular exertions (for which an active faculty is indispensable), gain the idea of force, as exerted by the rock or the water. I admit, and even have assumed, that force and resistance are inseparable, but deny that, relatively to our powers of cognition, they are identical. This conclusion is not affected by the additional, but independent, truth, that our muscles must exert force (and they do so in their very solidity), in order to feel resistance from the rock or the water; for even after making that exertion, or by mere *vis inertia* causing the counter resistance, we get no more from the rock than a passive sensation. For this sensation there is a nerve, but there is another nerve to obey our will, when we ourselves apply force either to balance or overcome resistance. The relation is necessarily bilateral. That resistance is all that we feel, whatever produces resistance, or whatever, in consequence of that feeling, we do, is the concurring opinion of Dr Brown, of Dr Spurzheim, and substantially of Sir Charles Bell. It was Sir G. Mackenzie's belief, and I feel assured will be so again.

purpose. Sight and Hearing are mere passive sensations of light and sound; so that, without faculties distinct from, but related to, these senses, respectively, we should never have acquired a knowledge of colours and music. So it is with the sense of Resistance and the faculty of Force; the sense of Resistance would not have given us the knowledge of force. When I claimed for the faculty of Force, as it is proposed now to call it, an organ in the brain, analogous to those for Colouring and Tune, and removed the objection that the nerve of the sense of Resistance is not traced into the convolution of brain allotted to Force, by answering, that neither is the optic nerve traced into the organ of Colouring, nor the auditory nerve into the organ of Tune, which faculties of Colouring and Tune have nevertheless organs demonstrated to accompany their respective manifestations, I observed that "the senses of Seeing and Hearing minister to the faculties of Colouring and Tune; but these last faculties work up higher the raw materials of light and sound, into all the combinations of tints, melodies and harmonies; so may, and probably so does, this new sense of Resistance minister to a higher faculty, which can combine forces, and estimate their harmonies in complicated equilibrium. But we must crave time both to observe and think on this difficult subject, for it is yet only a hypothesis: that a sense and a higher faculty both exist." I must leave it to you and your philosophical readers to form your own judgment as to what advance has now been made on the above conjecture of 1827; and whether what was then a hypothesis is or is not now nearer to a demonstration,—viz. that there exist in man and all living animals A SENSE FOR MECHANICAL RESISTANCE WITH ITS NERVE, AND A FACULTY FOR FORCE WITH ITS ORGAN; THAT ORGAN IN MAN HAVING ITS LOCALITY IMMEDIATELY ABOVE THE ORBITAR PLATE, BETWEEN THE ORGANS OF SIZE AND COLOURING.—I am &c.

JAMES SIMPSON.

ARTICLE II.

ANNALS OF PHRENOLOGY, Nos. I. & II. Boston: Marsh, Capen, & Lyon. 1833 & 1834.

THE design of the conductors of the American *Annals of Phrenology*, is to publish "articles from the Edinburgh, Paris, and London phrenological journals, and such papers as may be selected and approved by the Boston Phrenological Society." Each number is to contain 128 octavo pages, with such engravings as the subjects introduced may require. "Since the visit

of Dr Spurzheim to this country," it is said, "the science of Phrenology has assumed an interesting aspect, and intelligent men of every class have become engaged in the investigation of it. This Journal is proposed with a view to facilitate free and general inquiry into the truths and objects of Phrenology, and to ascertain its bearings upon the physical, moral, and intellectual condition of man." The first number appeared in October 1833, and the second in September 1834. "The remaining numbers of the first volume, however, will be published before January 1835. The causes of delay, heretofore, have been unavoidable, but they are now entirely removed."

Two-thirds of the first number are occupied by an article from the pen of Dr Caldwell, entitled, "Phrenology Vindicated, in remarks on Article III of the July number, 1833, of the North American Review, headed Phrenology." It is in Dr Caldwell's usual vigorous style, and, as we formerly remarked, utterly annihilates the reviewer. Having ourselves (Vol. VIII. No. 40,) replied to that antiphrenological writer, we think it unnecessary to give a detailed view of the line of argument adopted by Dr Caldwell. It will be enough to advert to a few of the more prominent topics discussed, particularly those which our limits did not permit us formerly to notice, and those which bear upon phrenological doctrines important in themselves without any reference to the present controversy.

Dr Caldwell treats the reviewer with unsparing severity: to no other treatment, in his opinion, can there be the slightest claim. "As one of its lightest faults," says he, "the article is wanting in that respectful observance, which should mark not only the intercourse of polished minds, but every form of intercourse in which either letters or science are concerned. Comparatively trivial as this omission may be thought, it is not destitute of weight and influence. An entire absence of good nature and good breeding in such a case,—for both are involved in it,—is always disagreeable, and not unfrequently a source of mischief. It awakens fresh feelings not friendly to impartial inquiries, produces usually a return of discourtesy, and, by strengthening prejudices and jealousies already existing, tends to perpetuate disagreements, prevent the co-operation of minds in a common cause, and thus retard the progress of knowledge.

"But the article possesses other characteristics much more objectionable. It possesses, indeed, but few that are free from objections. We dislike its whole tone, taste, temper, order, spirit, and, in fact, all its qualities, except its *errors*, *want of strength*, and *inconclusiveness*. Our reason for not disliking these, is, that they render the paper harmless, in its attack on a science we have long delighted in, and which we believe to be founded in truth, and destined to be highly beneficial to man. We further dislike

the production, because the arts and devices of the witting, and the cavilling sciolist, mingled with the rant of the pretender to orthodoxy, too often usurp the place in it, which ought to be occupied by the facts and arguments of the conscientious inquirer. Above all, we shrink from ascribing to the determined spirit of falsification and obliquity which pervades it, to an extent that has scarcely a parallel."

There are some pointed remarks on the absurdity of endeavouring, at this time of day, to strangle Phrenology by falsehood and abuse. "If Phrenology be doomed to extinction (which we deem as improbable as that the sun will retrograde on his path) the work must be effected by other means. Misrepresentation, denunciation, and all the thrusting devices of unfairness, on the part of its adversaries, have had their time, and have failed to perform their allotted task. They must therefore cease, and observation, inquiry, and argument begin. By such means only can truth be elicited, to whatever side of the controversy it may incline. And though it would astonish us greatly were it to declare against Phrenology, yet, if the contest be thus to terminate, the sooner the better. Phrenologists are labouring for the attainment of truth, and will delight to give in exchange for it their most cherished hypotheses. They therefore invite their opponents to state frankly their objections to the science, *as expounded by its advocates, and as it is in itself*, not as misrepresented by its enemies, and those who are ignorant of it. They invite them, moreover, to make their statements gravely and courteously, like philosophers and men of breeding; not rudely and sneeringly, like coarse jesters, and charlatans in science. Should it be made to appear, in the course of our inquiry, that the author of the article belongs to the latter class, the fault is his own. Nor will the public, we trust, attach any blame to us, should we openly expose to them so many and such gross violations of truth in his paper as to destroy entirely his credibility as a writer."

Dr Caldwell accordingly lays open in a masterly manner the barefaced misrepresentations and falsehoods to which the reviewer is so fond of resorting. Of this portion of the article, we have room for only a short specimen.

"But, disagreeable as the task is to ourselves, and no less so, we fear, to our readers, we are not yet done with exposing this gentleman's misstatements. In reference to the proposition, that the strength of a mental faculty is in proportion to the development of its organ, he says,—

"The phrenological writers themselves admit the statement not to be correct, when they declare, in the case of any particular organ, that the surrounding organs may be so much developed (we use the orthodox phrase) that this organ, though ab-

solutely projecting, may in a mechanical sense (another orthodox term) be depressed. (P. 61, 62.)

"We ask the author, what phrenological writers have made the declaration here imputed to them? and we assert, in self-reply, that, as here stated, no *intelligent* phrenologist ever made it, nor ever will; because it is self-contradictory, and involves an *impossibility*. An organ at the same time 'projecting' and 'mechanically depressed'! advancing outwardly, and retreating inwardly! as well may it be represented as, at once, round and triangular — hot and cold — in existence and out of it! True, an organ may project or reach a certain distance from its root, and still be relatively depressed; because its neighbouring organs, being largely developed, may project beyond it. But that is not what phrenologists mean by the projection of an organ. To project in the true phrenological sense, the organ must be prominent, not sunken. But the whole matter is only

A thing devised by the enemy —

a petty fabrication, designed to prejudice Phrenology, by representing it as inconsistent with itself, and unworthy of belief. It is thus perpetually. Anti-phrenologists never assail the science *as it is*, but they misrepresent it. They construct a disjointed and feeble fabric of their own devising, and then demolish it and proclaim victory. We have never witnessed an attack on the genuine Phrenology of Gall and Spurzheim. The reason is plain. When viewed and examined in its true character, it is perceived to be proof against assault. No enemy, therefore, ventures to molest it. We should rather say, that, when seen in its real symmetry, strength, and beauty, it *has* no enemy. All those who have been such, become its friends. We defy its opponents to adduce a single instance in which it has been attacked, without having been, at the same time, falsely spoken of. Hence no one who has studied it thoroughly, and fully comprehended it, has ever failed to become a proselyte to it. Nor can an example of apostasy from it be cited.

"The chief reason why the public are opposed to Phrenology is, that they are made acquainted only with the Phrenology of the newspapers and other periodicals of the country, and of common rumour, which, from the absurdities attached to it, is incredible and ridiculous. A chief device of the enemies of the science is thus to distort it in all its features, and then proclaim it incongruous and unfounded. From this stratagem has arisen much of their temporary success in retarding its progress. Let it be correctly expounded and comprehended, and it must soon become the creed in mental philosophy of the whole enlightened portion of the community.

"One *unqualified falsehood* more, (though we could specify dozens of them), and adieu to that part of the discussion.

"We remember one learned gentleman, who, in the warmth of his zeal, declared that he 'was conscious that he studied metaphysics with one part of his head, and enjoyed poetry and light reading with the other.'" P. 56.

"This is as positive a departure from truth, as the history of fiction can furnish. Nor do we consider it accidental. Our charity is not so flexible and accommodating. We are compelled to believe it a premeditated fabrication, intended for mischief."

"The 'learned gentleman' referred to in the extract is intimately known to us. So are his views and discussions on Phrenology. And we assert positively, on authority which cannot be held doubtful, that he never made the remark here ascribed to him. He has said, and is prepared to repeat, that; when engaged in intense intellectual labour, he is *conscious that his brain is in action*, and that the part immediately exercised is *that which lies in front*. Farther than this, he has never gone in discussing the subject. Should the correspondent of the North American be dissatisfied with these remarks, he is invited to name the 'learned gentleman' he has alluded to, and he will receive from himself a similar statement, accompanied probably by a sterner rebuke than any contained in this paper, for the numerous violations of truth he has been guilty of. We say again, that there are many other palpable misrepresentations in the paper before us, to some of which it may possibly be requisite for us to refer hereafter.

"We may observe, that, apart from his direct and open falsifications, the author of the article is *inaccurate* in many of his statements; we might almost have said, in all of them. A paper so replete with faults of this description, interwoven with a sort of shuffling sophistry, we have rarely, if ever, before perused."

The reviewer states his belief, "that the evidence in favour of the fact, that the human brain does not increase in size after the age of seven, is stronger than we have seen adduced for any phrenological fact whatever." On this Dr Caldwell remarks:—

"To be convinced of his *inaccuracy*, in the present instance, the writer has only to provide himself with a piece of tape or riband, select promiscuously fifty boys 'of seven,' and an equal number of full-grown men in the same way, measure their heads, and note the result. Unless he be proof against the evidence of sense, this will satisfy him. He will find the *adult heads much the largest*. Nor is there, in Boston, a hatter's boy of the age 'of seven' who cannot profitably instruct the writer for the North American, on this point—notwithstanding the measurements *he says* he has taken with Mr Combe's cranio-meter. The boy will assure him, on the ground of daily obser-

vation and experience, that his own head is not as large as that of his master, or of other gentlemen to whom he sells hats. If asked for the reason of his belief, he will reply, that the crowns of hats which fit full grown men, are 'too big' for him—and that he is certain of this, because he has tried them on.

"Further, should the writer ever make a voyage to London or Paris, he may there receive additional information to the same effect. Let him, in those places, visit the great hat factories, many of which have been carried on in the same buildings for centuries. He will there learn, that, without even an acquaintance with the term Phrenology, the manufacturers, or their employers, have *four** *general and distinct measures* for the crowns of hats. Of these, the smallest is for boys under twelve years of age; the next for servants and ordinary day-labourers; a larger size for farmers and common mechanics; and the largest of all, for the more *cultivated and intellectual classes*, such as professional men generally, authors, mechanicians and artists of high standing, legislators, and ministers of state. (And he will further learn, that such has been the arrangement in those factories, almost time out of mind. On this we make no comment. Every intelligent reader can draw from it the proper inference. We merely state the fact, and vouch for its truth. Once more.

"Mere hatter's measure does not determine the *entire* magnitude of the brain. It only gives its extent in one direction—*horizontally*. It does nothing toward ascertaining the depth of it *perpendicularly*—we mean from its base to its arch or top. One man may require a larger hat than another, and yet have a smaller brain, on account of the greater depression of the top of his head. The Carib furnishes a striking exemplification of this. The same is true, to a certain extent, in boys, the upper portion of whose brain is not yet developed. That development does not take place until the period of puberty, when the reflecting and the moral organs attain their growth, and the youth becomes a being of *morality and reason* in a much higher degree than he was before. Even after the brain has ceased to enlarge horizontally, then, it continues to grow in the other direction. Though the boy, when thirteen, therefore, should require as large a hat as he does when he is a man of twenty-five, it does not follow that his whole head and brain must be as large—nor are they.

"There is still another reason, why the boy, before puberty, and even for several years afterwards, is not so mature and vigorous, in his moral and reflecting faculties, as he becomes at a later period. The organs of those faculties, though of full size,

* "We are not confident that there are *four* sizes of hat-crowns, kept in the large London and Paris factories. But we are certain that there are *three*, and that crowns for boys and servants are the smallest."

are not yet complete in themselves perfectly organizable—or in but a very slight degree of maturity. Nor do they attain to manhood, when, like the adult, they have attained all the powers of the intellect. Then, and not before, they are capable of labour; precisely as muscular power in each case of each, the cause is the same. The brain had been previously organized. This is common sense, and is intelligible to every one. It is not a spring of ignorance, or a point of view hereafter the decision of the law.

Dr Caldwell, in reply to the objection against Phrenology, that it offers to refer the matter to the arbitrariness of the settlement of the law, offers the following trial:

“Let him take twenty, or thirty, figures and dimensions, and make a plaster cast, by filling it with a substance in a proper state of preparation. That the figure, in size and figure, to the figure, will not be determined, in those points, to the skull. In evidence of this, a practised eye, experienced in such examinations, can determine the skull which served as the mould of the figure, which we think a fair one, we will issue of the whole controversy. Or, if by the writer, let him say in what respect another mode of decision. It is our wish to settle. We shall only add, that it is not the cavils of a noted anti-phrenologist by which we mean his cavils on the point we are considering.

The following very remarkable case is given by Dr Caldwell, to illustrate the action of the brain on the mental functions. The case, reported by Dr Pierquin, as having fallen under the observation of one of the hospitals of Montpellier, in the year 1785.

“The subject of it was a female, at the age of 30, who had lost a large portion of her scalp, skull-bone, in a neglected attack of lues venerea. A case

“• This is particularly the case in relation to all such remarkable, we mean, for either size or form. This may be recognised as far as they can be distinctly seen.”

be kept to, and if any part of the contemplation of the world by Christianity is contrary to it, let the Scripture, in its

In what part of his catechism does he show boldness and liberality? Palmer

response. 'Those rules of action, which are the use of reason, to be agreeable to

which his happiness will appear to be the law of nature; and when these

Of the Divine will and purpose, the laws of God.' . . . For any

these natural laws of God, under proposed divine revelation, or in any

ordinary manner, will appear very extraordinary (meaning revelation) can be supposed

need the use of reason upon the ground

in explaining and applying it to the present

Now. 'The first excellency peculiar to it gives us a true, proper, and

of God, such as perfectly agrees with the works of nature and

and common experience testify. Every religion that should, in

more, would bear upon it the stamp of not come from the AUTHOR of

always faithful.' In any other passages, of like import

from the writings of the ancients. And we repeat, that both

and those of the Philosophers are in total discrepancy. In

Will our author, in his account of his wrath on

the occasion of the fall, to the penalty of eternal

continued upon the earth, and the punishment of

all the life of the soul. If so, his doctrine is

entirely foreign to the Christian religion.

are not yet complete in their structure and tone—they are not themselves perfectly *organised*. Their *fibres* are not perceptible—or in but a very slight degree. They are pulpy and immature. Nor do they become fully *ripe* until the prime of manhood, when, like the muscles and other parts of the system, they have attained all the perfection of which they are susceptible. Then, and not before, does the mind operate in full vigour; precisely as muscular power is then at its height. In the case of each, the case is the same. Both the muscles and the brain had been previously immature, and comparatively inefficient. This is common sense; the fruit of observation, and intelligible to every one. Our author's objection to it is the offspring of ignorance, or prejudice, or both; and such will be hereafter the decision of the world.

Dr Caldwell, in reply to that statement of all the state arguments against Phrenology, that the tables of the skull are not parallel, offers to refer the matter to the test of experiment; the ablest arbiter in the settlement of controversies. He invites the reviewer to the following trial of it:

“Let him take twenty, or even an hundred skulls, of different figures and dimensions, and make in the cavity of each a wax or plaster cast, by filling it with either of those materials in a proper state of preparation. That these casts will be precisely similar, in *size* and *figure*, to the brains which the skulls respectively contained; will not be denied. Nor will they be less similar, in *these points*, to the skulls in which they were made. In evidence of this, a practised eye, or even one not much experienced in such examinations, can immediately indicate the skull which served as the mould of each cast. On this experiment, which we think a fair one, we are willing to hazard the issue of the whole controversy. Or, if it be considered unfair by the writer, let him say in what respect; and we will propose another mode of decision. It is our wish that the question be settled. We shall only add, that it is not long since we silenced the cavils of a noted anti-phrenologist by this experiment—we mean his cavils on the point we are considering.”

The following very remarkable case is introduced by Dr Caldwell, to illustrate the action of the brain during the performance of the mental functions. The case, he mentions, is reported by Dr Pierquin, as having fallen under his notice in one of the hospitals of Montpellier, in the year 1821.

“The subject of it was a female, at the age of twenty-six, who had lost a large portion of her scalp, skull-bone, and dura mater, in a neglected attack of *lues venerea*. A corresponding portion

“* This is particularly the case in relation to all striking skulls—all that are remarkable, we mean, for either size or form. The casts made in them can be recognised as far as they can be distinctly seen.”

of her brain was consequently bare, and subject to inspection. When she was in a dreamless sleep, her brain was motionless, and lay within the cranium. When her sleep was imperfect, and she was agitated by dreams, her brain moved, and protruded without the cranium, forming cerebral hernia! Individually, reported as such by herself, the protrusion was considerable; and when she was perfectly awake, especially if engaged in active thought or sprightly conversation, it was still greater. Nor did the protrusion occur in jerks, alternating with recessions, as if caused by the impulses of the arterial blood. It remained steady, while conversation lasted.*

We have never seen a stronger proof than this, that the force of the circulation in the brain is increased or diminished according to the activity or quiescence of the mental faculties. It pointedly confirms the doctrine of Blumenbach, that during sleep the quantity of blood sent to the brain is less than in the wakeful state; being strictly analogous to a case which fell under the personal observation of that physiologist, of a living person whose "brain sank whenever he was asleep, and swelled again with blood the moment he awoke."† The following case, reported by Sir Astley Cooper, is not less striking and valuable. It is that of a young gentleman who had lost a portion of his skull just above the eye-brow. "On examining the head," says Sir Astley, "I distinctly saw the pulsation of the brain was regular and slow; but at this time, he was agitated by some opposition to his wishes, and directly the blood was sent with increased force to the brain, and the pulsation became frequent and violent: if, therefore," continues Sir Astley, "you omit to keep the mind free from agitation, your other means will be unavailing" in the treatment of injuries of the brain.

The attempt of the reviewer to fasten on Phrenology the imputation of a tendency to support infidelity, is well exposed. He confuses his attention to Dr Spurzheim's Philosophical Catechism of the Natural Laws, and, finding there are some opinions which happen to have been held by Voltaire, Paine, Diderot, and others of the same school, makes use of this circumstance to excite religious prejudice against Phrenology. Dr Caldwell's answer is twofold: 1st, that Dr Spurzheim's opinions on natural religion may be either true or false, and yet Phrenology be in each case alike unaffected; and, 2dly, that if Dr Spurzheim does err, he errs in orthodox company.

"Our main business with this portion of the article we are considering, may be dispatched in a few words. It has no direct bearing on Phrenology, either for it or against it. It is not

* See Elliotson's Blumenbach, 4th edition, pp. 191, 283.

† Sir A. Cooper's Lectures on Surgery, by Tyrrel, i. 278.

true, as asserted by the writer, that the doctrines contained in the 'Philosophical Catechism' are 'legitimate deductions from the phrenological principles.' Their strongest, if not their *only*, connexion with Phrenology is, that they are written by a phrenologist. But are they therefore necessarily of a phrenological character? Certainly not. The divine does not always write or talk on divinity, the politician on politics, nor the lawyer on jurisprudence. Neither is the phrenologist constantly dealing out Phrenology. This is peculiarly true in the present instance. The errors of a phrenologist, moreover, are not necessarily the errors of Phrenology. They may arise from imperfections in the man, not in the science. Were Christianity made answerable for all the doctrinal errors of the clergy and their followers, its whole strength and purity would be scarcely sufficient to sustain a responsibility so enormous."

After filling three pages in illustrating these propositions, Dr Caldwell proceeds:—

"Thus far of the catechismal doctrines, and their connexion with Phrenology. Let it not be inferred, however, from any thing here stated, that we are hostile to those doctrines. It is not our intention to sit in judgment on them, as respects either their truth or tendency. Like all other forms of opinion, they must stand or fall, not on the ground of any evidence we could offer, but on that contained within themselves. Yet we may be permitted to observe, that whatever fate may await them, they will not meet it alone; but that however widely they may have departed from the path of reputed orthodoxy, they have strayed in *good company*. As far as we comprehend them, they are not more in accordance with the sentiments of Voltaire and his associates, than with those of Bishop Butler, Dr Doddridge, Dr Barrow, and many others we could name, acknowledged to have been among the most pious and distinguished teachers in the Christian church. Let the matter be fairly tested."

"A leading object of the author of the Philosophical Catechism is, to inculcate the tenet, that the verity of all laws written by man, is to be determined by reason, and a strict comparison of them with the laws written by the finger of God in the works of creation; in other words, that the truth of revealed religion may be best decided by bringing it to the standard of natural religion. And we apprehend it will be difficult to convince the enlightened portion of the community that this is a heresy. Let us listen to Bishop Butler on this point.

"*'Natural religion,'* says that eminent prelate, '*is the foundation and principal part of Christianity.*' * * * * '*Christianity teaches natural religion, in its genuine simplicity.*' * * *

"*'Reason* can and ought to judge, not only of the meaning, but also of the *morality* and *evidence* of revelation.'

“ ‘ Let *reason* be kept to, and if any part of the scriptural account of the redemption of the world by Christ, can be shown to be really contrary to it, *let the Scripture, in the name of God, be given up.*’ In what part of his catechism has Spurzheim surpassed this, in boldness and liberality ? Palpably in none.

“ Dr. DOWDRIE. ‘ Those rules of action, which a man may discover, *by the use of reason*, to be agreeable to the *nature of things*, and on which his happiness will appear to him to depend, may be called *the law of nature* ; and when these are considered as intimations of the Divine will and purpose, they may be called *the natural laws of God.*’ * * * ‘ For any one to pour contempt upon these *natural laws of God*, under pretence of extolling any *supposed divine revelation*, or intimation of God’s will in an *extraordinary manner*, will appear *very absurd.*’ * * * * ‘ No discovery (meaning revelation) can be supposed so particular, as not to need the use of *reason upon the principles of the law of nature*, in explaining and applying it to particular cases.’

“ Dr. BARROW. ‘ The *first excellency* peculiar to the Christian doctrine is, that it gives us a true, proper, and complete character or notion of God, such as perfectly agrees with what the *best reason dictates, the works of nature declare*, ancient tradition doth attest, and common experience testify.’

“ * * * * ‘ Every religion that should, in this case, *clash with the law of nature*, would bear upon it *the marks of reprobation*, and it could not come from the AUTHOR of nature, who is always consistent, always faithful.’

“ We could cite many other passages, of like import, from the same authors, as well as from the writings of other pious and distinguished divines. And we repeat, that between their general scope and meaning, and those of the Philosophical Catechism, we perceive no material discrepancy. In spirit and substance they are the same. Will our author, in his tender regard for religion, empty the vials of his wrath on all these writers, and condemn them, by the lump, to the penalties of infidelity, here and hereafter, because they entertained opinions in unison, on some points, with those of Voltaire and Thomas Paine ? And will he doom to the same fate all the living clergy and others, who concur in these opinions ? If so, his condemnations will swell almost to infinity. He will consign to the worm that never dies, an hundred-fold more of the human race, than ever bled beneath the sword of the most sanguinary conqueror. The whole *enlightened and liberal* portion of mankind will fall under his ban. And the numbers will augment hereafter, in direct proportion to the progress of knowledge. Finally ; we might defy him to show any material disagreement between the tenets of the Philosophical Catechism, and those of the Christian religion, stripped of sectarian dogmas and unintelligible subtleties.

"The truth is, that the correspondent of the North American has made, in the present case, a mere stalking-horse of religion, to produce effect, and injure *by cant*, what he could not affect by argument. And his awkwardness in the management of it, proves his want of familiarity with it. Destitute of adroitness in his trade, he has yet to learn how to reach, and injure by a *jaded expedient*, an individual immeasurably above him."

Dr Caldwell gives a detailed exposition of the evidence of the plurality of cerebral organs; but as it is unnecessary for us to enter on this subject, we proceed to notice the reviewer's attempt to overthrow the conclusions of phrenologists as to the function of the cerebellum. This he tries to do, by quoting a case represented to be completely fatal:

"We have thus gone upon the supposition that there are no natural boundaries to the organs; there is, as we noticed above, one exception to this, the *cerebellum*. This, as we understand it, is a distinct organ, the seat of a distinct propensity; and it is remarkable that it affords us an opportunity of applying the test of experience directly and fatally. The anatomical reader will find, in Ferussac's Bulletin for October 1831, under *Medical Sciences*, the details of a case, in which this part of the *encephalon* did not exist at all, while the propensity was rather remarkably developed. So much for showing us the boundaries of the organs; and so much for the difficulties which embarrass the first step of Phrenology, the simple and mechanical question, whether any organ is large or small."

On this Dr Caldwell comments as follows:

"We have here another memorable example of the writer's trickishness and misrepresentation—memorable even in the midst of his own offences of the kind. It is not true, that, in the individual mentioned in Ferussac's Bulletin for October 1831, the *cerebellum* did not exist at all. There did exist the remains of a diseased cerebellum; and such remains as indicated clearly that the part had been in a chronic state of excessive excitement; a condition precisely calculated to lead to the practice of which the individual had been guilty."

"But why has the writer merely referred to the case reported in the Bulletin, giving his own one-sided construction of it, and drawing from it his own unwarranted inference? Why has he not traced at least the leading features of it, that the reader might judge of the matter for himself? The answer is easy. Such procedure would not have suited his sinister purpose; because it would not have sustained the views he wished to establish. Detection in his unfairness, and the frustration of his hopes, would have been the consequence of it. Yet charity, but slightly exercised, might perhaps suggest for his conduct a different cause. Such may be his anatomical and pathological ig-

norance, that he cannot distinguish a diseased cerebellum from no cerebellum at all.

The subject of the case, was a female child, born of a sickly and irregular, if not profligate mother—*usée par des excès de tout genre*—and was herself deeply diseased from her birth. She became early addicted to self-pollution, and died near the close of her tenth year. On an examination of the brain, it was found that the cerebellum was not entirely wanting, but greatly diminished in size, and so changed in structure as to resemble a gelatinous membrane, surrounded by a large quantity of serum—*une grande quantité de sérosité*.—*Je trouvai à la place du cerceau, une membrane, gélatineuse, de forme circulaire, tenant à la moelle allongée par deux pedoncles.*

"This gelatinous membrane was doubtless the remains of the cerebellum, reduced to its then present condition by disease, and that disease was of a highly excitive, if not inflammatory character, calculated to throw the part prematurely into a state of premature action. Hence the vice into which the child fell at so early a period. The precocity and strength of the sexual propensity can be in no other way explained. And this explanation seems satisfactory. That an inflammatory or highly excited condition of the cerebellum awakens strong libidinous desires, is proved by hundreds of instances, occurring at various periods of life, from early childhood to advanced old age. That this is the pathology of *antomania*, is proved, not only by the symptoms and successful treatment of that complaint, but also by dissections after death.

"Are we asked, why we consider the cerebellum, in the present case, to have been in a state of *chronic inflammation*. We reply, because it presented the effects of chronic inflammation? A superabundant secretion of serum is a common result of sub-acute inflammation of serous membranes, in every part of the body, and the structure of portions of the brain is known to be often reduced, by the same morbid condition, to a sort of *gelatinous mass*. Why should it not? We might almost ask, how can it be otherwise? The brain consists, in a high degree, of albumen, tenderly organized. Demolish its structure, by sub-acute inflammation, and that substance shows itself in somewhat of a pulpy or jelly-like form. Such is the condition in which the cerebellum of confirmed onanists has been found after death. Softened, and somewhat disorganized, by a constant state of high and unnatural excitement, that portion of the brain has assumed the appearance of a gelatinous mass, surrounded by serum or penetrated by it. Several dissections in the large hospitals of Paris testify to this. So does the late dissection of a case, reported in No. II. of the Journal of the Phrenological Society of Paris. And, from its extreme tenderness and imper-

fect organization, the brain of a mere child must be more easily reduced to a semi-fluid condition than that of an adult."

A summary of the evidence in favour of the doctrine that the cerebellum is the organ of the sexual passion, is then given. So far as we are aware, it is by much the fullest account of this matter that has yet appeared in the English language.

Some may be disposed to regard Dr Caldwell's language towards the reviewer as too severe, and to consider the present exposure more elaborate and minute than was rendered necessary by an opponent so little formidable. In such an opinion we should be disposed to concur, did we not think it probable that the smart castigation here inflicted, is intended to prevent, if possible, future attacks of a like nature, from dishonest and ignorant writers in the United States. The circulation of the reply among our transatlantic brethren, must have produced a strong feeling in favour of Phrenology; and we heartily congratulate the American phrenologists on their fortune in possessing such a formidable and unflinching champion of truth.

The remaining four articles in the first number of the *Annals* are copied from the *Lancet* and our own pages. The papers quoted from us are, on the colony of Liberia, published in No. 34, on the practical utility of Phrenology, and phrenological cases both in No. 30.

The second number contains a Phrenological sketch of Dr Gall, translated from the Journal of the Phrenological Journal of Paris vol. I.; Remarks by Dr Elliotson on objections to Phrenology by Professor Kidd of Oxford and a curate of the name of Taylor, from the *Lancet*; On the state of Phrenology in Britain, being replies by the London Phrenological Society to a series of questions addressed by the French minister of commerce to the French consul in England, respecting the progress of Phrenology in Great Britain, also from the *Lancet*; and the following papers from the first and second volumes of our own journal: Essay on the phrenological causes of the different degrees of liberty enjoyed by different nations;—On the organ and faculty of Constructiveness;—Application of Phrenology to criticism;—Application of Phrenology on a voyage;—On the combinations in Phrenology;—On the statement of cerebral development in words and numerals;—On the frontal sinus;—Fatalism and phrenology. Some notices of the progress of the science in the United States are added; of which the substance will be found at the end of our present number.

ARTICLE III. DUBLIN PHRENOLOGICAL SOCIETY.*

THE winter session of the Society opened on Wednesday evening, at their rooms in Sackville Street. The meeting, as on former occasions, presented a very fashionable array of the fair sex. Some of the most distinguished medical gentlemen of the city were in attendance, and seemed to take a very prominent part in the proceedings. Members of the other learned professions were also present, who, as we are informed, are not less earnest and zealous cultivators of the science. The chair was taken by the Rev. Mr Armstrong, who premised that it fell to his lot, as president, to give a general outline of the principles and objects which the Society had in view. He commenced by entering on a very minute analysis of the doctrines and reasonings of the ancient philosophers, Pythagoras, Plato, and Aristotle, whose fanciful theories and extravagant assumptions triumphed so long in the departments of science, and gave rise to all that vagueness and sterility in the physical systems which existed in those days. He detailed the various speculations of the Epicureans, Platonists, and Peripatetics,—their extravagant notions concerning the essence of mind, its precise influence in all operations, with its relation to the external world; and, taking in review a long line of metaphysical inquiries, laid particular stress on the opinions of Descartes, Malebranche, and the celebrated John Locke, whose hypothetical system of ideas formed an introduction to the principles of Hume and Berkley, who, in their outrages of common sense, would sacrifice every property of matter in the temple of their own imaginations. He illustrated, with the happiest effects, the pernicious influence of the Aristotelian logic, in tending to prostrate the mind by the domination of authority, and warp the reason by the monarchy of system. By it the portals to improvement were completely closed—the currents of knowledge dried at their very source—the veins of intellect exhausted of their previous stores—and every ray of original genius suffocated in impenetrable obscurity. He showed an intimate acquaintance with the history of the middle ages, and pointed to the 15th century, when the art of printing was invented, as the period when man earnestly roused himself from a species of mental paralysis, and openly rebelled against the dynasty of uncompromising dogmas. Then it was that he began to observe seriously, and examine closely—thus fanning that dormant flame of research which gave a brilliancy and a splendour to all subsequent discoveries. It is scarcely possible, ob-

* From the *Dublin Freeman's Journal* of 19th December 1834.

served the Rev. Gentleman, "to conceive the wonderful advantages which the inductive process of reasoning has conferred on Natural Philosophy—additions are being daily made to the stores of knowledge—new facts are rapidly accumulating, which, collected with accuracy and reported with fidelity, rest on a stable and imperishable basis—behold the metaphorical representation of Nature being put to the torture, her inmost secrets scrutinized; and the key of her inexhaustible treasures delivered up to man, the lord of the lower world. In accordance with the true spirit of induction he became a convert to Phrenology, feeling a strong conviction in the truth of its doctrines; he confessed that he was one of those who raised an early cry against the system; he was prejudiced, but his prejudices being founded in ignorance soon vanished before the light of reason. He did conceive that its introduction was intended for the purpose of giving an explanation of the essence of mind, and would, in all probability, end in the removal of all those bewildering controversies which clouded the perceptions of men for whole centuries. He also felt a very serious objection to the phrenology that was adopted; the idea of there being organs, especially intended for murder, theft, &c., established a degree of dangerous fatalism, which was quite irreconcilable with the dispensation of Providence, and altogether subversive of divine revelation. Any unbiassed inquirer, however, will readily learn that those terms are applicable to the abuses of the organs, and could by no means form any argument against the principles themselves. With respect to the doctrines of the science, he would hold it as undeniably true, that particular forms of heads were connected in a greater or less degree with particular manifestations of mind; children of the same parents, brought up under the same moral and physical control, breathing the same mental atmosphere, and in every respect similarly circumstanced, nevertheless betrayed traits of character and tendencies of disposition, diametrically opposite. Who has not remarked the facility with which one has acquired a knowledge of language, another the science of numbers, while a taste for mechanical contrivances wholly absorbs the attention of a third? The brilliant bearing of an eye radiating thought and intelligence, forms an extraordinary contrast with the dull expression of Boman imbecility. The old epithets of "felix cerebri," "putridum cerebrum," and the more modern and popular terms of "hair-brained," "crack-brained," "brainless," &c., were in themselves arguments in support of the doctrine generally, and shewed how we were in some measure compelled, by a species of intuitive instinct, to form our notions of individual characters from something striking in the configuration of their heads. He then exhibited the cast of an idiot's head in juxtaposition with the head of Edmund Burke, and ar-

gued, as in these two cases the shapes of the head clearly indicated the degrees of mental qualities, was it not reasonable to admit that intermediate states of development had similar manifestations of intellect? He would deny the position of those who maintained that the capabilities of all are originally the same, differing merely by the influence of education. He would admit that education does in a great degree modify the faculties, but it cannot create them. Great minds are unquestionably born unto great men, however sullied in particular instances by natural failings and propensities; for in the brightest intellectual picture we are oftentimes able to discover blemishes which detract more or less from their intrinsic value. Several passages from sacred history proved that Phrenology was supported by revelation. It inculcated charity, disposing us to make allowances for the errors and frailties of fellow-men. By directing our attention to the exercise and use of our several faculties, it gave us self-knowledge; teaching us to control our evil propensities, and to regulate our moral conduct. It also went to establish an aristocracy in nature, unlike the aristocracy of birth or fortune, which is merely conventional; but an aristocracy which points out with the finger of beneficent wisdom the mighty pre-eminence of man over all created beings. At the conclusion of his able and eloquent discourse, he entreated his audience not to be biased by pre-conceived opinions—recommending them in the words of the immortal Bacon, to observe patiently, examine cautiously, and generalise slowly; appealing to their senses and their understanding, whether a system founded in nature, and consistent with religion, did not merit a serious consideration. A vote of thanks was passed unanimously to the Rev. Gentleman for his very able and argumentative dissertation, which contained an epitome of Phrenology, and combated so successfully the objections of its opponents.

Mr. Brabazon presented to the Society a very remarkable bust for their examination. The Secretary, Dr. Evanson, an eminent phrenologist, Surgeon Carmichael, and others, severally expressed their opinions—all equally agreed that it represented some extraordinary personage. The organs of Language, Causality, Self-esteem, Constructiveness, and Ideality, presented an unusually high state of development. Mr. B. expressed his satisfaction at their forming so accurate an estimate of one of the most distinguished men of the present age. He was no less than the celebrated Mezzofanti, prefect of the Vatican Library, who speaks thirty languages and understood nearly forty. The business of the evening closed by allusions to the rapid progress of Phrenology on the continent, and some cursory observations from Mr. Carmichael on the heads of Napoleon, Spurzheim, Locke, &c.

ARTICLE IV.

RAMMOHUN ROY.

In the *Christian Pioneer* for October 1884, the following remarks have been elicited from the respected editor of that periodical, by a paragraph among the "Notices" in our 41st number:—

"From a careful perusal of the writings of Rammohun Roy, and from personal conversation with that illustrious man on this particular subject, we are convinced that he embraced Christianity on the ground of its miraculous, its divine origin, long previously to his visit to Bristol. We are also persuaded, that had the editor of the *Phrenological Journal* had access to the same sources of information, or been aware of the degree of credit to be attached to some supposed evidence on which his opinion was founded; his decision would have been directly the reverse of that to which we object."

Our chief reason for doubting Rammohun Roy's conviction of the divine origin of Christianity was the explicit statement of his secretary, the late Mr. Sanford Arnot, that he believed in no Christian tenet whatever; "except the doctrine of the unity of God." (See our 8th vol. p. 600.) This is obviously the "supposed evidence" alluded to by the editor of the *Christian Pioneer*, and the trust-worthiness of which he seems to have reasons for doubting. Were we personally aware of the circumstances tending to invalidate Mr Arnot's statement, we should certainly be induced by the evidence on the other side to believe that Rammohun Roy was for many years a Christian.

The following remarks are from a quarter on which we place much reliance. "I am convinced by a certain degree of personal knowledge of Rammohun Roy, and by the testimony of those who were more intimate with him, that a false view is given of his character in representing him as deficient in the "courage to say No," and as disposed to temporize from "love of approbation." In the *Phrenological Journal* itself, sufficient evidence of the contrary is afforded by the account of his resolution in maintaining his views of Christianity in India; when he had to encounter the calumny and prejudices of all his early connections, and of a great part of the European as well as Hindoo population. From a conversation which I had with Rammohun Roy myself, I perfectly understood why he was liable to the imputation of concurring in turn with Christians of different denominations. He distinctly stated to me, that from the deepest study

of their respective tenets, he had come to the conclusion that the differences were purely *verbal*—the result of the imperfections of language,—and that in every essential all Christians were agreed. It followed naturally, that he could join heartily in the worship of every sect, though the Unitarian was to his taste least exceptionable in respect to language. These sentiments of his remind me of what was said by Dr. Tuckerman of a distinguished member of another church: "I am divided from such a man *only by a word*." If the evidence of countenance be not rejected, the expression of moral intrepidity would have been seen in that of Rammohun Roy: "There is written in your brow honesty and consistency." As to his acquiescence from courtesy, I had personal experience of the contrary; for when at my house, he opposed an opinion of mine with great energy. He maintained that murder ought to be punished with death, while my own opinion is in accordance with that of the conductors of the *Phrenological Journal* respecting capital punishment.

We are happy to learn from this communication, that in serious matters Rammohun Roy's Love of Approbation did not always lead him so far astray as we were induced by Mr. Anst to imagine. If we understand our correspondent aright, however, no doubt is raised with respect to the Rajah's great anxiety to avoid giving offence, and "that disposition to acquiescence," which, according to Dr. Carpenter, was sometimes "known to place him in circumstances, and lead him to expressions, which made his sincerity questionable." It is probable that during the period of the Rajah's illness, his acquiescence might occasionally appear to be greater than it really was, from a desire to avoid the annoyance of disputation.

ARTICLE V.

ANTI-PHRENOLOGICAL ESSAY, by a CERGYMAN of the CHURCH of SCOTLAND; with an ANSWER thereto, by MR. WALTER TOD.*

ALL mental energy or susceptibility being presumed to be lodged in the head, and these to be indicated by the skull, either in its general conformation, or by its particular prominences, distinguishable by sight or touch, the system set out under the modest title of *Cranioscopy*.

* The two papers composing this article were written in the year 1833, without, we believe, the slightest view to publication. Having been favoured with a perusal of them, we conceived that they were likely to prove interesting to our readers, and solicited permission to print them. This request was

Of late, however, it has arrogated to itself the more ostentatious title of *Paranorology*, from a supposed existence of corresponding "probabilities in the brain!" (as yet *what's best judges*), which find a receptacle in these bumps upon the skull; and which are presumed to be directed organs, through which the mind acts or is acted upon; in a similar manner as by and through the different organs of senses, without admitting a mind to the organ. It seems to me expedient, that this pretended science ought, as soon as possible, to be hoisted off the stage.—*As it*, however, even if it did indicate in childhood to what mode of training the person should be subjected with the greatest probability of success, (which is the main ground upon which its claim to utility is founded), the very same thing, that is the peculiar propensities of the child, must have been much more unequivocally manifested in its actions long before the time when any mode of education should be applied, suited to any particular profession. But farther, if well founded and generally received as such, it necessarily *must* give rise to *indefinite* and *negating* oppositions in its onward attempts at its practical application; whether for the purpose of gratifying a mere idle curiosity, or for any other purpose of greater seeming interest. For the fiduciary notes bearing mere bumps upon the skull, equally apt to the observation of all who have merely eyes to see, and fingers to handle, and requiring (in order to draw the proper conclusions) antecedent knowledge of the anatomy of the human body, of various physical analysis of the faculties of the mind, &c.—it is not at all wonderful that this *royal road* to interesting knowledge should be entered upon with eager credulity, and a confidence placed in it, which is not warranted by any real evidence. To best readily granted; and we have now the pleasure of laying before the public the reasons which have induced a talented clergyman to think that *Phrenology* "ought, as soon as possible, to be hoisted off the stage." Truth being our sole aim, we are always glad to have an opportunity of publishing objections to the phrenological doctrines, especially from quarters so respectable; if they be valid, the sooner Phrenology is hoisted off the stage, the better; if futile, they only serve to confirm phrenologists in their belief, who which claim the phrenologists published bearing to dele who takes the trouble to peruse Mr. Ford's reply, can have much difficulty in deciding. Some of our readers will as soon identify the author of the Essay with the "Octogenarian," whose antiphrenological lucubrations were, as "too good to be lost," published about two years ago in the *Dumfries Free Press*, and commented on by a correspondent in the eighth volume of this Journal, p. 368. These lucubrations, indeed, are the "abandon" of what is now supposed to have been the 20 years of writing Phrenology a mental blow.—Ed.

in the science equal to that which is a quick medicine trumpeted forth as an infallible remedy for all diseases. (As, however, phrenologists admit that the superior size of the whole head or whole hump upon it compared to the general standard, or the controlling power of one bump when superior in size to its fellows upon the same head, or the biasing power of education, have all of them a controlling influence upon character, and as the forehead, for general inspection, is both as the side of a punch-draw, would require an estimate of vision or delicacy of touch equal to those of the eye of the hawk or eagle of an insect to detect in it one or all of those dozens of indicative bumps alleged to be contained within its margin, compass, each of them alleged to be filled up by a corresponding cerebral protuberance or organ;—from these considerations it is evident, that, even were the science well-founded and true, any thing like a complete mastery of it must be exclusively confined to a very few adepts; and that the far greater numbers of those presuming to practise upon its principles, must be mere bungling scoundrels, who, instead of allowing others the fair play of being judged by their conduct, would stake up the most unfounded misconstructions of their characters, conclusions resting upon mere ill-digested phrenological prejudices. Meantime among these numberless scoundrels, what rude, staring, and insidious attempts at sky-dabbling on the one hand, and, on the other, what suspecting efforts at evading touch or scalar inspection, would arise in every company! A spirit of irritating compound of impudent audacity, jealous suspicion, and unwarranted imputation, would paralyse mutual confidence and destroy all enjoyment of social intercourse. What danger of injustice, too, might there not be introduced into the administration of criminal law, were an unfortunate person to be tried by a jury of dabblers in Phrenology—who, instead of modifying their judgment by his habits and repute, established by witnesses, or by his former conduct, should, instead of calling witnesses, cause his head to be shaven, that the condition of his bumps might be ascertained, in order to answer that intention!

2d. But the theory itself is false and unfounded. For

(1.) It is contradicted by the whole analogy of Nature.

Through the whole of created things, we may uniformly observe a most harmonious adaptation of one thing to another, to produce important ends.

Now, it is abundantly evident, that man was made for social union. He is born into this world the most weak and defenceless of animals; the helplessness of his infancy is longer protracted than that of any other, and his strength and defence depend upon social combination. Through the combination of mutual

experience is acquired that *knowledge which is power*; and through the combination of powers are effected those purposes to which individual power were totally inadequate. But that such combination may be effected, it was necessary that a suitable adaptation of means should be provided; and the suitable one is accordingly provided in the capacity of men to communicate to each other their knowledge, their desires, their designs, and their mutual purposes and pledges to co-operation.

Artificial language comes, no doubt, in process of time, to constitute the mode of communication. It is, however, not the *natural* mode, but the *artificial*, engrafted upon, and deriving its signification from the *natural*. Sounds, indeed, are natural modes of expressing various emotions, such as those of admiration, grief, fear, indignation, &c., and as such are uniformly the same, and universally and instinctively understood. But were articulate language an equally natural expression, it would be found equally universal and uniform, and instinctively intelligible, instead of presenting that endless diversity into which it is divided, and which makes the speakers of one tongue unintelligible to those of another. There must have been, and there are, natural signs of thought and emotion, universally and instinctively intelligible, from which the articulate sounds of words, pronounced under their influence, derived their meaning; and which being, through custom, attached to the original sign, when pronounced would bring to recollection the original sign, with its signification.

In this mode of mutual adaptation of one thing to another, so universally prevalent—and through which, for instance, the infant, without the least experience, information, or reasoning, applies its mouth to the mother's breast for nourishment—in this very same mode, I am perfectly convinced that the child, in order to avoid what may prove hurtful, and cling to what may prove beneficial, in the thoughts and sentiments of others, is led instinctively to the interpretation of these by their natural signs and expression; and that it is only through repetition and custom that he learns to connect the artificial substitute to the natural sign, so as to comprehend the signification of words. But, in this process, it is evident that the child was never intended to be a *cranioscopist*, but to be a *physiognomist*.

When speaking of physiognomy, I would not be understood to use the term in that confined sense in which it is often used, as restricted to the mere features of the countenance (constituting, though they do, an essential branch of the subject), but in that enlarged sense, in which it applies not merely to the features of the face, with their various play, but comprehends also the intonations of the voice, the air of the head, with the various gestures and carriage of the body, &c.; and I am persuaded,

that, in this way, every internal state prompts to its own appropriate expression: such as hatred, or love, aversion or complacency, resentment, or gratitude, fear or hope, sorrow or joy, pusillanimity or courage, pity or contempt, confidence or suspicion, authority, or submission, respect or ridicule, interest or indifference, assent, or dissent. There is a physiognomical expression suited to all of these; and the arbitrary adaptation of articulate words, which shall convey the same meaning as that expression, and in time serve the same purpose, or supersede its use, is just as various, as the various different languages which are spread over the earth's surface; and it matters not, to the child, which of these it shall be accustomed to connect with the physiognomical expression; and whether its mother-tongue shall be Hebrew, Greek, or Latin—French, English, or Italian. Nor is it possible to comprehend in what other manner a child should learn the import and signification of words.

So entirely, indeed, does the import of words depend upon the physiognomical expression, that the most impressive oratory always calls in the aid of the latter, to supply the deficiency of its artificial substitute; and the full impression depends more upon the manner of saying, than upon the words spoken.

Now, had the bumps on the skull been intended to be the mode of comprehending each other's views and intentions, the child, according to the analogy of universal mutual adaptation, would have been furnished with the correspondent instinctive desire of handling his nurse's bumps; but he certainly shows as little desire to handle her bumps, for information, as to suck her nose for nourishment.

The patrons of Phrenology may perhaps allege in its favour, that physiognomy is more calculated to indicate the present momentary emotions; but Phrenology to indicate the fixed and permanent disposition. There is, however, a fixed and settled state of the pliant features and gesture, which they acquire in being most frequently called into action; and it is to these, and not to bumps on the skull, that we must look, to form a notion of the predominant disposition.

(2.) But, besides its being at variance with that system of mu-

See Walter Scott, that shrewd observer of human nature, has thus remarked the acute discrimination of children in interpreting physiognomical signs:—"And, indeed, children are generally acute physiognomists, and not only pleased with what is beautiful in itself, but peculiarly quick in distinguishing and replying to the attentions of those who really love them. If they see a person in company, though a perfect stranger, who is by nature fond of children, the little imps seem to discover it by a sort of freemasonry; whilst the awkward attempts of those who make advances to them, for the purpose of recommending themselves to the parents, usually fail in attracting their reciprocal attention."—*Monastery*, ch. li. and 1st paragraph.

tural adaptation which universally prevails, the theory of Phrenology is *frivolous, and unfounded in experience*. It seems plainly to have taken its vulgar origin as suspicious. It seems to be a common mode of speaking, in referring things to the *skull*, and, indeed, phrenologists refer to this model of speaking, in confirmation of their theory; and, for this reason, and for some better, have they been laughing at themselves, of ascribing for every operation of mind in the structure of the skull, possessing it (as in the bodily senses) each, distinct internal operation must be attributed to some corporeal organ possessed (as the organs of sense) of a distinct magnitude and figure; for the expansion of which, in hollow inside of the skull, (imbedded by a corresponding convexity outside) is provided, at which the organ provides for itself by its own expansion, whilst the bone remains soft and flexible in infancy. But does it not at once occur, that, by parity of reason, the seat of all the passions and emotions should be looked for in the *heart*, to which, in the same common *popularities*, they are attributed? And as the heart cannot be submitted to ocular inspection in the live subject, may we not then say that brain, and, as, probably, none of its organs, are marked externally upon the breast; why should ascertainment be had to the *skull* alone? And the prevalent ascertainment might be detected by the *hearting*, if not cognisable, like skull-bumps, by the *signs*. And, indeed, I doubt not that some German or romantic imagination, or some American quack, taking advantage of British *gullibility*, may arise, who, instead of calipers to measure the extent, or thumbing to ascertain the bumps, of the skull, shall have recourse to this newly-invented instrument—shall thus restore those honours to the heart, of which it has been imperiously deprived, to grandment the quack-shall and that a system of *cardiology*, or *cardiology*, shall be created, equally plausible as ever were those of animal magnetism or metallic tractors—on as is at present. I trust we may soon say, *was* this system of Phrenology a July 11th British theory?

It is *unfounded in experience*. Bumps have ever been pretended by phrenologists to be natural signs, suggesting instinctively and universally the distinct, different, and multitudinous faculties and propensities which they ascribe to the brain and its cerebral organs; neither do they pretend that their theory, ever was or can be verified by accidental expunction, or substituted experiment upon the live subject, either in human or comparative anatomy, (like the three distinct classes of nerves so lately discovered as subservient to the distinct purposes of sensation, and voluntary and involuntary motion), or neither the human nor brute animal could survive the operation of interrupting the connection between this supposed cerebral organ and the brain, by ligature or abscission, so as to show this result. And any other

pretended experience must of necessity be in the highest degree illusory and inconclusive; for, as no instituted experiment can be made, the truth of the theory must rest upon the experience of long continued observation, and of most intimate acquaintance of those who are observed upon, lest a partial coincidence should be mistaken for a general law.

When, however, we consider the acknowledged very small progress which has yet been made in the science of medicine, (although it has formed the most interesting study of mankind since the beginning of time,) it must appear most suspiciously surprising that this same science, with a mushroom-like rapidity of growth, should have arrived to the acme of infallible certainty during the short period of the flourishing of Drs Gall, Spurzheim, and Combe.

It is not, however, at all surprising that it should have met with such a rapid and easy reception from the credulity of mankind, nor how very easily facts might seem to be attained to verify the truth of it by experience. For, undoubtedly, excepting in the case of madness or idiocy, all mankind are essentially alike, being all, to a certain extent, possessed of the same intellectual powers and mental susceptibilities. Suppose, then, the phrenologist selects any number of subjects for his observation, — he says to one, “I perceive by your bumps that you are benevolent, or acquisitive, or philoprogenous, or casualist,” &c., as the case may be: Now, as there are none who do not in some degree partake of all these powers or propensities, the person observed upon, if he has any confidence in this trier or discerner of spirits, will be easily persuaded that what is predicated is in fact his predominant quality; if his faith is only abundantly strong, he will be led to acquiesce in the phrenological conclusion, even although what has been inferred from his bumps has been vicious and condemnable, and still more readily if virtuous and praiseworthy. It is by facts of this equivocal nature, and so very easily obtained, that the phrenologist supports his theory by what he is pleased to call experience.

As to this boasted experience by which phrenologists pretend their theory to be verified, it appears altogether unworthy of credit; from another consideration. If human skulls have all this general resemblance, that they might all, upon inspection, be pronounced to be human skulls, it must then have been some remarkable prominence, in some particular bump, in some person remarkable for some remarkably strong mental power or propensity, that could alone lead to the supposition that such bump was the organ of such particular power or propensity, unless, indeed, the phrenologists pretend to have had a supernatural revelation of the residence of these dozens of powers and propensities in their appropriate bumps. Now, considering the anti-

mate acquaintance necessary to form an accurate judgment even of one single character, it would require the lifetime of one who had nothing else to do, to make extensive observation sufficient to verify the invariable connection even of one single bump with any one of these powers or propensities; or, if it is alleged that this verification is the result of the combined experience of a great number of observers, the question recurs, How many of these observers had the capacity of appreciating a character? This pretended experience, therefore, ought absolutely to go for nothing.

(3.) The foolery of the system appears in the great multiplicity of powers and propensities, each different and distinct from the rest, and having each its own distinct cerebral organ,—which the phrenologist attributes to the brain. And, indeed, did not the organ of smell appear outwardly to be *one nose*, I have no doubt that the phrenologist, with the same propensity to fritter down into particular individuality, and aversion at generalization, would be inclined to suppose two distinct organs, one for the perception of perfumes, and the other for that of stench. They seem, indeed, in this respect, to have taken for their model the late Lord Kames, who, in his *Elements of Criticism and Sketches of Man*, when at a loss to refer any phenomenon to a general law, considers it as an ultimate fact constituting a law of itself,—such as his *principle of the desire of hunting, or of the desire of finishing*. As a specimen of a similar mode of philosophising among phrenologists, I would instance what they denominate *Acquisitiveness*, by which I presume is meant what the uninitiated call *avarice*, which they seem to state as a distinct original principle, acting by a distinct organ of its own. It appears, however, by far more reasonable to consider it as a secondary passion, originating not in a primary liking to gold and silver, but attaching itself to these merely as the means of procuring the gratification of other desires; but that a persevering attention to the means makes the end be lost sight of, when the means come to be pursued as the end,—just as, at the restoration of learning, Greek and Latin were studied at first as the only accessible mode of attaining to useful knowledge, but were at last studied for their own sakes, the original end being forgotten. Now, if by *Acquisitiveness* is meant the desire of riches, which is called in common parlance *avarice*, and if this organ requires a separate distinct organ,—for the same reason a distinct organ ought to be sought after for the desire of acquiring the learned languages;—or, if by *Acquisitiveness* is meant an undistinguishing desire of acquiring and accumulating, no matter whether gold and silver, or old cast-iron hoops and rusty nails, it might then be fitly likened to the undistinguishing voracity of the ostrich, who gobbles up iron or stones as readily as food.

(4.) But further, if these said bumps are the receptacles of cerebral organs, which there find shelter and protection; and if character is determined by the due order and proportions of these; it then behoves the phrenologist to explain what varieties of character are produced by the operations of savage nations upon the skull, who, not contented with Nature's conformation of the human head, reduce it by compression, while the bones remain flexible, into the more eligible forms of a square or a sugar-loaf, or flatten it at the top that it may extend laterally—operations which cannot be performed without diminishing the space for the development of various organs, whilst it allows room for the expansion of others, perhaps to the extent of a supremacy over the rest. Surely were the same freedom used with the organs of sense, their functions could not but be strangely altered and disturbed.

(5.) It is presumed that the boldest of phrenologists will not deny that there is a material difference betwixt the characters of an ancient and a modern Greek—betwixt those of an ancient Roman and an Italian—betwixt a freeman and a slave; nor do I conceive any will be so hardy as to affirm that a corresponding difference takes place as to the bumps. In short, character, so far from being dependent upon bumps and their supposed contents, seems to depend chiefly on circumstances of situation; and of these principally upon political institutions. And indeed phrenologists, aware of this glaring fact, are obliged to allow a great influence to education, which they admit may produce a character widely different from that indicated by the bumps,—an admission which reduces the theory to a state of complete inanity, from which I hope it shall never recover.

*Reply to an Essay against Phrenology by the Rev. CHARLES FUND-
LATER, Newlands; in a Letter to the Author, by WALTER TOD.*

LARGHOPPE, Oct. 1833.

MY DEAR SIR,—I have read your essay against Phrenology with great attention, and am quite delighted that a man of your distinguished talents should have been able to do the system so little harm. Like most antiphrenologists, you have begun at the wrong end, and reasoned against the utility and consequences of the system, without first settling the great question of its truth or falsehood by an induction of facts. This, you must admit, is unphilosophical, as facts in nature cannot be overturned by reasoning against their supposed utility, and consequences, but must be disproved by evidence.

I am surprised that you should have imitated the conclave, that condemned the discoveries of Galileo for their assumed consequences, without being able to disprove the facts upon which

they feared, and nobody knew better than myself, that almost every important discovery has been not only opposed by the ignorant and vulgar, but by the dangerous consequences. In 1808, but having this objection, you will be distinctly and accurately state the fundamental principles of the system you oppose. First, All mental energy or susceptibility, you say, is being determined to be lodged in the head, and there to be indicated by a visible and tangible manifestation, in its particular prominence, distinguishable by sight or touch. The system set out under the modest title of *Cranioscopy*, *Phrenology*, &c. &c. &c. is not a correct statement of the doctrines of *Phrenology*, and I must, therefore, direct your attention to an accurate account of its real principles. These are—

1. That the human mind manifests powers, in the present world, by means of the brain, which powers are affected and modified by the size, health, and activity of that organ. 2. That the brain does not, as an indivisible organ, but consists of a congeries of organs, having distinct and different functions.

Now if you deny, that the brain is, in any sense, the organ of the mind, you deny some of the best established facts in nature: for, that the most vigorous minds have frequently been reduced to mere idiocy, and disease of the brain is a fact, beyond all civil or controversy.

And why bleed and blister the head for mental derangement, if the disease be really mental and not physical? These physicians, who bleed and blister, are for removing mental disease, and yet deny the truth of the first principle of *Phrenology*, practise as if *Phrenology* were false, and their own philosophy of the human mind false. Even you will hardly maintain that bleeding and blistering are for the purpose of restoring the tone and number of the soul itself, and yet to this absurd conclusion you must come, or admit the first and fundamental principle of *Phrenology*, that the brain is the organ of the mind.

But I will not press you farther with this great fact, in the constitution of human nature, as its denial would turn the reputation of any man as a philosopher, whose reputation as a philosopher should be turned.

The second phrenological principle is, that the mental manifestations are affected and modified by the size, health, and activity of the brain. Now with regard to the first of these conditions, you will admit, that size in an organ is the measure of its power; for this proposition is universal, and one to which there are no exceptions in nature. A cannon ball, or stream of water, produces (in like circumstances) effects in exact proportion to the quantity of matter which it contains; and wood, iron, brass, bone, and every substance in nature, have strength in

proportion to their size. It is obvious that to this great law—that size gives power—there cannot be a single exception, as its denial would be the same thing as to deny that quantities which are equal to the same thing are not equal to one another. So that this fundamental principle of Phrenology is not contradicted by the whole analogy of nature, as you allege, but is in strict accordance with the most obvious and universal law of creation. And with regard to the health of an organ being a condition of its power, I shall not waste a single word, as no sane man can believe for a moment, that a diseased organ can perform its functions with the energy of one in health.

Thus the two fundamental principles of Phrenology are established by facts which it seems to me impossible to resist.

If, then, these two principles must be admitted, and, to be candid, you have brought forward neither facts nor arguments to disprove either, the only remaining question for discussion is, Whether the brain acts as a whole or in parts? It is on this point, indeed, that antiphrenologists have been the most wayward and wretched in their abuse.

All anatomists and physiologists that deserve the name, have admitted the two first principles; but when phrenologists brought multiplied and unanswerable facts to prove that the brain does not act as one and indivisible organ, but consists of a congeries of organs having distinct and different functions, some of the great masters of the healing art forgot their propriety, and, with the rudeness of ignorance, took leave to rail, most disparagingly, at what they were at no pains to understand—and for a very silly reason, namely, because they could not discover different organs in the brain by dissection.

Now, the fact is, that dissection alone never did, and never will, discover the functions of a single organ. The spleen, for example, has been dissected for ages, yet at this moment its functions are totally unknown. So much for the anatomy of the business. But let us examine the question by facts and philosophical principles.

And in the first place, if the brain acted as one indivisible organ, partial genius would be impossible.

For if a brain possessed great energy, and acted as a unity, the same energy would appear in every mental manifestation in which that brain was employed. But is this the fact? Why, the very reverse is generally the case. Some children lay their hands upon an instrument, and make music at once; while thousands of young ladies who distinguish themselves in other branches of knowledge, never arrive at any proficiency in music, even after the labours of many years, under the greatest advantages of education. The same thing takes place in painting, poetry, sculpture, eloquence, and mechanics; in one word, in

all the arts and sciences within the compass of human knowledge. Now, these facts are utterly incompatible with the unity of the brain.

But you seem to belong to that class of philosophers who maintain that partial genius is the result of habit and education. This is inverting the order of nature. For what is a habit but the effect of repetition of acts prompted by some mental impulse? and hence the impulse must have formed the habit, and not the habit the impulse. No man will ever acquire the habit of making music who has hardly any perception of melody; and so in all other cases. You put the cart before the horse.

But besides the unphilosophical character of this philosophy of yours, it is contradicted by the whole history of mankind. How many men have remained sheer dolt, after circumstances, habit, and education had done their utmost! To schools and colleges they went in "stirks and came out asses"; and if honest nature made them fools, what serves their grammars? And how many men of original genius have risen to eminence regardless alike of helps and of hinderances! The list of such men is long and glorious, and from that list it were easy to mention names which ought to put your *habit and education men* to the blush. But in mercy I spare you, and shall only add, that the man who believes that the genius of Shakspeare was the result of habit and education, should have some reserve in speaking about the gullibility of mankind.

2. But, in the second place, partial insanity is incompatible with the unity of the brain. You must admit that nothing is more common than partial insanity. Now, if the brain acted as a unity, this phenomenon would be impossible; since, if the brain acted as a unity, whatever affected it must affect it as a whole and not as a part.

3. In the third place, that the mind is found to be relieved by merely changing the objects of thought and study, is another fact inconsistent with the unity of the brain. For, if the whole brain were employed in all manifestations of mind, it could not be rested by any change of thought or contemplation. A man would not be rested by first running east and then west upon the same level plain.

4. In the fourth place, partial injuries of the brain, by producing partial derangement of the mental manifestations, exhibit another fact inconsistent with the unity of the brain. Baron Larrey (no phreniologist) has given a body of facts on this point, which no sound understanding can resist.

5. In the fifth place, dreaming would be impossible, if the brain acted as a unity. For if the brain acted as a whole, it must be either all asleep or all awake, and in either case dreaming could not take place.

Thus, my dear sir, I have established by undeniable facts,

1st, That the human mind manifests its powers in the present world by means of the brain; 2dly, That these mental manifestations are affected and modified by the size, health, and activity of that organ; and, 3dly, That the brain does not act as a unity, but consists of a congeries of organs.* Now these are the great and fundamental principles of Phrenology—which, however, you have left absolutely untouched either by fact or argument. You have wasted your strength, and misspent your time, in endeavouring to lop off a few unseemly branches engrafted by enemies; while you have left the true phrenological tree to spread its roots wider and deeper in the earth. Antiphrenologists have in general shewn themselves very inaccurate in their knowledge of its real principles and character; and in this list I am sorry in being obliged to assign you a distinguished place.

About the middle of your essay you say, "Had the bumps on the skull been intended to be the mode of comprehending each other's *views* and *intentions*," &c. Now, that the *views* and *intentions* of one another can be ascertained by inspection, is distinctly denied by every phrenological writer; and therefore the absurdity which you oppose must find a father elsewhere than among phrenologists. The same want of correct knowledge characterizes your account of its rise and progress, a circumstance the more inexcusable, as Dr Gall has given a very minute account of the origin and progress of his discovery. You are equally infelicitous in calling the science "mushroom-like" in rapidity of growth; as Phrenology is nearly in her fortieth year, and still possesses all the freshness and vigour of youth, though from her cradle exposed to strangulation and death in every possible form, which ruthless and relentless enemies could devise. Your friend Mr Jeffrey, the present Lord Advocate, instead of trying her by the forms of law, turned quack, and at three different times gave her three pills, which he hoped would have proved her death; but as he was ignorant of her constitution, his pills merely acted as an emetic, and she did not die; and I venture to predict that she will be in high places when the learned lord is out of office. Dr Gall lectured on Phrenology in Vienna in 1796, and Mr Combe in Edinburgh in 1832.

In your remarks on the common form of speech, in referring thought to the head, and the affections to the heart, the same fatality attends you. For this mode of speech neither suggested the system, nor is referred to as a proof of its truth,—but simply to shew, that mankind, in every age, believed the mind

* Though the facts and arguments adduced by Mr Tod in support of the principles of Phrenology are amply sufficient to establish them, our readers of course will not understand that he has here exhausted his case. Had every fact and argument demonstrative of the truth of these principles been stated, the letter would have occupied volumes.—F.D.

to act through the medium of material organs; and for this purpose it is not without force.

In your observations on the organ of Acquisitiveness you are still at fault in point of correct knowledge, as its direct use is neither theft nor avarice, but the simple desire of personal property. Theft and avarice are abuses of the faculty unregulated by justice and benevolence. You call avarice "the second passion." That at least implies that there is a first; and if there be a first and second kind of avarice, there may be a third and fourth, even to the tenth generation. This philosophy, say to me, is absurdity. For from the simple desire for an object, to the most violent passion for it, the desire is not different in kind but in degree. You are displeased with phrenologists for having so large a number of original principles in human nature. But though yours are less numerous, they are far more prolific; for if each of them produces ten illegitimate children, no wonder that your whole philosophy is in a state of absolute bastardy. The fact, however, is, that the whole analogy of nature is in favour of unity of function. The ear cannot see, nor the eye hear; and the discovery of Sir Charles Bell, which you mention, is in strict accordance with the principles of Phrenology and unity of function. It was formerly believed that the same nerve produced sensation and motion, which would have been a double function of a single organ; but Sir Charles Bell's discovery tends to support the conclusion, that no organ performs double functions; so that this fact is distinctly against you, anti-phrenologists. Your objection to the number of original principles in the human mind, lies equally against the actual constitution of the body, as you would have made one nerve perform ten different functions; but by the fact just mentioned, you see that nature is constituted upon the principle of distinct organs and unity of function. So much for the discovery of Sir Charles Bell.

You seem to think it very difficult to distinguish one head from another. This, however, is in truth far more easy than to distinguish one face from another; of the difficulty of which nobody complains. There are not two things alike in nature more than heads. Your prejudices against the system have kept you in sad ignorance of the facts upon which it rests. Dr Gall has left six volumes full of the most important facts regarding the physical and mental condition of our race. Double that number of volumes have been published in this country, all abounding in carefully observed and accurately recorded facts. Crania have been collected of a great variety of tribes; savage and civilized, ancient and modern, which have been carefully compared with the national character of the different tribes to which they belong; so that your difficulties have been solved a thousand

times. Dr Gall's collection was very large, and the Phrenological Society of Edinburgh possesses crania from a number of the most opposite parts of the earth. Why, then, do you need to your soul to the contemplation of these great facts, and give us some rational reason why the Caribs and the Hollanders have remained so long in a state of the deepest mental degradation? You have, indeed, given a reason, such as it is, in the conclusion of your Essay; where you say, "In short, character, as far from being dependent upon bumps and their supposed contents, needs to depend chiefly on circumstances of situation; and of these principally upon political institutions." Now, nothing can appear to me more false in philosophy than this, no political institutions are formed by the national character, and not the national character by political institutions. Your philosophy here runs, as formerly, in the same groove as the horse. Nations, ever since the world began, have been constituted like dogs with their heads in the liberal political institutions which survive in the nation, unless they are the growth of the national mind. What has become of the liberal institutions that were tried in Sicily, Spain, and Portugal? The first liberal political institutions in Prussia ended in military despotism; and though, from the glorious *Trauer*, our light-hearted neighbours got a little son, the nation is well that the wick for the most part, are very body knows, with very scanty means has had to pay the paper. But you anti-phrenologists care nothing for facts; but regardless of the nature of the soil, would plant political institutions with the very seed of the most obvious principles which regulate the whole constitution of things under which we live, and set on a quaking basis. When I came to your pithy sentence, that "the theory itself is false and unfounded; for (1.) it is contradicted by the whole analogy of nature," I certainly expected facts and analogies of nature, brought to bear on the question in debate;—instead of which, you enter into a discussion upon what you call the "*monious adaptation*" of one thing to another, to produce important ends," and about men being made for "social union." Now, who ever doubted one word of all this? and in what possible way does it bear against Phrenology? Why, Mr. Combe has published a whole volume on the *Constitution of Man*, the object of which is to shew the admirable "*adaptation*" which exists between that constitution and the general constitution of nature. Were you really so simple as to believe that phrenologists contended for the constitution of nature being one of anarchy and misrule? So far is this from being the case, that they have been accused by some of your fraternity of teaching the doctrine of absolute perfectibility. "*Tanta est discordia fratri*"

With respect to your remarks on physiognomy, and the dis-

tion between natural and artificial language, I am happy to inform you that your views on these points are strictly phrenological, and, indeed, have been confirmed and illustrated by phrenologists at great length. That every faculty, sentiment, and passion of human nature has a natural aspect, tone, and language peculiar to itself, is beyond all controversy. But is this admitting that every faculty, sentiment, and passion has a distinct and definite constitution in nature, and is not the result of habit and association? For distinct faculties, and simple functions, manifested by distinct and different organs, are the great foundations of Phrenology.

Having now adverted to all your objections which seemed to me to deserve an answer, permit me to offer a few remarks on the uses of Phrenology and its importance to mankind; as contrasted with the old school of mental philosophy to which you belong. You see what a perverse logician you are; indeed am compelled to end where you began, by turning the kind and of your Essay foremost.

Those who long denied the circulation of the blood, like you said, *cui bono?* Short-sighted men! The knowledge of that simple fact has increased the power of the physician over the human frame a thousandfold. And if the functions of that magnificent organ, the brain, be now discovered, the utility of the discovery must be immense. Would it be of no advantage to have a sound philosophy of the human mind, based upon a correct knowledge of the constitution of human nature, which would enable us to lay down a philosophical and universal system of physical, intellectual, and moral education, which would apply to all the varied conditions of the human race? Would it be of no importance to know accurately the strength and weakness of our own physical and mental constitution? Self-knowledge has been sought by wise men in all ages, as of all knowledge the most important to their improvement in virtue and happiness. The functions of the brain once known, what a flood of light is thrown on the laws of health and disease, the cure of the insane, criminal law, penitentiary discipline, and, in one word, all the relations in which man can exist as a physical, intellectual, and moral being.

Now, what has your *habit and association philosophy* done for the human race? Absolutely nothing. Mankind felt that it came not home to their business or their bosoms, and neglected it as a thing of no value. And how could it be otherwise? You reasoned about the powers and principles of a being of whom you had no experience. You spoke of the mind as if it had already "shuffled off this mortal coil," or, rather, as if it had never put it on. And yet it is only from birth till death that we have any experience of the human mind; and during all

that period it is connected with a physical frame, modifying the mental phenomena at every step. And to say nothing of the influence of this physical power, is to say nothing of part of the elements composing the being, the phenomena of whose nature you profess to explain. Is not this to throw Lord Bacon's rules and philosophy to the winds of heaven? (And, after ages of this kind of futile labour, when we ask you what is the actual constitution and nature of man, some of you say, that he is a compound of matter and mind; another says he is all matter, as matter is mind, and mind is matter. Some of you say he was once a certain animal, but unluckily lost his tail. One of you says he is a social animal, another, that he is an unsocial animal. Some say he has many faculties; others, that he has very few. Some say that he is a selfish being; others, that he is a benevolent being. Some grant him a moral sense; others none. Some allow him a conscience; others say that it is a thing of mere habit and education. The foundation of virtue itself has been made to consist in propriety, fitness, utility, benevolence, selfishness, sympathy, &c. Dr. Reid, with his common sense, put all uncommon sense to the blush. Mr. Stewart, that elegant and splendid writer, from his immense erudition, has given us the literature of many important questions; but nothing that can be called the philosophy of the human mind. That acute reasoner, and delightful man, Dr. Thomas Brown, threw the philosophy of Reid and Stewart behind his back, as a thing of nought; while, on the other hand, a learned Baronet, the other year, fell upon Dr. Brown, and if he had not been weighed down with a load of German metaphysics, would actually have finished him. Nor can you have forgotten, that a simple note on Cause and Effect, by Professor Leslie, had some years ago nearly stranded the whole General Assembly.

Now, my dear sir, are you, belonging to a band of philosophers like this, entitled to assume airs, look big, and talk of Phrenology as a science that deserves to be "hooted off the stage?"

Nothing has surprised me more, than that men of thought, reputation, and observation, should continue to deny the fundamental principles of Phrenology, when they must feel their own mental powers modified every day, by the different states of their physical frames in health and disease; or that they can resist such facts as that the most gifted minds become more infants under disease of the brain. But here I stop for the present, till I hear from you again, which I hope will be soon.

I have said nothing regarding the tone and temper of your communication, which is certainly in both sufficiently irreverent. But I make no complaint. Some allowance must be made for an author who writes in defence of a sinking cause.—Yours truly,

WALTER TOD.

ARTICLE VI.

THE TEACHER; OR MODEL INFLUENCES EMPLOYED IN THE INSTRUCTION OF THE YOUNG. Intended chiefly to assist Young Teachers in organizing and conducting their Schools. By JACOB ABBOTT, Principal of Mount Vernon School, New England. — Revised by the Rev. CHARLES MARO, LL. D., late Fellow of St John's College, Oxford. London: Seeley & Sons. 1884. 12mo. Pp. 326.

MR ABBOTT remarks, that were teachers to visit the schools of each other, they would vastly increase their knowledge of and interest in the art of instruction. "It is not always the case," says he, "that any thing is observed by the visitor which he can directly and wholly introduce into his own school; but what he sees suggests to him modifications or changes; and it gives him, at any rate, renewed strength and resolution in his work, to see how similar objects are accomplished, or similar difficulties removed, by others." "Next to a visit to a school," he continues, "comes the reading of a vivid description of it. I do not intend a cold theoretical exposition of the general principles of its management and instruction; for these are essentially the same in all schools; I mean a minute account of the plans and arrangements by which these general principles are applied. Suppose twenty of the most successful teachers in New England would write such a description, each of his own school, how valuable would be the volume which should contain them!" Mr Abbott has followed this recommendation in publishing the work under review. Its general nature is well set forth by Dr Mayo in his preface to the English reprint:—

"The little volume now presented to the British public, sets forth in a lively and practical manner, the every-day life of a North American school. We are fairly ushered into the classroom, introduced to the pupils, made acquainted with the lights and shades of their characters; and all the physical, moral, and intellectual machinery of the institution, is set in motion before our eyes, and its principles familiarly explained. It is not indeed an elaborate exhibition of abstract truths addressed to a few philosophical minds, but a lively picture of school scenes, a minute detail of lessons, many of which were actually given, and a circumstantial report of cases which have really occurred, and may any day occur again. It is a volume for the practical educator; the teacher in an infant school, the master of a proprietary establishment, the professor in a university, the instructor in a private family or in a school of any description, may study its lively narratives and judicious remarks with profit to himself and his charge. It exhibits to us how moral discipline and re-

ligious influence may be exercised, even in a day-school, and that without violating sectarian prejudices."

Mr Abbott's work gives us a very favourable impression of his moral and intellectual qualities. He argues strongly against the prevalent compulsory system of tuition, and maintains that by adapting the mode of teaching, and subjects taught, to the minds, to be operated on,—and exciting motives in the pupils by skillfully addressing their various faculties,—the business of instruction may be rendered comparatively easy and pleasant. "The school-room," says he, "is in reality a little empire of mind. If the one who presides in it sees it in its true light, studies the nature and tendency of the minds which he has to control, adapts his plans and his treasures to the laws of human nature, and endeavours to accomplish his purposes for them; not by mere labour and force, but by ingenuity and enterprise; he will take pleasure in administering his little government. He will watch with care and interest the operation of the moral and intellectual causes which he sees in operation; and find, as he accomplishes with increasing facility and power his various objects, that he derives a greater and greater pleasure from his work. Scholars never can be instructed by the power of any mechanical routine; nor can they be governed by the blind naked strength of the master: each mind must be made to accomplish the purposes designed, and consequently the teacher who tries such a course, must have continually upon his mind the discouraging, disheartening burden of unsuccessful and almost useless labour. He is continually uneasy, dissatisfied, and filled with anxious cares; and sources of vexation and perplexity will continually arise. He attempts to remove evils by waging against them a useless and most vexatious warfare of threatening and punishment, and he is trying continually to drive, when he might know that neither the intellect nor the heart are capable of being driven."

Since, then, an accurate knowledge of human nature is so indispensable to the successful education of the young; it is manifest that the study of Phrenology, the only science by which the faculties of man are practically disclosed, is of the deepest importance to teachers. Cowper has well said; that,

Though Nature weigh our talents, and dispense
To every man his modicum of sense,
Yet much depends, as in the tiller's soil,
On culture, and the sowing of the soil."

And it may well be asked, Whether is the tiller who knows scientifically the quality of the soil, its relations to different kinds of seed, and the periods at which the business of sowing may be most advantageously performed, or he who is ignorant of all these matters, likely to be the more successful cultivator? Surely no one can hesitate to name the former in reply. As he who has

studied both the principles and the practice of agriculture, is far less exposed to error than he who has nothing but his own limited experience to guide him, so will the teacher who understands the faculties which it is his profession to cultivate, direct, and enlighten,—the degree in which every individual pupil is endowed with them,—and the mode of increasing and diminishing the activity of each,—be greatly superior to him who proceeds empirically to his task, and spends half a lifetime before even arriving at a settled conviction of the innate diversity of human dispositions and talents. Mr. Abbott is evidently unacquainted with Phrenology; but there are many passages in his book which shew that he has carefully studied and soundly reasoned upon the mental phenomena beheld in his school-room, and that he is fully aware how important it is that the teacher should be familiar with the characters of his pupils. "It is of course," he says, "one essential part of a man's duty in engaging in any undertaking, whether it will lead him to act upon matter or upon mind, to become first well acquainted with the circumstances of the case,—the materials he is to act upon, and the means which he may reasonably expect to have at his command. If he underrates his difficulties or overrates the power of his means of overcoming them, it is his mistake; a mistake for which he is fully responsible. Whatever may be the nature of the effect which he aims at accomplishing, he ought fully to understand it, and to appreciate justly the difficulties which lie in the way."

These general remarks Mr. Abbott illustrates thus:—"One class of teachers seem never to make it a part of their calculation that their pupils will do wrong; and then, when any misconduct occurs, they are disconcerted and irritated, and look and act as if some unexpected occurrence had broken in upon their plans. Others understand and consider all this beforehand. They seem to think a little before they go into their school, what sort of beings boys and girls are, and any ordinary case of youthful delinquency or dulness does not surprise them. I do not mean that they treat such cases with indifference or neglect, but that they *expect* them, and *are prepared for them*. Such a teacher knows that boys and girls are the *materials* he has to work upon, and he takes care to make himself acquainted with these materials *just as they are*. The other class, however, do not seem to know at all what sort of beings they have to deal with, or if they know, do not *consider*. They expect from them what is not to be obtained, and then are disappointed and vexed at the failure. It is as if a carpenter should attempt to support an entablature by pillars of wood too small and weak for the weight, and then go on, from week to week, suffering anxiety and irritation, as he sees them swelling and splitting under the

burden, and finding fault *with the wood*, instead of taking the blame to himself."

The advice given to teachers regarding the treatment of the less gifted pupils, is benevolent and touching; and, we hope, will ere long be generally followed. "Never get out of patience with dullness. Perhaps I ought to say, never get out of patience with any thing—that would perhaps be the wisest rule; but above all things, remember that dullness and stupidity (and you will certainly find them in every school), are the very last things to get out of patience with. If the Creator has so formed the mind of a boy, that he must go through life slowly and with difficulty, impeded by obstructions which others do not feel, and depressed by discouragements which others never know, his lot is surely hard enough, without having you to add to it the trials and suffering which sarcasm and reproach from you can heap upon him. Look over your school-room, therefore, and wherever you find one whom you perceive the Creator to have endowed with less intellectual power than others, fix your eye upon him with an expression of kindness and sympathy. Such a boy will have suffering enough from the selfish tyranny of his companions; he ought to find in you a protector and friend. One of the greatest pleasures which a teacher's life affords, is the interest of seeking out such an one, bowed down with burdens of depression and discouragement, unaccustomed to sympathy and kindness, and expecting nothing for the future but a weary continuation of the cheerless toils which have embittered the past; and the pleasure of taking off the burden, of surprising the timid disheartened sufferer by kind words and cheering looks, and of seeing in his countenance the expressions of ease and even of happiness gradually returning."

Dr Gall, in refuting the theory of Helvetius, that all differences of minds are the product of education, advises those who entertain such an opinion to enlighten themselves by conversing on the subject with persons who dedicate their lives to the training of youth. From those persons, says Gall, they will learn that every day furnishes occasion to remark, that in each individual the dispositions vary even from birth, and that education can be effectual only in proportion to the innate qualities: if it were otherwise, he adds, how could these excellent men pardon themselves, and how could others pardon them, for neglecting to root out from the minds of their pupils every fault, every vice, every evil passion, and every grovelling inclination*? Let us now hear the result of Mr Abbott's experience. "Do not hope or attempt to make all your pupils alike. Providence has determined that human minds should differ from each other, for the very purpose of giving variety and interest to this busy scene

* Sur les Fonctions du Cerveau, i. 148.

of life. Now, if it were possible for a teacher so to plan his organization, as to send his pupils forth upon the extremity, formed on the same model as if they were actually machinery, he would do so much towards spoiling one of the virtues of the pupils which the Almighty has formed for making this world a happy scene. *Just* it be the teacher's business to co-operate with, not vary in, attempt to thwart, the designs of Providence. We should bring out those powers which within the Creator has entrusted the mind placed under our control. We must open up every way, corresponding to its own nature, for its development, each in its way, and its growth, be foolish if it were possible to manipulate, by artificial means, the power intended for its creating the sea and the grandeur of the apple-tree, or to try to imitate the big and the orange where wheat only will grow. No, it should be the teacher's main design to shelter his pupils from every deleterious influence, and to bring every thing to bear upon the opportunity of mind before him; which will encourage in each one the development of its own native powers. For the rest, he must remember that his province is to cultivate, not to create. These observations show the degree of freedom each which we should like to see more general among teachers. Yet it is curious that, even Mr. Abbott, should so far contradict himself, as to employ such an argument as the following: "The human mind is always, essentially the same. That which is tedious and joyless to one will be so to another, if pursued in the same way and under the same circumstances. And teaching, if it is pleasant, and amusing, and exciting to one, may be so to all. The instances, like this, show of how little practical efficacy is the philosophical belief of unphrenological thinkers compared with the deep-seated convictions derived from Phrenology. In treating of mental diseases, Mr. Abbott remarks, that the characteristic of off-handedness is the hope, which to be carefully studied. Phrenology would be of great use, here." *Edwards* says Mr. Abbott "will often acquire great intellectual power and velocity of acquiring; and for still finer, as the results of his powers are a variety of character, which the general influences above described will not be sufficient to control." The language of individuals will not be great, but they develop all characters; compensated in it will be such as to call into existence all your powers of vigilance and discrimination. On one side you will find a severe, red-looking boy, who will openly disobey your commands and oppose your wishes; on another, a more shy rogue, whose devious and submissive look is a secret, to conceal a mischievous disposition. Here is one whose glib spirit is always leading him into difficulty, but who is of so open and frank a disposition, that you will most easily lead him back to duty; but there is

by Mr Abbott, of securing the personal attachment of boys, is "to notice them—to take an interest in their pursuits, and the qualities and powers which they value in one another. It is astonishing what an influence is exerted by such little circumstances as stopping at a play-ground a moment to notice with interest, though perhaps without saying a word, speed of running,—or exactness of aim,—the force with which a ball is struck, or the dexterity with which it is caught or thrown. The teacher must, indeed, in all his intercourse with his pupils, never forget his station, nor allow them to lay aside the respect, without which authority cannot be maintained. But he may be, notwithstanding this, on the most intimate and familiar footing with them all. He may take a strong and open interest in all their enjoyments, and thus awaken on their part a personal attachment to himself, which will exert over them a constant and powerful control."

The following observations shew that Mr Abbott is aware of the true method of improving the moral character. In a recent article on penitentiary discipline, we recommended its application to criminals*. "We should all remember that our pupils are but for a very short time under our direct control. Even when they are in school, the most unceasing vigilance will not enable us to watch, except for a very small portion of the time, any individual. Many hours of the day, too, they are entirely removed from our inspection, and a few months will take them away from us altogether: so that subjecting them to mere external restraint, is a very inadequate remedy for the moral evil to which they are exposed. What we aim at, is to bring forward and strengthen an internal principle, which will act when both parent and teacher are away, and control where external circumstances are all unfavourable."

The teacher ought uniformly to address his pupils in a good-humoured though decided manner. Were this rule attended to, his correlative remarks would on almost every occasion be well received. "Whenever strictness of discipline," says Mr Abbott, "is unpopular, it is rendered so simply by the ill-humoured and ill-judged means by which it is attempted to be introduced. But all children will love strict discipline, if it is pleasantly, though firmly, maintained. It is a great, though very prevalent mistake, to imagine that boys and girls like a lax and inefficient government, and dislike the pressure of steady control. What they dislike is sour looks and irritating language, and they therefore very naturally dislike every thing introduced or sustained by their means. If, however, exactness and precision in all the operations of a class, and of the school, are introduced and enforced in the proper manner, i. e. by a firm, but mild and good-humoured authority, scholars will universally be

* See vol. viii. p. 594.

pleased with them. They like to see the uniform appearance, the straight line, the simultaneous movement. They like to feel the operation of system, and to realise, while they are in the school-room, that they form a community, governed by fixed and steady laws, firmly but pleasantly administered. On the other hand, laxity of discipline, and the disorder which will result from it, will only lead the pupils to despise their teacher, and to hate their school.

Mr. Abbott strongly insists on the necessity of conducting the business of schools in a systematic manner. Instead, says he, of vainly attempting to attend simultaneously to a dozen things, teachers should so plan their work, that only one will demand attention. During the winter months, while the principal common schools in our country are in operation, it is sad to reflect how many teachers come home every evening, with bewildered and aching heads, having been vainly trying all the day to do six things at a time, while He, who made the human mind, has determined that it shall do but one. How many become discouraged and disheartened by what they consider the unavoidable trials of a teacher's life, and give up in despair, just because their faculties will not sustain a six-fold task. There are multitudes who, in early life, attempted teaching, and, after having been worried, almost to distraction, by the simultaneous pressure of these multifarious cares, gave up the employment in disgust, and for ever after wonder how any body can like teaching. I know multitudes of persons to whom the above description will exactly apply."

Some excellent remarks on the subject of themes or essays written by boys, well deserve to be quoted:—"There is no branch of study attended to in school, which may, by judicious efforts, be made more effectual in accomplishing this object, leading the pupils to see the practical utility and the value of knowledge, than composition. If such subjects as are suitable themes for moral essays are assigned, the scholars will indeed dislike the work of writing, and derive little benefit from it. The mass of pupils in our schools are not to be writers of moral essays or prayers, and they do not need to form that style of empty, florid, verbose declamation, which the practice of writing composition in our schools, as it is too frequently managed, tends to form. Assign practical subjects—subjects relating to the business of the school, or the events taking place around you. Is there a question before the community on the subject of the location of a new school-house? Assign it to your pupils as a question for discussion, and direct them not to write empty declamation, but to obtain from their parents the real arguments in the case, and to present them, distinctly and clear-

ly, and in simple language, to their companions. Was a building burnt by lightning in the neighbourhood? Let those who saw the scene describe it; their productions to be read by the teacher aloud; and let them see that clear descriptions please, and that good legible writing can be read fluently, and that correct spelling and punctuation and grammar, make the article go smoothly and pleasantly, and enable it to produce its full effect. Is a public building going forward in the neighbourhood of your school? You can make it a very fruitful source of subjects and questions, to give interest and impulse to the studies of the school-room. Your classes in geometry may measure—your arithmeticians may calculate and make estimates—your writers may describe its progress from week to week, and anticipate the scenes which it will in future years exhibit."

The following short sentence embodies an important truth. "A class should go on slowly, and dwell on details, so long as to fix firmly, and make perfectly familiar, whatever they undertake to learn. In this manner, the knowledge they acquire will become their own. It will be incorporated, as it were, into their very minds, and they cannot afterwards be deprived of it."

Mr Abbott offers to teachers an advice, of which they—and, we may add, clergymen too—frequently stand much in need. "The teacher should guard against unnecessarily imbibing those faulty mental habits to which his station and employment expose him. Accustomed to command, and to hold intercourse with minds which are immature and feeble compared with our own, we gradually acquire habits, that the rough collisions and the friction of active life prevent from gathering around other men. Narrow-minded prejudices and prepossessions are imbibed, through the facility with which, in our own little community, we adopt and maintain opinions. A too strong confidence in our own views on every subject, almost inevitably comes, from never hearing our opinions contradicted or called in question; and we express those opinions in a tone of authority, and even sometimes of arrogance, which we acquire in the school-room: for there, when we speak, nobody can reply."

A great proportion of Mr Abbott's work is occupied with a detailed description of the management of his school; and hence it is hardly susceptible of abridgement. Instead, therefore, of attempting to give an abstract of it, we have preferred to lay before the reader a few detached passages on subjects of importance in every system of education. These extracts at once furnish a specimen of the author's style of writing and thinking, and embody ideas and facts well deserving to be recorded in the pages of a Journal having for its chief object the elucidation and improvement of human nature. By reprinting the work in England, Dr Mayo has performed good service to the British public.

ARTICLE VII.

PHYSIOLOGIE DE L'HOMME ALIENÉ APPLIQUÉE A L'ANALYSE DE L'HOMME SOCIAL. Par SCIPION PINEL, &c. Paris, 1833.

THE name of PINEL is associated throughout the civilized world with the humane method of treatment now so generally employed in the management of the insane. When the father of the present author was first appointed to the charge of the Salpêtrière in the neighbourhood of Paris, the insane were treated there, as every where else, with a harshness, severity, and neglect, which rendered an asylum the abode of terror and misery, and which accounted perfectly for the horror which is still so generally felt at the very notion of a place of confinement.

No sooner had Pinel time to study the actual state of mind of the unhappy inmates, and to observe the irritating and hurtful consequences of severity, than he set himself to improve their condition, by treating them with kindness, and soothing their morbid feelings by every means in his power. He reformed the whole system of discipline, and substituted watchful attention on the part of the attendants for the chains and seclusion in which alone security had previously been sought. He introduced order, cleanliness, and comfort, where nothing but suffering and confusion were formerly known. The consequences were surprising. Tranquillity prevailed among the patients to an extent far exceeding all past experience; while recoveries became more rapid, and more numerous.

Having accomplished so much, Pinel announced to the world the principles which had guided him, and the success which had attended his efforts. Backed by results so decisive, and by the extensive opportunities which he enjoyed, he spoke with an authority which prejudice could not long withstand, and with a philanthropic eloquence not less convincing to the reason than cheering to the best feelings of human nature. And from the extensive circulation and influence of his work throughout Europe and America, it cannot be doubted, that to Pinel is, in a great measure, due the beneficent impulse which has already materially alleviated the sufferings of thousands, and which promises ere long to render insanity a much less terrible affliction than it has been in times past. Pinel, in short, was a notable instance of the advantage of placing at the head of a large public establishment a man fully qualified for the situation, and capable of availing himself of the opportunities afforded for adding to the stock of human knowledge and thereby to the sum

of human happiness. Had an ordinary routine physician been appointed in his place, the same abuses might have continued unabated for years, and no suspicion have ever crossed his mind that the system was susceptible of the smallest improvement. How few, accordingly,—how very few—are there, among the numerous establishments of Europe, whose physicians have done any thing to advance our knowledge of insanity, or even given to the world any record of their principles, practice, or experience! Many golden opportunities are thus lost for ever; but the day is approaching, when a more active and enlightened zeal will hasten to remove the reproach.

After this preface, we need hardly say, that the name of Pinel on the title-page of the above work gave us a sanguine expectation of finding the son carrying on the labours of his lamented parent, and contributing a fresh stock of information on this most interesting subject. Nor have we been deceived. We miss occasionally the perfect sobriety of judgment and solidity of matter which distinguished the father; but we recognise the same acute observation, glowing benevolence, and scientific zeal, which characterized him; combined, indeed, as is quite natural, with a more youthful and ardent imagination. These, however, are defects which the lapse of time and further experience will not fail to remove.

We intended to notice the present work at greater length; but, owing to want of room, must content ourselves with offering a strong recommendation to its able author, to make himself thoroughly acquainted with the facts and evidences of Phrenology; as we feel assured that it will enable him to give additional force and precision to his views, and to explain satisfactorily a variety of phenomena, which will otherwise seem perplexing and contradictory. His liberality, intelligence, and candour, lead us to believe, that conviction of the truth and value of Phrenology will follow his study of its doctrines; and we feel persuaded, that, with its assistance, he would not only do greater justice to his own talents, but add much to the practical value of his work. In the hope that a second edition, thus amended, may make its early appearance, we leave him at present with our best wishes.

ARTICLE VIII.

PROCEEDINGS OF THE MANCHESTER PHRENOLOGICAL SOCIETY.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,—I am directed to make the following communication to you respecting the Manchester Phrenological Society's proceedings since the last report inserted in the Journal:—

3d June 1834.—Mr James Edmondson read a paper on the character and development of Burns the poet; which led to an animated discussion at this and the ensuing meeting.

10th June.—Mr Bally introduced Mr Ditchfield, a resident of Paris, who visited this country mainly for the purpose of estimating the progress of Phrenology, with the view of reporting on the subject to its advocates in Paris. He was unanimously elected a corresponding member.

2d July.—The president, Mr Wilson, read a paper on idiocy, peculiarly referring to the case of the Salford idiot, as published in the last Journal.

5th August.—Mr A. Prentice suggested for discussion the question, "How far are the principles adopted in infant school education consonant with those of Phrenology?" In the course of his observations on this question, Mr P. entered into the description of the mode adopted generally in infant schools in the neighbourhood, in the founding of several of which he has been mainly instrumental. A long discussion arose upon the question, particularly as to the liability of the faculties to fatigue, and the great necessity of peculiar regard to avoiding an over exercise of them during infancy.

23d September.—A paper was read by Mr Edmondson "on the practice of taking developments"—deprecating the course adopted by some Phrenologists in pursuing almost indiscriminate manipulation of heads, and the prediction of character therefrom—a practice which, owing to a due regard not always being had to the whole relative conditions, he considered calculated to do injury to Phrenology, and so tending to impede its progress, by increasing the prejudices already too general against it.

14th October.—Mr Bally laid upon the table ten casts of different sections of the brain, as exhibited in the course of its dissection, according to the plan of Dr Spurzheim. The casts are beautifully executed, and are coloured and finished so as to constitute an invaluable substitute for the real brain in the illustration of cerebral anatomy. Mr Bally also displayed and dissected the brain of a sheep; upon which, in connection with the above-mentioned casts, he proceeded to give a series of observations on the anatomy of the brain, and to point out the correspondencies of the sheep's and the human brain. His remarks and dissection elicited the warmest thanks of the Society, and subsequently the set of casts of the brain was purchased and added to the Society's collection. The subject of the anatomy of the brain was continued at three subsequent meetings by Mr D. Noble and Mr Bally.

21st October.—Mr James Edmondson read a paper on the character of the natives of Loo-Choo, as described by Captain

Basil Hall, and suggested an inferred general development; which led to an interesting discussion.

2d December.—Mr Daniel Noble read a paper of on the means, physical and moral, of estimating human character." So highly were the merits of this essay appreciated by the members present on the second evening of discussion, that they determined upon its publication in the form of a pamphlet. This resolution has since been carried into effect, and a copy is herewith forwarded.

9th December.—Previously to entering into the farther discussion of Mr Noble's paper read at the last meeting, Mr Noble begged to make some remarks upon the critique contained in the last number of the Journal, upon his paper on the temperaments, therein published, and forwarded by this Society to the Editors. After some discussion upon those remarks, it was resolved unanimously, "That the Secretary is directed to communicate to the Editors of the Journal the objections of this Society to the critique on the *abridgment* of Mr D. Noble's paper on the temperaments, contained in the December number of that publication." In accordance with this resolution, I may be allowed respectfully to remark, that Mr Noble does not state in the essay that "indolence and mental inactivity in the absence of any very powerful motive" are the *result* of the sanguine temperament; but that this condition of things is *most commonly* associated with it, and for the reasons stated by Mr Noble in the succeeding paragraph, viz. "in consequence of the predominant energy usually possessed in these instances by the organs of vegetative life," leading most generally to the state of bodily constitution which you, in your critical illustration, allow to be productive of "mental indolence and inactivity." It was conceived by the Society, that had the whole sentence within the periods, relative to this matter, been quoted; your half-condemnatory remarks would not have been deemed so appropriate. In your concluding remarks in the critique in question, you observe, that "Temperament, therefore, besides influencing the activity of the organs, affects their power also; to a greater extent than Mr Noble seems inclined to allow." The Society apprehends, that had not a very important paragraph been abstracted, in the process of abridgement, this objection could not have appeared to hold good. In the draft of the paper in the possession of Mr Noble, the paragraph alluded to runs thus, "The practical inference which I would deduce from all these circumstances is, that, in forming an opinion of mental peculiarity from corporeal structure, we should in all cases take into the account, not only the size of the brain generally and the cerebral organs individually, but also the kind of temperament with which they

are associated; for as this latter very materially modifies the degree of exercise to which the power may have been submitted, it will be absolutely impossible to form a correct idea of the actual energy of any power, without our attention being directed to its probable training, over which the temperament exerts such a manifest influence. We are all well aware that the vigour of any faculty is obviously increased by its due exercise, and certainly before any corresponding increase in the size of the organic material can have taken place," &c. &c. In conclusion, it appears to us that the views expressed in Mr Noble's paper are, that exercise increases the *energy* of the powers, and that such exercise is promoted by a favourable temperament.

We feel it incumbent upon us thus to declare ourselves upon the foregoing subject, having unanimously adopted Mr Noble's essay on the temperaments, and having originally forwarded the same for insertion in your valuable Journal.

16th December.—Mr Prentice read a paper "on the comparative obsequial endowment of successful and unsuccessful tradesmen," in which several instances and facts, valuable to the science, were contributed. He has promised additional communications upon the subject at his earliest convenience.

19th December.—The Rev. Henry Halford Jones in the chair. This being an especial annual meeting of the Society for receiving the report of the past year, and for the election of officers for the ensuing one, the reports of the Treasurer and Secretary were read and received; and the balloting then took place. Ultimately the following results were announced by the chairman:—Mr Daniel Noble, surgeon, *President*; Mr George Inglis, *Treasurer*; Mr Jonathan N. Rawson, *Secretary*; Mr William Baily, artist, *Curator*; Rev. H. H. Jones, Mr George Plant, surgeon, Mr Richard Anderson, surgeon, Mr Edmondson, Mr James Edmondson, and Mr John Stansfield, *Councillors*. The thanks of the Society were then given to the officers of the past year, and the Society adjourned to the 6th January 1885.

6th January 1885.—The Secretary read a paper "on the character and source of the disagreeable feeling suggested by the observation of uncleanness of the person;" in which the Society ultimately thought, after two evenings' discussion, that he had successfully shown that the five external senses possess, like the intellectual faculties, perception, memory, and, *probably*, imagination. He examined the sources to which peculiar regard to cleanliness of the person is usually attributed, and shewed the deductions or conclusions to be unsatisfactory. After a brief description of the nature of the feeling experienced in uncleanness, and the process of annoyance it occasions, he expressed the conclusion at which he had arrived to be, "that the source of

that abhorrence which some display at the sight of uncleanness, or of extreme regard to cleanliness at the same time manifested, is the peculiar acuteness of the sense of touch or feeling in some degree, in joint operation with the observing powers."

27th January.—The life of Caspar Hauser was read by the Secretary, with a view to the eliciting of the opinions of the members, and inducing attention to that most interesting case. It is expected that it will lead to a more particular notice in the form of an essay.—Your attention to these communications will oblige, Sir, your most obedient servant, for the Manchester Phrenological Society, JON. N. RAWSON, Sec.

We insert with much pleasure the foregoing communication. The Manchester phrenologists continue to prosecute their investigations with most commendable zeal and perseverance; and we rejoice to find that they are presided over by such an intelligent and well-informed phrenologist as Mr Noble appears to be. His "Essay on the Means, Physical and Moral, of Estimating the Human Character," a copy of which Mr Rawson has kindly sent us, is excellently fitted to rectify the crude notions entertained by some as to the extent to which *character* is ascertainable from the mere size and form of the head, without regard to temperament, or inquiry into the kind of society in which the individual has moved; and his moral, religious, literary, and scientific education. The important influence of these circumstances in modifying the *natural tendencies*, though treated of in all the standard works on Phrenology, is too frequently neglected in practice; and the consequence is, that grave errors are committed, which, instead of being ascribed to the ignorance or rashness of the manipulator, are often regarded as demonstrative of the unsoundness of Phrenology itself. The present essay, therefore, in which these modifying circumstances are insisted on in detail, is calculated to be of great service in checking the folly of unthinking phrenologists; and we heartily recommend it to our readers, both for this reason and on account of its intrinsic excellence and soundness of doctrine. The pamphlet is sold by all the booksellers in Manchester, and also by our Edinburgh publisher. A short specimen may be given here.

With respect to the modifying effects of example, Mr Noble observes:—"We all know how much mankind, especially in youth, are the creatures of imitation, and how much example influences the disposition in early years. We all know how habits, from this source, become formed, to which there was not any especial predisposition; and how, when they have become so formed, they exist almost as a second nature, and this either for good or for evil. The great tendency in the inferior feelings of our nature to obtain a predominance is well known, and we may

almost infer with certainty, that, in the very great majority of instances, an undue activity and improper direction will have been communicated to these, if subjected in early life to the influence of evil association. This will hold good, not only in respect of those whose tendencies to immorality are naturally considerable, but in respect also of those who possess from nature a fair average of moral endowment; and indeed I may go further, and assert, with the highest confidence, that even those who are the most favourably gifted of nature will lose that high sense of Christian virtue, which is the perfection of the moral code, if in early life they have been engulfed in the allurements of vicious society. For, as the apostle emphatically observes, 'evil communications corrupt good manners.' And, in like manner, an individual of no great moral strength by his nature, will often pass through life with more true honour to himself than one more eminently endowed in a moral point of view, whose opportunities as to early association have not been so favourable. But the influence of society is not alike upon all; moral example will have infinitely more effect upon one who is possessed of a high cerebral organization, than upon one whose head is 'villanously low;' and whilst I believe that an individual of this latter character will, from his earliest years, be almost sure to run riot if evil communication be not studiously prevented, I am yet satisfied that even such an one may, by dint of an excellent moral training, be rendered a tolerably respectable character.* And the intermediate results may always be anticipated under intermediate circumstances; the proper proceeding, in the estimate, being always to compare the *predisposition* with the *external agents* by which it is modified, and to deduce the legitimate conclusion from a consideration of their reciprocal influence."

There is considerable force in what Mr Noble says in commendation of the study of literature, which he conceives to polish the manners by cultivating Ideality. We think him mistaken, however, in supposing that it is against sound literary education that the public mind is now so generally excited. There is a great difference between the mere acquisition of synonymous words in different languages, and the gaining of a relish for the beauties of *native* or foreign literature. Of twenty boys who receive what passes for a literary education, probably not more than one really appreciates, follows out, and is improved by the study of *belles lettres*.

After mentioning that the function of the perceptive faculties is to observe external objects and their qualities and phenomena, Mr Noble adds, with great truth,—“ But the kind of knowledge

* This statement appears too broad. Heads of the *lowest* class are in no circumstances accompanied by a tolerably respectable character.—Ed.

sought after, and its effects upon individuals, will vary with variations in the degree of mental endowment in other respects, and with their general education. Thus, for example, a person may have great powers in the acquisition of knowledge, but shall be of moderate reflective endowment, and such sciences be left to himself, the great probability is, that his whole soul will be bent upon petty gossip and trifling detail, in which he may be bound to tediousness; whilst, on the other hand, the same individual, by the communication of some powerful influence in early life, might have acquired much useful information, and, as a referee for those more highly endowed with reflective power, have constituted no unimportant member of society. And if some one were to predicate, from a mere observation of cerebral development, that a person with great individuality and eventuality would make great progress in physical science, and be very fond of natural history, and so on, it might happen that a very great error should be committed, as, love of tea-table talk, or of village politics, or of some other objects of trivial importance, contracted by neglect of education, might have created an actual distaste to the very things in which, under other circumstances, he would have been a respectable proficient. And in regard to those instances where, with strength of perception, a powerful reflective faculty exists, it will depend very much upon the education whether such a mind be honourably directed in its pursuits. I have seen individuals, with great intellectual power, presenting instances of mental excellence far inferior to many whose cerebral organization was much beneath their own; and, in these cases, the result might readily be traced to the education.—The former class of individuals I have generally observed to be very expert in their ordinary avocations; very clever at a bargain, or in arranging some scheme relative to the ordinary affairs of life; well informed, and happy in reasoning, upon the politics of the day; and, in a case or two which I have now in mind, decidedly ignorant upon, and entertaining distaste to, most of those subjects to the cultivation of which their own minds might, by their nature, be considered prone. And persons of the opposite class I have seen, whose cerebral organization, though respectable indeed, has not been indicative of any finite power, but who, by the influence of an excellent training, have distinguished themselves before the whole scientific world; and this, too, unassisted by patronage and undue influence. These illustrations are intended to convey an idea as to the method in which the direction of the intellectual faculties may modify the results."

Due consideration has been given to the Society's remarks on our critique of Mr Noble's essay on the Temperaments; but

there is nothing in their critiques which we as yet see any good reason for modifying. Mr. Noble says: "the system, which, in cases of the sanguine temperament, there is no compound a disposition to indolence and mental inactivity, in the absence of any powerful motive; nor are we less susceptible in the validity of the system suggested by Mr. Noble for the improvement, even supposing the fault to be, in strictness, in the organs of vegetative life," which, generally, glosses in the statement: "energy" which the temperament is sanguine, and the lungs and heart; and the activity of these, no farther from detracting from what the brain or any other part of the system, has exactly the opposite effect, by propelling forcibly throughout the system, stimulus supplied with oxygenated blood, which stimulates directly the brain and the internal organs; as is also wastefully considering the same, as quoted last by Mr. Rawson, but which, for the sake of brevity, was omitted in the printed essay, that we quote the observation that: "temperament, besides influencing the activity of the organs, affects their power also as a greater extent than Mr. Noble seems inclined to allow." The passage adverted to, however, does not bear on this question at all; for Mr. Noble speaks of energy acquired by exercise, while our remark has reference to *native energy* alone. Observations prove that the latter depends on temperament or quality of the organic structure, as well as on exercise. However much a lymphatic brain may be compelled to work, it will never acquire the energy of a similarly developed bilious or nervous brain which performs exactly the same quantity of labour. The reader must judge between us.—*Edinburgh*—*Journal of the Phrenological Society*.

ARTICLE IX.

published in WEDNESDAY'S EVENING CRIME.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

Sir,—The work of Mr. Galtrey, entitled *A Statistical Manual of the Prisons*, has lately received discussion on the old question, whether or not education tends to diminish crime. It appears from the work alluded to (of which an abstract will be found in the first volume of Mr. Henry Lytton Bulwer's "*Prison, Social, Literary, and Political*"), that while crimes against the person are most frequent in Corsica, the provinces of the south-east, and Alsace, where the people are well instructed, there are fewest of those crimes in Berry, Limousin, and Brittany, where the people are most ignorant; and that, in like manner, crimes against property almost invariably prevail most in those departments of which the inhabitants are best informed. The

data on which such statements are founded, ought to be narrowly looked into; but as M. Guerry has a high reputation for accuracy, and his tables seem to have been compiled with care, the probability is, that the above account may be safely relied on. Now, it may naturally enough be imagined, that if the facts are really so, they furnish unquestionable evidence that education, instead of diminishing crime, positively tends to increase it. Such an inference, however, seems to be as yet unwarranted; for, until it be proved that education has the same kind of subjects to operate on in every part of France, its effects cannot be judged of from such data as those furnished by M. Guerry. It appears from the 42d number of the Phrenological Journal, article 1st, that France is peopled by two great families,—named by M. Thierry, Gauls and Kuaris,—whose mental qualities are very dissimilar; and I have been informed, by a phrenologist who recently travelled in France, that he observed the heads to be in some districts much inferior to those seen in others. Now, this important fact ought not to be overlooked, as it has hitherto been, in judging of the influence of education; for it can hardly be doubted, that educated but inferior minds will display less morality than minds which are uneducated but naturally much superior. What should we say of a man who should call in question the efficacy of medical treatment, because a patient tainted from birth with consumption, and who had been long under the care of a physician, was not so healthy as a person with naturally sound lungs, who had never taken medical advice in his life? But for the treatment, the consumptive man would have been much worse than he actually was, and probably would have died in early youth. To judge correctly, therefore, of the question at issue, we must compare the present amount of crime in particular departments of France, with its amount *in the same departments* when there was either very little instruction or none at all. In this manner we shall avoid being misled by the effects of other influences; such as the density or thinness of the population,—the employment of the people in agriculture or manufactures,—and their residence on the coast, in the interior, or in mountainous or fertile districts. Were such a trial made, I think it would almost without exception be found, in cases where no great change of circumstances had occurred that in exact proportion to the increase of education there had been an obvious diminution of crime. I am well aware that, by the system of instruction generally pursued, the moral feelings, which restrain from crime, are wholly neglected: but cultivation even of the intellect appears favourable to morality; *first*, by giving periods of repose to the lower propensities, of whose excessive activity crime is the result; *secondly*, by promoting the habits of regularity, subordination,

and obedience; and, *thirdly*, by strengthening and informing the intellect, and thereby enabling it to see more clearly the dangerous consequences of crime. No doubt there are criminals on whom an excellent intellectual education has been bestowed; but instead of thence inferring that education increases the liability of mankind to crime, it may with great reason be asked, whether, had the same individuals wanted education altogether, their crimes would not have been ten times more atrocious.—
Yours, &c. Q. M. Q.

ARTICLE X.

CHAMBERS'S INFORMATION FOR THE PEOPLE, No. 45.

Treatise on Moral Philosophy.

THIS number of the *Information for the People* is occupied by a Treatise on Moral Philosophy, in which are briefly and intelligently described the leading doctrines propounded in ancient and modern times relative to the powers and operations of the human mind. The author, in concluding his sketch of the metaphysical systems which have hitherto prevailed, states that "it has been given more with the view of affording our readers an idea of what has been done in the way of exploring the hidden mysteries of mind, than with the hope that any benefit will be reaped from the perusal. The sketch, such as it is, exhibits a lamentable picture of misdirected ability—of valuable time spent in a search as vain as that after the 'philosopher's stone.' From the days of Zeno and Epicurus to those of Immanuel Kant, the world has been the theatre of successive systems of metaphysics, each of which, as we have seen, has met with followers of greater or less distinction, in schools and colleges, without having, either individually or collectively, been of any sensible benefit to the mass of the community. Logic, the design of which is to teach the right use of our reason, or intellectual and moral faculties, and the improvement of them in ourselves and others, has been actively employed in the endeavour to subvert the most obvious truths. Zeno demonstrated the impossibility of motion; Spinoza, that there was no God; Hobbes, that there was no difference between right and wrong; Hume, that belief was imaginary; Descartes, Mallebranche, and Locke, that mind was matter, or, in other words, that when we lose our consciousness of existence, we no longer preserve our identity. Well may the untaught reader inquire, What does all this mean? We may answer him in the words of Reid—'Poor untaught mortals believe undoubtedly that there is a sun, moon, and stars; an earth which we inhabit; country, friends, and relations, which we enjoy; land, houses, and move-

ables, which we possess. But philosophers, pitying the credulity of the vulgar, resolve to have no faith but what is founded on reason. They apply to philosophy to furnish them with reason for the belief of those things which all mankind have believed without being able to give any reason for it. And surely one would expect that, in matters of such importance, the proof would not be difficult: but it is the most difficult thing in the world; for these three men—Descartes, Malebranche, and Locke—with the best good will, have not been able, from all the treasures of philosophy, to draw one argument that is fit to convince a man that can reason, of the existence of any one thing without him. Admitted philosophy!—daughter of light!—parent of wisdom and knowledge!—if thou art she, surely thou hast not yet arisen upon the human mind, nor blessed us with more of thy rays than are sufficient to shed a ‘darkness visible’ upon the human faculties, and to disturb that repose and serenity which happier mortals enjoy, who never approached thine altar, nor felt thine influence. But if indeed thou hast not power to dispel those clouds and phantoms which thou hast discovered or created, withdraw this pernicious and malignant ray—I despise philosophy, and renounce its guidance; let my soul dwell with common sense.’ These are no doubt severe expressions of reproof from one of the most eminent inquirers into the nature of mind in modern times, but they are obviously no less just than severe. Professor Dugald Stewart has admitted with the Abbé de Bonald that ‘diversity of doctrine has increased from age to age, with the numbers of masters, and with the progress of knowledge; and Europe, which at present possesses libraries filled with philosophical works, and which reckons up almost as many philosophers as writers, poor in the midst of so much riches, and uncertain with the aid of all its guides, which road it should follow—Europe, the centre and focus of all the lights of the world, has yet its PHILOSOPHY only in expectation.’”

After thus giving his opinion as to the value of the labours of the metaphysicians, and alluding with approbation to the recent works of Dr Abercrombie, the author proceeds to notice “the extraordinary exertions which for the last few years have been made by the phrenologists, whose system of mind, laying the question of its physiological origin and alleged foundation entirely aside, has perhaps better claims to notice than many who are repelled by the startling question as to that origin may be aware of.” A short account of the rise and progress of Phrenology is then given, and a high eulogium is pronounced on Mr Combe’s *Treatise on the Constitution of Man*. The author observes, that, “as if . . . to compensate the credulity which their ancestors . . . alchemy and astrology, the public have . . . eager to condemn a science which, though

at first sight one of the same order, never yet has made any pretensions that were not based on observation of facts patent to the senses. So much we can say, in a spirit of fairness without having ourselves so much equivoquant with the original part of the science as to say whether it is to be judged on that. Since the publication of Mr Combe's *Lectures*, which has been understood and practically applied by multitudes without regard to particular lesions of the brain, the *own* has evidently been much affected. Phrenology may now be taken up to consideration, not as a means of vaticinating upon the attributes of men by an inspection of their heads, but as a scheme of the mental constitution; in short, a system of metaphysics, and, consequently, of morals. Considered in this light, it appears to us to have, in the first place, the important quality of intelligibility, which no other system altogether has. It seems for the first time to make plain the perplexing mixture of tendencies, feelings, and powers, which has heretofore rendered man such a riddle to himself. This it does by rigidly tracing the patterns of mind to their primitive functions, and reducing them to a kind of democratic level, allowing each an agency independent of the rest, but which may be exerted in company with others, and dividing the whole into three great classes—propensities, moral sentiments, and intellectual faculties.

Finally, the writer concludes, by quoting at full length from Mr Simpson's work on Popular Education, the account there given of the powers of the human mind, and Phrenology is thus made to occupy three-fourths of the whole sheet.

We cannot refrain from here expressing our high estimate of the bold and independent spirit which has induced Messrs Chambers to publish their favourable opinion of doctrines so generally treated as by persons who find it more easy to ridicule than to investigate. Not having studied the physiological department of Phrenology, they, with characteristic good sense, offer no opinion regarding its validity. A tree, however, is known by its fruit. If the metaphysical superstructure of Phrenology be so excellent, is it difficult to suppose from the conclusion that the physiology on which it is based cannot be improved.

ARTICLE XI.

MR J. L. LEVISON.

SINCE the publication of our last number, the following communication has been received from Mr Levison:—

“LIVER, Dec. 10, 1854.

“TO THE EDITOR OF THE LANCET AND PHRENOLOGICAL JOURNAL.

“SIR—I shall not trouble you with any further remarks on

the injustice of the review of my work on Mental Culture, or your *comment* on my last letter in your Journal, but shall request you to insert all the *misstated facts* and *doctrines* which you have promised to do, should I wish it:—that I am not taxing your courtesy too much, I refer you to the last number of your Journal, page 187, where you say,—‘From delicacy to Mr Levison, no details were originally entered into regarding the mistakes and inaccuracies, and, from the same motive, they are still withheld. Should Mr Levison, however, request us to publish them, this shall be instantly done.’ I shall, therefore, expect to see a list of the mistakes, &c., in the next Journal.—
I am, &c. J. L. LEVISON.”

In compliance with Mr Levison’s request, we shall now exhibit, at some length, the grounds on which we said that, in his book, “facts as well as doctrines are occasionally misstated; a fault which it is the duty of every writer on controverted subjects like Phrenology to avoid with peculiar care.”

Speaking of the mode in which the activity of Acquisitiveness may be allayed, Mr Levison says:—“It would be advisable to treat a covetous child in the following manner; viz., never to excite the tendency, but always to praise generous and disinterested acts; and thus, if we cannot eradicate the feeling, we have it in our power to give it a better and more salutary direction. *Induce the little being to derive the acquisition of knowledge, by initiating it in some department of natural history, for instance; you may gratify the feeling without any demoralization, and thus a propensity, otherwise tending to vice, may be rendered a means of instruction and intellectual advantage, acting in concert with the moral and reflective qualities of the mind, and exercising a salutary influence on the character.*”—(P. 187.)

We refrain from inquiring to what extent the moral and reflective faculties are called into action by the study of natural history; and shall simply express our surprise that the word *Acquisitiveness* should have so far misled Mr Levison, as to make him believe that this propensity is gratified by the *acquisition* of knowledge. The function of Acquisitiveness, as correctly stated by Dr Spurzheim (to whose authority Mr Levison bows), is merely to “give a desire for every sort of property,” (Phrenology, 8d edit. p. 171); and, in the words of the same phrenologist, it is the intellectual faculties alone “which procure to man or animals any kind of knowledge.”—(Id. p. 216.)

“We are told,” says Mr Levison on pp. 80, 81, “that Pizarro, with a few Spaniards, conquered the kingdom of Montezuma. fact that the crania of the Peruvians have the c iveness small, whilst in the heads of the

Spaniards it is large. This phrenological test is further established by a similar comparison between the heads of the Mexicans and their conquerors. There are many Mexican and Peruvian skulls (Aborigines) in the excellent museum of the Edinburgh Phrenological Society. On the other hand, we find that many of the natives who inhabit some of the Malacca Islands (the Caribbean Indians, for example) are notorious for their brutal courage, and their skulls form a striking contrast to those of the Iascars and Hindoos, both which people are proverbial for their timidity and cowardice."

In this short paragraph are comprised several inaccuracies of which any writer ought to be ashamed. In the *first* place, It was not the kingdom of Montezuma (in other words, Mexico,) but that of Atahualpa (namely Peru), which was conquered by Pizarro. *Secondly*, No phrenological comparison has ever been made between the heads of the Mexicans and those of the Spaniards—there being in the museum of the Phrenological Society, instead of "many" Mexican skulls, *not one*. And, *thirdly*, The geographical statement made by Mr Levison is very erroneous; for the Caribbean Indians do not inhabit "some of the Malacca Islands," but the Caribbee Islands in the West Indies, and the northern part of South America. Where, we take leave to ask, are "the Malacca Islands?" In the East Indies there is a *peninsula* called Malacca; but as for the "Islands," their position on the face of the globe is not very apparent.

On page 35, Mr Levison affirms that the Hindoos have "Benevolence large." Unless he is able to invalidate the evidence given to the contrary by Dr George Murray Paterson,* who made very extensive observations in India, and to annul the testimony afforded by about forty Hindoo skulls in the Phrenological Society's museum, we are entitled to say that his statement is not borne out by facts.

Such expressions as "the *size* of the venerative *faculty*" (p. 55); "This *organ* is situated laterally on each side of the last mentioned *faculty*" (p. 88); and, "It should be remembered that the *brain*, composed of these diversified *faculties*," &c. (p. 109)—are unphilosophical and absurd; for faculties have neither size nor place, and it is of organs, not faculties, that the brain is composed. These absurdities were, we doubt not, uttered through mere carelessness; but such carelessness is very injurious in a philosophical work. The whole book, it may be mentioned, bears obvious marks of negligence and haste; the reason of which may be partly found in a fact stated by Mr Levison in the *Berkshire Chronicle*, viz. that it "was composed

* Transactions of the Phrenological Society, pp. 437, 438.

after his professional hours, and that in a very few months." Respect for the public ought to have induced him to bestow more of the *labor limæ* on an elementary treatise like this, where accuracy is of greater importance than in works intended for the advanced student.

"When the head is very small," he says on p. 20, "(but accompanied with the nervous temperament), there is great general activity, but, at the same time, we feel that there is a mental feebleness. On the contrary, if the head be very large, then, with the same temperament, there is a corresponding superiority: the individual is impressively profound, driving all before him by the strength and energy of his genius, sometimes like a hurricane carrying desolation whenever he appears, or, as the glorious sun, enlightening and blessing mankind with the rays emanating from his moral and intellectual attributes: such a man was the great Lord Chatham." Now, these last effects occur only when the organs of the moral sentiments and intellect are large, which either may or may not be the case in a very large head. Mr Levison's statement, therefore, is too unqualified, and gives countenance to an error very prevalent among persons ignorant of phrenology—that a large and active brain, of whatever form, is, according to the cultivators of our science, always accompanied by genius. That Mr Levison meant otherwise, there can be little doubt; but the inaccuracy of his statement is certainly "a fault which it is the duty of every writer on controverted subjects like phrenology to avoid with peculiar care."

Speaking of Combativeness, he says (p. 31):—"In the well organized individual it is a feeling of great importance, infusing a moral courage which fits the possessor for the noblest acts, and urges him to make, if necessary, a sacrifice of personal ease, and even of life, in the cause of truth and virtue, from a stern sense of duty." Here is an obvious misapprehension. Combativeness no doubt gives the courage which enables men to act according to the dictates of higher powers, but it "urges" no sacrifice whatever.

On Constructiveness, according to Mr Levison, "depend all our powers of contrivance" (p. 43). The truth is, that the intellectual faculties are the contriving powers, and that Constructiveness merely gives the manual dexterity necessary for carrying their contrivances into execution. "It guides," says Dr Spurzheim, "the *practical part of construction*, but does not determine the objects to be constructed." (Manual of Phrenology.) There are persons who, though excellent contrivers, are (as in a case mentioned on p. 207 of our present number,) obliged to employ other men to construct what they plan; and, on the other hand, many good *constructors* are almost, or even wholly, destitute of the power of contrivance.

In the section on Self-Esteem, the following words occur: "This cerebral organ is situated above the organ of Adhesiveness, and was supposed to give nobleness to thought, and consequently to infuse a kind of dignity into all our actions," (p. 43). Its real situation is above the organ of Concentrativeness, that over Adhesiveness being the organ of Love of Approbation. By whom has Self-Esteem been "supposed to give nobleness to thought?" Certainly not by Gall or Spurzheim.

Speaking of Love of Approbation, Mr Levison says, "When this feeling is comparatively small, an individual is indifferent whether he has the good or the bad opinion of his associates; and such a person will be negligent, uncourteous, and selfish," (p. 46). But these results by no means necessarily follow. There is a courtesy of Benevolence as well as of Love of Approbation; and selfishness may exist either with or without a strong endowment of the latter sentiment, which simply operates as a check upon its outward manifestation. Persons ignorant of phrenology would naturally infer from Mr Levison's statement, that a small organ of Love of Approbation indicates selfishness, and a large one disinterestedness. The reverse of this is often seen.

"The organ of Conscientiousness," we are told, "is situated on each side of Firmness, and the two sentiments taken together may be compared to censors appointed by the Creator, to guard us against acting from the mere impulse of our lower feelings; or they may be regarded as a moral balance, by which we should weigh all our motives, so that we may not infringe upon the rights of others, or gratify personal desires by compromising our dignity as moral and intelligent beings," (p. 56). Firmness has nothing whatever to do with the weighing of motives in a moral balance. It is only a tendency to persist in such conduct, and such opinions and purposes, as the other faculties—moral or otherwise—may determine.

"These (the reflective) faculties," says Mr Levison, "are perfectly developed about the age of puberty, and indicate the greatest energy between thirty and forty," (p. 95). Nothing is more rare than their perfect development about the age of puberty. Perfection of development, and possession of the greatest energy, are co-existent, the latter being the necessary result of the former.

According to Mr Levison, had man been destitute of Locality, "his thoughts would have had nothing of regularity, but would have been like the fleeting and evanescent forms of passing clouds; and it would have been impossible for him to conceive the natural or accidental *relations* existing between the different objects of the universe on which he moves and dwells." "It is that power of the mind which informs us of the *relations*

of one object to another," (p. 84). The word *relation* is here most inaccurately used instead of *relative position*; and as to regularity and stability of the thoughts, we are puzzled to discover how these are influenced by a faculty whose entire function is to observe, remember, and judge of the physical position of objects. We know individuals who, with deficient Locality, are remarkable for thoughts the very opposite of irregular and evanescent.

Mr Levison says of Eventuality, that "when an object is spoken of, or presented to us, whether in a tangible form or merely orally, in an instant this highly valuable faculty recalls all circumstances connected with it," (p. 88). Surely it is not intended that these concluding words should receive a literal interpretation.

"The organ of Melody is situated in a lateral direction, on each side of Time," (p. 89). Another very careless expression.

Mr Levison entertains unsound and novel opinions respecting the sentiment of Wonder, though he propounds them as established doctrine. He thinks that this faculty gives mankind "an instinctive faith" in the recurrence of natural phenomena of which a regular and unbroken series has for a long time been observed. "Possessing this sentiment of natural belief," says he, "we are not now under the necessity of reconvinving ourselves that the operations of nature, which we observe, are uniform and constant: we feel certain that they are so," (p. 63). Facts, it humbly appears to us, are wholly at variance with such an idea of the function of the organ of Wonder—an idea in support of which Mr Levison offers not the shadow of an argument. Observation proves, that the larger this organ is, the less confidence have men in the uniformity and constancy of the operations of nature, and the more are they disposed to expect the supernatural interference of occult beings.

Some very odd statements are made with regard to Imitation. "When we reflect on the *multiplicity of IDEAS* which are acquired by children without any kind of direct tuition, we must conclude that there is an *innate faculty of IMITATION*!" (p. 69.) In what part of Dr Spurzheim's works, we again ask, did Mr Levison find that Imitation, or any other affective faculty, acquires ideas? But this is not all: Imitation, he says, besides conferring the power of *imitating* or *assuming* the natural language of the faculties, is the source of natural language itself, and of the power of comprehending it. His words are the following: "The organ of Imitation is situated on each side of Benevolence, and, from its natural tendency, might be designated the 'mimic power,' as it is this same faculty which gives to children a language of natural expression long before they ac-

quire the least knowledge of artificial sounds (verbal language) : and, in this manner, they comprehend certain physiognomical signs, even when they do not understand the words which orally represent them ; as, for example, the nod of the head, as an affirmative ; and the lateral shake, as meaning to express a negative. They also evidently distinguish between the frown of anger and the smile of approbation, as they intuitively shrink back at the exhibition of the former, and are attracted by the pleasing impressions of the latter," (p. 70). Mr Levison neither gives, nor, we may safely add, is able to give, any good evidence of the soundness of these new views as to the source of natural language and power of understanding it.

"The organ of Form," says Mr Levison, "lies rather upon Individuality, at each side of it," (p. 80). This is pure nonsense.

At the end of the book there is given an explanation of technical terms ; and here, at least, might care and precision have been expected. Even in definitions, however, Mr Levison displays his characteristic vagueness and inaccuracy. We shall extract several of them entire, and leave them, without comment, to the judgment of our well-informed readers.

"*Colour (organ of).*—Perception of harmony or relation of colours."

"*Constructiveness.*—Instinct of contrivance."

"*Destructiveness.*—Carnivorous instinct."

"*Form.*—Perception of symmetry and proportion."

"*Hope.*—A sentiment which urges the mind to regard a future state."

"*Imitation (organ of).*—Source of expression and natural language."

"*Marvellousness.*—Instinctive credulity."

"*Number (organ of).*—Perception of quantity."

"*Secretiveness.*—Instinct of cunning and evasion : also an element in prudence."

"*Self-Estee.*—In its good sense, the instinct of self-preservation, but generally used with a reference to its various abuses."

"*Size (organ of).*—Perception of distance and perspective."

We now take leave of Mr Levison, by expressing our regret that he should have done himself the injustice of sending into the world a book sullied by so many imperfections, and of which we have been compelled to speak in terms the reverse of those which we should otherwise have gladly employed. We beg to assure him, that notwithstanding what has lately, and on the present occasion, appeared in our pages, we shall ever be ready to speak with favour of whatever future productions of his pen may seem to us worthy of commendation.

ARTICLE XII.

SINGULAR DREAM.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,—As the subject of dreaming is rather a curious one in the philosophy of the human mind, and phrenology is the only system which affords a rational explanation of the nature and origin of dreams, the following narrative may prove not uninteresting to your readers, as an example of considerable activity of some of the intellectual faculties co-existing with the complete inactivity, or sleep, of most of the propensities and sentiments. The whole occurrences were as distinctly impressed on me as if I had been entirely awake.

In the dream referred to, I was standing in St Paul's Church-yard, when a funeral procession, consisting of a magnificent hearse, drawn by six horses, preceded by a great number of mutes, and followed by an immense train of carriages, slowly approached from Ludgate Hill, and made its way towards the entrance on the north side of the Cathedral. A dense crowd was looking on, and I was given to understand that the deceased was a man universally known, and distinguished for the services which he had rendered to his country and the lustre he had shed upon the age in which he lived; but I could not discover his name. On arriving within a short distance of the gate, the procession stopped, and presently Lord Nelson stepped forward from beside me, dressed in his admiral's uniform, and, with a respectful inclination of his head, as a mark of profound respect for the character of the deceased, stated to him that he had left his own tomb, and come to do him the honours of the funeral-vault, and receive him amongst the other great men already buried there. The recently deceased, who, strangely enough, was not in his coffin, but stood near us, received this piece of attention courteously and graciously, and signified how much he was pleased to put himself under his Lordship's guidance in this hitherto untried scene.

After a short pause, Lord Nelson, perceiving the crowd looking eagerly on for the completion of the ceremony, remarked to his guest, that he must now take his place in his coffin, and be carried forward in the splendid official hearse prepared for the occasion. His Lordship then ordered the richly ornamented coffin to be brought forward, and said, that as he was now accustomed to the thing, he would shew his friend how to place himself, which he accordingly did by laying himself in it at full length, and carefully pulling a folded covering over his body. He then got out, and the deceased placed himself exactly as

directed, on which his Lordship made a signal to lift the coffin into the hearse and move on. This was done accordingly, and we then mingled with the crowd, and proceeded on foot to the door of the Cathedral—I walking familiarly alongside of his Lordship, without ever wondering how I had become acquainted with him, or perceiving any thing extraordinary in the fact of a man who had been dead for many years, rising from his grave, *still dead*, and, in the character of a dead man, doing the funeral honours to another dead man. I never for a moment imagined that Nelson was alive; but, on the contrary, was conscious that a long interval had elapsed since his death, and saw distinctly the glazed eye and cold dull features so characteristic of death: and yet so completely were the feelings asleep, that I felt neither wonder, nor awe, nor incongruity, but every thing seemed perfectly natural and as it ought to be; and indeed I was more at ease with him than I probably would have been had I met him in society as a living man.

We entered the church together, and Nelson, with respectful care, was ready to direct every movement, so as to make the situation of his guest as little uncomfortable as possible. He descended with him into the vault,—saw his coffin properly placed,—took his leave,—and then adding that he must now resume his place in his own coffin, was going away, but immediately turned round and said, “By the bye, as I am here at any rate, would it not be as well to take a look of my head before I go?” I answered eagerly, “that I thought it would, as this was an opportunity which might not occur again, and ought by no means to be lost.” We thereupon proceeded to the recess of a window for the sake of a better light; and as he stood before me with his sunk and glazed eye, dull leaden features, and armless sleeve, I thought how very like he was to his portraits, and to the wax-figure in Westminster Abbey! At this time, too, it struck me as extraordinary, that he who had been so long dead should be aware how much interest phrenology was exciting *now*, when, at the time of his death, it had scarcely been heard of; but this was the only thing approaching to wonder or perception of incongruity of which I was conscious during the whole time.

On looking attentively at the forehead, I was struck with the breadth and fulness just above the root of the nose, where Individuality lies; and remarked to him that his power of observing what was passing around him must have been peculiarly acute and rapid, and that I could now see many uses in his profession to which it was applicable, although I had never before thought that it was so necessary. He requested to know exactly what was comprehended under the term Individuality; and after listening to the explanation, replied, “*It is quite*

true: I must have it large—that was my forte—I was always quick in observing.” I then noticed the great development of Locality, Weight, Size, and Form, told him the qualities of mind which they indicated, and remarked on the fondness for exploring other countries, which such a combination bestowed, and the facility which it gave of recollecting places and countries once seen. He said this also was correct, and that he found Locality useful even in stationing the ships of his fleet. I proceeded in my examination, and remarked, that I was disappointed to find the upper part of his forehead more retreating than I had anticipated—denoting less power of logical reasoning and systematizing than what I had conceived him to possess. He begged I would explain particularly the functions of that part of the brain; and when I gave him the usual account of Causality, he thought for a moment and replied, “*Well, after all, you are perhaps not far wrong there either: I was not remarkable for reasoning power; observation and the other qualities were what I excelled in.*” My interest in the examination was becoming every moment more intense, and my eye was taking the direction of Firmness, an organ which seemed to be very largely developed, when, unfortunately, the vault-keeper came quietly up, and, tapping his Lordship on the shoulder, said all was ready for him down below, and he would thank him to resume his place, as he had not time to wait longer. His Lordship at once obeyed, and bade me good bye, with a slight bow, but without altering a single feature of his face. I then left the church, thinking how fortunate I had been to be there at such an interesting time, and soon after awoke.

Such are the facts of my dream. I shall not attempt to explain them farther than by remarking, that they exhibit a striking instance of activity of some faculties co-existing with repose of others; a circumstance which can be accounted for only by the phrenological principle of a plurality of cerebral organs, each of which may be active while the others are at rest. The perfect recollection which I had, not only of Nelson’s history, appearance, and death, and of the localities of St Paul’s and the aspect of its monuments, but also of the phrenological doctrines and their applications in life, formed a singular contrast to the total absence of every feeling of awe, incongruity, wonder, or disgust, which, in the waking state, would have been so strongly excited. The only cause to which I can ascribe the dream, is having previously resolved to send to the library for Southey’s *Life of Nelson*, which I had heard praised as an excellent piece of biography. I am, &c.

A. C.

EDINBURGH, 3d February 1835.

ARTICLE XIII.

PROSPECTUS OF A BRITISH ASSOCIATION FOR THE
ADVANCEMENT OF MENTAL SCIENCE. By Sir GEORGE S.
MACKENZIE, Bart.

THE establishment of an Association for the advancement of Physical Science, naturally led several persons who have paid attention to the state of Mental Science to desire the promotion of the latter by a similar Association. Whether mental science be regarded as one hardly yet in existence, or as having advanced sufficiently to enable those who have particularly attended to it to perceive that it is minutely interwoven with human conduct and human institutions, it has been too long neglected. While physical science opens up to view many proofs of the immensity of creative power, and administers to the increase of human comfort, it likewise multiplies human wants, and contributes to the useless gratification, even to the extent of abuse, of appetites which were destined not to be the guides of human conduct, but to be subservient to the higher faculties, the exercise of which alone can direct mankind to the rational use of physical discovery. The rational enjoyment to which physical science can administer, can be rendered so only by a knowledge of the real constitution of man; and such happiness as it may be permitted to us to enjoy in this world can be attained only by searching for the relation in which man stands to his fellow-men and to external nature—in other words, for the laws which it has pleased Almighty Power to establish for that relation—and by obeying those laws as part of the Creator's will. No doubt it has been discovered that the mind is so closely connected with the body as to produce mutual influence; and to investigate this is a branch of physiology; and thus, mental science might appear capable of being connected with physical, in our present Association: But, since the mental faculties have not yet been all discovered, nor those known defined with sufficient accuracy, they have to be submitted to farther metaphysical inquiry; and it seems proper, from the wide extent of the subject, that a separate Association should be established. While mental science is truly one of observation, inquiry being applied in the first instance to the discovery of faculties, much discussion will be required before the definitions of discovered faculties are settled. Seeing, therefore, that this is what may be called a mixed science, and that its results are applicable to legislation, the administration of justice, political science, education, and the treatment of the insane, and, in short, to every sublunary concern of human life, it would be improper to attach it to an Asso-

ciation for the advancement of purely physical discovery, while its extent is ample for the full employment of a separate one.

The immense importance of mental science to mankind has been overlooked, because for a very long period no discovery of any importance had been made in it. Philosophers had speculated only on their own individual consciousness, and had made themselves standards for the whole human race, neglecting, or setting aside as not worthy of regard, the marked differences of human talent and character. Attention has been attracted to physical science, because discoveries were, to all appearance, more easily made, and every discovery opened the field still wider, so that every one found a range for his prevailing talent. Physiologists, however, have at last withdrawn the veil which had obscured and rendered uninviting the track of those who had embarked on the ocean of metaphysics, without a single fact to serve as a pilot.

Enough has been said to introduce what is proposed to be the manner of proceeding. As soon as a sufficient number of persons shall have announced their desire to be members, a general meeting will be held at such time and place as may appear convenient, at which officers will be selected, and rules for future government enacted. And, if they can be procured, reports will be read on the following subjects:—

1. On the present state of mental science.
2. On the present state of our knowledge of the causes of insanity, idiocy, and other aberrations of the faculties.
3. On the present state of the criminal law, in reference to the mode of trial and punishment, and as applicable to the human faculties.
4. On the present mode of administering justice in civil cases.
5. On the present state of education.
6. On the present state of political science.
7. On the present customs and usages of society, as affecting the faculties.

It is proposed that the inquiries to be instituted shall be remitted to different committees or sections as follows:—

1. Enumeration and analysis of the human faculties; the physiology of the brain; the causes of difference in human talent and character; hereditary influences.
2. Education, in reference to health, and the discipline of the animal, intellectual, and moral faculties; the customs and usages of society, in reference to their influence on the human constitution.
3. Civil and criminal legislation; the relations of man to external things.

4. Political economy ; colonization ; in reference to the moral faculties.

It is proposed that the sections shall report their proceedings daily to a general meeting, when, if any member shall choose to make observations, he shall be invited to deliver them, and some member of the section, on whose report the observations may be made, shall be at liberty to reply, after which no farther discussion shall be allowed ; and a recommendation made to inquire farther into facts to be submitted to the section at the subsequent annual meeting. No question having any reference to religious creed to be admitted.

The establishment of such an Association as that proposed by Sir George Mackenzie, is certainly most desirable ; but we fear that, unless the members were phrenologists, the business of the meetings would consist of vain and endless speculations, and that the most opposite opinions would be advocated without the possibility of appealing for their support or refutation to any fixed and admitted standard. On the other hand, were half of the members phrenological, and the other half unphrenological, the Association would evidently prove inoperative,—those ignorant of phrenology denying, doubting, or groping for principles which the phrenologists consider fully established ; and the phrenologists, on their side, by no means consenting to be thus retarded in their progress. We would suggest, therefore, that the phrenologists of the United Kingdom should associate, and meet once a-year in some central place, such as York. Phrenologists would all agree on fundamental points, and it cannot be doubted, that, by such meetings, and the reading of reports like those suggested in Sir George Mackenzie's prospectus, a very decided impetus would be given both to the advancement and to the diffusion of phrenology. The public might be attracted to some of the meetings by lectures on the history and principles of the science.

As the maturest consideration ought to be bestowed on this important subject, we recommend it to the attention of phrenologists and phrenological societies throughout the kingdom, and shall be happy to receive communications (*post paid*, through any of our publishers) from all who incline to favour us with their suggestions, or promise of support to the projected Association. Should insuperable difficulties present themselves, it deserves to be considered by Phrenological Societies whether they should not individually hold annual general meetings, as the Parisian Society does, and invite the public to hear reports of the labours of the preceding year, and the progress which phrenology is making throughout the world.—EDITOR.

MISCELLANEOUS NOTICES.

EDINBURGH.—The following evening courses of Lectures are being delivered in the Waterloo Rooms, under the auspices of the Edinburgh Association for Procuring Instruction in Useful and Entertaining Sciences:—1. Lectures on Phrenology (twice a-week), giving a full view of the Philosophy of the Human mind, and embracing the applications of the Science to Education,—Morals,—Criminal Legislation,—Insanity,—Health,—the elucidation of Character,—and the Happiness and Moral and Intellectual Improvement of the Human Race. By Mr George Combe.—2. On the Laws of the Animal Economy (once a-week), embracing a Popular View of Anatomy and Physiology, and the application of their principles to the preservation of Health. By Dr Allen Thomson.—And 3. A second course of Natural Philosophy (once a-week), on subjects which were either altogether omitted, or but slightly treated of, in last winter's course, such as the doctrine of Bodies or Matter in general—Atmosphere—Heat—Electricity—Meteorology—Galvanism—Magnetism, and the general features of Astronomy with a view to the formation of artificial Globes and the construction of Maps and Charts. By George Lees, A.M., of the Scottish Naval and Military Academy.

The attendance at these Lectures is shown by the following statement of tickets sold, and visitors admitted, down to the 4th February 1835:—

	Phrenology.			Natural Philosophy.			Animal Economy.			Total.		
Tickets	212	L.96	4 6	203	L.68	15 6	192	L.64	16 0	607	L.228	16 0
Visitors	835	20	17 6	140	3	10 0	255	6	7 6	1229	30	15 0
	L.116 2 0			L.72 5 6			L.71 3 6			L.259 11 0		

We extract the following from the *Edinburgh Chronicle* of 27th December 1834:—“A correspondent in Melrose reminds us, that in making, some time back, a few remarks upon Phrenology, we promised that we would take an early opportunity to enter at more length into that important question. ‘I have waited,’ he says, ‘and watched for that number, but it has never appeared; and in the sickness arising from hope deferred, I have taken the liberty of begging that you will, in as early a number as possible, express your opinions upon its tendency and merits. The operatives in the south of Scotland are beginning to appreciate its merits. Nothing but cheap information on the subject is required. A public lecturer upon that interesting science would meet with certain and deserved success. Many of the readers of your journal in this quarter, have a faint perception of its doctrines, and the expression of your opinion would be an unspeakable benefit and pleasure.’ We have no recollection of the particular occasion alluded to, but have no doubt we did make such a promise, and we assure our correspondent that we are exceedingly pleased to find that the subject excites so much interest. To those who are not acquainted with the principles of the science—and we can pretend only to a knowledge of these—we dare say it may appear ultra-absurd; but our belief is, that were Phrenology generally understood—and it has only to be understood in order to be appreciated—it would lead to a complete and most beneficial social revolution. But we cannot enter into its merits at present, and are afraid it will not be in our power for some time, owing to the present state of the political world. We hope, however, in due time to be enabled to devote an article or two to its consideration.”

The January and February numbers of the *Christian Pioneer*, a Glasgow periodical, contain the first and second of a series of articles on phrenology, and a regular continuation is promised. “Considering the philosophy of mind,” says the Editor, “to be one of the most important subjects that can engage human attention, and that every thing which tends to throw light on mental phenomena must be useful to man, we have requested a series of papers on phrenology from an individual well qualified to do justice to that interesting science; and though we do not pledge ourselves to coincide with every statement he may make, we are well satisfied that none will be made

but such as will merit candid and serious consideration." The first article consists of preliminary observations intended to remove hostile prejudices; and in the second is given the history of Phrenology, down to the departure of Gall and Spurzheim from Vienna in 1805. The editor of the *Edinburgh Chronicle*, in order to meet the request of his Melrose correspondent, has copied the former of these articles, slightly abridged, into his paper of 31st January, and promises to quote the others as they make their appearance. "To such of our readers," he observes, "as still labour under the erroneous impression that Phrenology is a tissue of unfounded and absurd doctrines, we may mention, that it is taught as the true physiology of the brain, and the science of mind; by professors in the London University, in the University of Dublin, in the Andersonian University in Glasgow, and by eminent private lecturers in Edinburgh—that its general principles are now admitted to be true, even by professors of the old school, who continue to deny its details, but at first ridiculed it entirely—that at a late meeting of the Royal Medical Society of this city, (the most important of the juvenile societies connected with medicine,) at which it formed the subject of the evening's discussion, the essayist, and all the speakers except one, declared in favour of its truth—that the spirited editors of 'Chambers's Information for the People,' in a recent number of that work on Moral Philosophy, gave phrenology the preference, for clearness and usefulness, over all former systems of mental philosophy—and that, at the present time, Mr Combe is lecturing in the Waterloo Rooms twice a-week, to an audience of 250 of the citizens of Edinburgh, of all ages and pursuits. These facts, we hope, will be accepted as an apology for our complying with the request alluded to, by presenting some account of the subject in our columns."

PHRENOLOGICAL SOCIETY.—The following office-bearers were elected on 27th November 1834:—George Combe, *President*; John Anderson, jun., Arthur Trevelyan, Sir G. S. Mackenzie, Bart., and Dr Francis Farquharson, *Vice-Presidents*; John F. Macfarlan, Lindsay Mackersy, Charles Macaren, H. T. M. Witham, Dr John Scott, and P. Deseret, *Councillors*; Dr William Gregory, *Secretary*; Robert Cox, *Conservator of Museum*; D. Campbell, *Clerk*. Several donations have been lately received:—Skull found under the foundation of the old steeple of Montrose, presented by Dr William Gregory; cast of skull of the Dugong or Indian mermaid, presented by Mr Anthony O'Neill; and three Hindoo skulls—two found on the banks of the Hoogley, and one from Pullicate on the Coromandel coast, presented by John Chisholm, Esq., surgeon, London.

GLASGOW.—On Monday 5th January, a phrenological *soirée* was held in the Andersonian University. There was a good attendance of ladies and gentlemen, but little or no discussion took place, as Professor Hunter and the other phrenologists had almost undisputed possession of the field. Dr Lawrie was the only opponent that presented himself, and even he admitted the claim of Phrenology to be ranked as "a science." At the following *soirée*, Dr Hunter introduced some remarks on national character, illustrated by a selection of casts.

DUNFERMLINE.—Mr W. A. F. Browne having undertaken, at the conclusion of his course of Lectures on Phrenology in Dunfermline last year, to give there an annual lecture on the science, delivered that for 1835, on 10th February, at a quarter past 8 o'clock p. m., in the Maygate Chapel. The subject which he treated was National Character, and the audience amounted to about two hundred and fifty individuals, each of whom paid sixpence. The delivery of an annual lecture in other provincial towns would be attended with much benefit.

DUNDEE.—On the forenoon of Sunday 11th January, a lecture on the connexion between Phrenology and Christianity was delivered in the Thistle Hall, Union Street, by the Rev. H. Clarke. This lecture gave so much satisfaction, that, as we learn, the Dundee Mechanics' Phrenological Society intend to print it. Mr Clarke has delivered several additional lectures on Phrenology.

GREENOCK.—The Phrenological Society of this town has lately procured an extensive collection of casts, and is proceeding with great vigour in the study of Phrenology. We beg to be favoured with occasional accounts of the progress of this and other societies.

SOUTHAMPTON.—Mr J. R. Stebbing lectured on Phrenology here in November last. He was attacked by a correspondent of the *Hampshire Advertiser*, on the subject of dreaming, &c.; but in a subsequent number of that paper was defended by a third party, and also by himself. The opponent, as usual, evinced the utmost ignorance of the science.

UNITED STATES.—From the second number of the *Annals of Phrenology*, we learn that the Boston Phrenological Society held regular meetings last summer, which were attended with unabated interest. A remittance of £100 was made to London in order to purchase casts. A course of public lectures, commencing on 3d October, at seven o'clock P. M., has been delivered at the Masonic Temple, under the direction of the Society.—A social Phrenological Society, composed of ladies and gentlemen, has been formed at *Hingham*. "Its members are of the most respectable families in the town, and their display of ability, and zeal in the study of the science, is highly creditable."—At *Nantucket* a similar society has been organised. "Its members are able and active. Mr Dunkin has just closed a course of lectures on Phrenology at this place. It was exceedingly popular."—At *Brunswick, Maine*, "a Society has been formed, in which the best students of the College take an active part. Its success is certain."—At *Andover, Amherst, and Hanover, N. H.*, "Phrenological Clubs have been formed by the students, and the science receives no small share of their attention."—Societies have arisen also in *South Reading, Leicester, Worcester, Hanover, Mass., Providence, R. I., and Hartford, Conn.*—The Boston Medical Magazine defends Phrenology in an unqualified manner; and the reprints of Mr Combe's *System and Elements of Phrenology*, &c., and of Dr Combe's *Observations on Mental Derangement*, have met with a very rapid sale. In short, the prospect from the other side of the Atlantic is cheering beyond expectation.

Dr Caldwell's excellent Treatise on Physical Education, published at Boston several months ago, has been received, and will be noticed. We have been gratified by receiving a copy of a useful little volume of 192 pages, entitled "Illustrations of Phrenology; being a Selection of Articles from the Edinburgh Phrenological Journal, and the Transactions of the Edinburgh Phrenological Society. With twenty-six wood-cuts. Edited by George H. Calvert. With an Introduction by the Editor. Baltimore, 1832." The editor's introduction is very well compiled, but his alteration of the numbering of the organs seems to us uncalled for, and tending to produce confusion. The remaining contents of the volume are the cases of Gottfried, Williams, Bishop, Burk, Hare, Pope Alexander VI, Melancthon, King Robert Bruce, and the Rev. Mr M.; with reports of Dr Gall's visit to the prisons of Berlin and Spandau, Mr Combe's visit to Dublin, and Mr Deville's examination of heads of convicts on board the ship *England* in 1826. The idea of the volume is excellent; and the wood-cuts, though in general coarsely executed, add much to its value. Such a book is well fitted to rouse the attention of the indifferent, and to lengthen the visage of the scoffer.

PARIS.—The January number of the *Journal of the Paris Phrenological Society* has just been received. It is now increased to the octavo size, and contains much interesting and original matter.

QUICK AT MEALS, QUICK AT WORK.—In a notice of the last number of this Journal, in the *Lancet* of 27th December 1834, some degree of misapprehension is fallen into, regarding what is said on p. 117, in an editorial note at the end of Mr Noble's Essay on the Temperaments. We there observed, that, "*ceteris paribus*, temperament seems to affect equally every part of the body; so that if the muscles be naturally active and energetic, we may expect also activity and energy of the brain." This principle, we added, is virtually recognized by William Cobbett, in a passage quoted, where he in-

forms lovers, that a girl who walks and speaks quickly and distinctly, and plies the teeth rapidly in eating, may, with considerable safety, be presumed to have an active and industrious mind. "Quick at meals, quick at work," says Cobbett, "is a saying as old as the hills in this the most industrious nation upon earth; and never was there a truer saying. Get to see her at work upon a mutton-chop, or a bit of bread and cheese; and if she deal quickly with these, you have a pretty good security for that activity, that *stirring* industry, without which a wife is a burden instead of a help." On this the remark was added,—“We are disposed to think that Cobbett's advice will prove sound in all cases where the nervous and muscular systems are equally developed, equally healthy, and equally accustomed to exercise.”

By this it was meant, that in cases where vivacity of the muscular system is evinced by habitual quickness of gait, speech, and movement of the jaws in chewing, the brain also will usually be found active; and that Cobbett's advice, *that these symptoms of muscular agility ought to be noted by lovers wishing to ascertain whether a girl is likely to be active-minded and industrious, will generally prove sound.* The writer in the *Lancet*, however, understands Cobbett and ourselves to recommend the hasty and imperfect mastication of food. "To our mind," says he, "the advice deserved some criticism like this. 'Nature meant teeth to be *used*, not food to be bolted. Teeth were designed to save trouble to the stomach,—to save it an effort which sometimes it cannot consummate at all. The young woman who deals very 'quickly' with her food will soon have a slow digestion, and that will end in disinclination to both mental and muscular activity. 'A time to work and a time to chew,' is a better saying than 'quick at meals, quick at work,'—a proverb which task-masters may easily make the agent of a gross crime against health. The saying deserves reprobation. We reflect too seldom on the *purposes of the teeth.*" We cordially agree with the *Lancet*, in thinking that food ought to be thoroughly chewed before being swallowed—and not only so, but that labour of mind and body ought to be refrained from until digestion has made considerable progress. But we do not perceive the slightest incompatibility between a *quick* and a *thorough* mastication. It is possible to chew quickly, and yet to "use" the teeth to the fullest extent, so as to avoid "bolting." The young woman who bolts her food, is, in ordinary circumstances, likely to do so through sheer laziness; and the *Lancet* is indisputably right in affirming, that the effect of this will be to augment still more her disinclination to both mental and muscular activity.

BEECHY'S VOYAGE IN THE BLOSSOM.—Can any of our readers inform us what has become of the skulls brought to England from St Lawrence Island, Beering's Strait, by Mr Collie, surgeon of the Blossom? We understand that they were taken possession of by Government, along with all other specimens of natural history collected during the voyage; but of their subsequent fate we are entirely ignorant. They must be comparatively useless to all but phrenologists, and we know that Mr Collie intended them as a donation for the Phrenological Society. That gentleman also, as Lieut. Beechey mentions in a passage quoted in our 34th number, p. 96, gave in his Journal a description of the heads of several Loo-Chooans, which was too long for insertion in the published narrative of the voyage. We hope that some friend will be able to bring to light both the skulls and the description of the heads. The latter, though too long for Lieut. Beechey, would probably suit our pages.

BRAIN OF THE BULL DOG.—Extract from *The Field Book*, article Dog.—“The cerebral capacity of the bull dog is sensibly smaller than in any other race, and it is doubtless to the decrease of the encephalon that we must attribute its inferiority to all others in every thing relating to intelligence. The bull dog is scarcely capable of any education, and is fitted for nothing but combat and ferocity.”

MR LOUDON makes the following sound remark in his “*Encyclopædia of Cottage, Farm, and Villa Architecture*,” published in 1834, p. 1124. “Before we recommend any youth to study Architecture as a profession, we

would endeavour to ascertain, upon phrenological principles or from general observation, whether his organization was favourable for that pursuit. One of the grand causes of the slow advancement of all the arts of taste, and of the great prevalence of mediocrity among artists, is the utter neglect of this preliminary measure on the part of their parents or advisers."

THE LONDON MEDICAL GAZETTE of 7th February contains a most disgraceful and abusive attack on Phrenology, which, for misrepresentation, ignorance, and *mala fides*, has had no parallel in this country since Dr Gordon's scurrilous production in No. 49 of the *Edinburgh Review*. The Gazette did not reach us till our pages were full, but we may possibly recur to it.

Among other signs of the times, we notice, that, in the account of Dr Gall just published in the new edition of the *Encyclopædia Britannica*, his history and discoveries are calmly narrated in accordance with the statements of the phrenologists themselves; contrary to the custom hitherto prevalent on such occasions, of misrepresenting and distorting facts. It ought to be remarked also, that the writer preserves the strictest neutrality, declaring neither for nor against the phrenologists; a circumstance which, if taken in connexion with the fact that the editor of the *Encyclopædia Britannica* is also editor of the *Edinburgh Review*, must be held as symptomatic of a considerable increase of respect for Phrenology. The article alluded to, however, contains a few trifling inaccuracies. Thus, Dr Gall's christian name is said to be John Joseph instead of Francis Joseph, an error copied from a French biographical sketch. Again, it is erroneously stated, that of his *Anatomie et Physiologie du Système Nerveux*, &c., only a volume and a half appeared; whereas the work was completed in four volumes. "The most elaborate of his productions, however," we are told, "is *Organologie, ou Exposition des Instincts, Penchans, &c., et du Siège de leurs Organes*, which was completed in 1825. His *Histoire des Fonctions du Cerveau* had appeared in 1822, in two vols. 8vo." The fact is, that the *Organologie* is merely a portion of his work *Sur les Fonctions du Cerveau*, which, in its turn, is but a reprint, with very few additions, of the physiological portion of the *Anatomie et Physiologie du Système Nerveux*.

MARQUIS MOSCATI.—Our readers may recollect, that we took occasion a few numbers back (vol. viii. p. 227), to defend Dr Spurzheim and Phrenology from the misrepresentations of their *soi-disant* friend the Marquis Moscati. At the time of our notice, we knew him only as the author of the misrepresentations which we exposed. The history of his conversion to Phrenology, which appeared in some of the newspapers shortly afterwards, and was greedily read by many, served only to confirm, by its inconsistencies, the suspicions of gross inaccuracy which his first paper excited in our minds; and at last, about a month ago, the Marquis, as the prosecutor of the *Times* newspaper, made an appearance in court, which, however characterized by cleverness and *savoir faire*, has at once and for ever extinguished any little claim which he may have formerly possessed to the attention or favour of the British public.

Mr Combe has completed a second edition of his work on the Constitution of Man, considerably enlarged and improved. It will be published on 1st April. Three new chapters have been added, and many new illustrations introduced into the former text.

Among several articles very reluctantly postponed till next Number, and mostly in types, are a Reply by Mr Carmichael to Mr Macnish's objections to his theory of sleep; a Review of Mr Dean's Lectures on Phrenology; and a very interesting communication, by Dr Barlow of Bath, about the child William Manuel, mentioned at the end of our last Number. If Dr Barlow could, in the mean time, procure a cast of the boy's head, or an accurate note of its dimensions, he would add much to the favour already conferred in transmitting the history and cerebral development of the child, and also increase not a little the value of his highly esteemed communication.

Edinburgh, 1st March 1835.

would endeavour to ascertain, upon phrenological principles or from general observation, whether his organization was favourable for that pursuit. One of the grand causes of the slow advancement of all the arts of taste, and of the great prevalence of mediocrity among artists, is the utter neglect of this preliminary measure on the part of their parents or advisers."

THE LONDON MEDICAL GAZETTE of 7th February contains a most disgraceful and abusive attack on Phrenology, which, for misrepresentation, ignorance, and *mala fides*, has had no parallel in this country since Dr Gordon's scurrilous production in No. 49 of the *Edinburgh Review*. The Gazette did not reach us till our pages were full, but we may possibly recur to it.

Among other signs of the times, we notice, that, in the account of Dr Gall just published in the new edition of the *Encyclopædia Britannica*, his history and discoveries are calmly narrated in accordance with the statements of the phrenologists themselves; contrary to the custom hitherto prevalent on such occasions, of misrepresenting and distorting facts. It ought to be remarked also, that the writer preserves the strictest neutrality, declaring neither for nor against the phrenologists; a circumstance which, if taken in connexion with the fact that the editor of the *Encyclopædia Britannica* is also editor of the *Edinburgh Review*, must be held as symptomatic of a considerable increase of respect for Phrenology. The article alluded to, however, contains a few trifling inaccuracies. Thus, Dr Gall's christian name is said to be John Joseph instead of Francis Joseph, an error copied from a French biographical sketch. Again, it is erroneously stated, that of his *Anatomie et Physiologie du Système Nerveux*, &c., only a volume and a half appeared; whereas the work was completed in four volumes. "The most elaborate of his productions, however," we are told, "is *Organologie, ou Exposition des Instincts, Penchans, &c., et du Siége de leurs Organes*, which was completed in 1825. His *Histoire des Fonctions du Cerveau* had appeared in 1822, in two vols. 8vo." The fact is, that the *Organologie* is merely a portion of his work *Sur les Fonctions du Cerveau*, which, in its turn, is but a reprint, with very few additions, of the physiological portion of the *Anatomie et Physiologie du Système Nerveux*.

MARQUIS MOSCATI.—Our readers may recollect, that we took occasion a few numbers back (vol. viii. p. 227), to defend Dr Spurzheim and Phrenology from the misrepresentations of their *soi-disant* friend the Marquis Moscati. At the time of our notice, we knew him only as the author of the misrepresentations which we exposed. The history of his conversion to Phrenology, which appeared in some of the newspapers shortly afterwards, and was greedily read by many, served only to confirm, by its inconsistencies, the suspicions of gross inaccuracy which his first paper excited in our minds; and at last, about a month ago, the Marquis, as the prosecutor of the *Times* newspaper, made an appearance in court, which, however characterized by cleverness and *savoir faire*, has at once and for ever extinguished any little claim which he may have formerly possessed to the attention or favour of the British public.

Mr Combe has completed a second edition of his work on the Constitution of Man, considerably enlarged and improved. It will be published on 1st April. Three new chapters have been added, and many new illustrations introduced into the former text.

Among several articles very reluctantly postponed till next Number, and mostly in types, are a Reply by Mr Carmichael to Mr Macnish's objections to his theory of sleep; a Review of Mr Dean's Lectures on Phrenology; and a very interesting communication, by Dr Barlow of Bath, about the child William Manuel, mentioned at the end of our last Number. If Dr Barlow could, in the mean time, procure a cast of the boy's head, or an accurate note of its dimensions, he would add much to the favour already conferred in transmitting the history and cerebral development of the child, and also increase not a little the value of his highly esteemed communication.

Edinburgh, 1st March 1835.

THE
PHRENOLOGICAL JOURNAL.

No. XLIV.

ARTICLE I.

OBSERVATIONS ON RELIGIOUS FANATICISM; illustrated by a
Comparison of the Belief and Conduct of noted Religious Enthusiasts
with those of Patients in the Montrose Lunatic Asylum. By W. A. F.
BROWN, Esq., Medical Superintendent of that Institution.

THE healthy exercise of the sentiment of Veneration enters so intimately into many of the amenities of social life, and constitutes so important a part in religious creeds and religious observances, that it has become a habit, a fashion, a point of orthodoxy, to regard some of its most erratic and extravagant manifestations as akin to virtue, if not as virtue itself. That sentiment, from which spring filial obedience, patriotic subordination, and the humility of the sincere worshipper, is held to be of too sacred a nature to be susceptible of excess, and of too beneficial a tendency to be susceptible of over-cultivation. It at first appears monstrous and absurd to affirm that the utility of such a feeling may be defeated, and the peace and harmony of society disturbed or endangered, by its predominance in the mental economy. Yet the paradox which seems to be conveyed in the proposition, that the ends and purposes of veneration, in common with those of all other feelings, may be nullified by its exercise and encouragement, is not only reconcilable with history, but is itself a historical truth. The fire which warms, may and must consume us if too largely and liberally fed; and the feeling which is the torch to guide us heavenward may dazzle and dim the inward eye by its intensity, until the path to be pursued or the power to pursue it is lost. We do not here speak of the aggregate sentiment of religion: the rational and practical character by which it is distinguished affords an unexceptionable guarantee

that in it and by it all interests are consulted ; and, as human perfectibility is its object, that excess is impossible. We speak of one of its ingredients, of veneration or mere devotional piety, and of its cultivation to the exclusion of that reason which examines and recognises the truths, and of those principles which dictate the duties, of the gospel. Divest a man of the hundred ties of love and friendship, justice and mercy, by which he is bound to his fellow men ; strip him of every attribute of reason save a blind and submissive perception of a high and mighty intelligence ; and leave but a strong instinct to venerate and worship : or do what produces results precisely similar—educate this solitary feeling ; teach that in its activity, in acts of adoration, there is supreme happiness ; rouse and stimulate it by rewards and punishments ; appeal to it by every mode, through every channel by which such a feeling is accessible—until the moral equilibrium is destroyed—until the trinity of truth and mercy and praise is disunited—until the counsels of judgment become as inaudible as the “ still small voice ” of conscience : do all this, and you will have established that condition, that vicious excess of veneration, to which allusion has been made, and of which it is designed to treat.

By a singular perversion of religious education, a great portion of the time and talent of those to whom this trust is committed has been directed to the accomplishment of this very end. This error has proceeded rather from the alliance of religion with a false philosophy, and consequently from erroneous views of the powers which it is intended to cultivate, than from erroneous views of the real objects of religion. Veneration, or the propensity to worship, has been looked upon, and correctly, as the natural effect of spiritual-mindedness : but it escaped observation that this feeling may and does exist, altogether independently of the latter disposition ; that it is in no degree commensurate with the strength of that disposition, and accordingly may never warm the bosom, or warm it imperfectly, while that disposition is in constant operation and regulating the whole conduct. It is, in fact, a mere feeling of reverence, abstract from all knowledge or practical excellence ; which in uninstructed minds leads to the worship or profound adoration of some being, the nature of which is determined by extraneous circumstances ; and which, in minds improperly instructed—that is, taught to consider adoration even as the amount of Christian duty—leads to that fanatical enthusiasm which places the cause upon which it is engrafted in jeopardy. Enthusiasm is the tropical sun of the religious feelings, and fanaticism may be called the fever heat to which the moral temperature will rise.

A whole nation or nations, engaged in ritual observances, in internal experiences, in adoration, to the contemptuous neglect of

every other object, would be a striking phenomenon ; but it is one which the world has more than once been on the verge of witnessing. Such a catastrophe could only arrive by long perseverance in a discipline which would keep this feeling in constant excitement, by making its gratification a part, and the principal part, of the happiness of each individual,—by creating it into the golden way whereby immortality might be attained, and by substituting its dictates for better and nobler guides. What may be styled the religious idiosyncrasies of particular periods have often threatened a visitation of the condition described : but, more than all others, the several Crusades, the reign of Charles V., and that of Cromwell, serve to exemplify the features and results of such an event. There appears to have been at those times an epidemic mania of the religious feelings. But, without venturing to insist upon so harsh a construction, it may be stated, that certain periods have become signalised by the supremacy and inordinate activity of the sentiment of Veneration. An excess of devotional feeling is thus created into a pivot upon and around which all previous and succeeding events revolve ; and in place of recalling these by allusions to, or details of, civil and political changes, we speak of the age of the Crusades, of the era of the Reformation—in other words, of Veneration acting as the mainspring in the grand machine of human affairs. Other motives, it is admitted, baser or better, contributed to the production of these and similar religious movements. But while in them, as in all grand and vital agitations of the mass of mankind, there will be found to have mingled, in governing, guiding, modifying, or increasing, all the passions, propensities, prejudices, and degrees of enlightenment under which the component members of that mass ordinarily acted ; still the main impulse of the majority can only be recognised in intense devotional feelings. It may be perfectly true that the wars styled Holy, which first assimilated Christianity in spirit to the ferocious creed they were intended to crush, which tinged every river, from the Thames to the Bosphorus, with the blood of the best and bravest sons of early civilization, and which, in seeking the possession of one empty and surreptitious sepulchre, filled hundreds of thousands—it may be perfectly true that these pious emigrations were in keeping with, and emanated from, that spirit of chivalry which distinguished the age, and converted the dominant church into a species of half military, half monastic feudalism. It is not less true, however, that blind, unresisting, unquestioning bigotry—respect for the doctrines, and subjection to the commands of the church—and that deep and romantic reverence which comprehended every tradition of whatever degree of authenticity, every relic, and every spot of earth connected with early Christian history,—in

short, an excess of veneration,—were the chief moral agents which put in motion and animated the cohorts of the Cross. On the other hand, it is immaterial although the origin of the Reformation can be traced to the squabbles of two indulgence-vending orders of monks, or the society of the Jesuits to the broken leg and personal vanity of Ignatius Loyola ; since the cause by which these striking manifestations of moral power were sustained and directed was so obviously an enthusiastic veneration for holy things ;—in the former case, accompanied by reason and conscientiousness—in the latter, it may be, with these allies, but assuredly with Wonder, Ideality, Cautiousness, and Secretiveness. We are free to confess, that while we view in these heart-stirring scenes much of that veneration which is catholic to all stages of the world's progress, and which is commendable wherever it may appear, we see much—ininitely more—of that extravagance and unhappy combination of feeling which with propriety can be classed only with disease ; sanctified, perhaps, by its symptoms, but in its character essentially disease. In retrospective analysis, such events must not be estimated by their consequences, or through the medium of modern feelings and opinions : we might as rationally compute ancient distances by statutory measurements. That secret lever must be sought for which gave them impetus and direction. We must endeavour to look on history as we look on histrionic representation ; and, identifying ourselves with the feelings of the actors, forget for a moment that the Crusades *proved* the antidote to the universal spread of Mohammedanism, and remember only that they were frantic or fervid ebullitions of religious zeal, uncombined with the eternal dictates of justice, and in open defiance to the suggestions of reason. In like manner, we must turn our eyes from the blessings which were bought by the Reformation, and narrowly scan the miseries and follies of fanaticism by which that purchase was attended. In the latter scrutiny, it cannot fail to be observed how beautifully the antithesis of human opinion is illustrated, and the identity of human feeling proved, by the deeds of Loyola and Luther at the two extremities of the empire. Both of these men were devotees ; sincere, superstitious, and, in the eyes of their contemporaries, sane : but were many of the dogmas which they promulgated broached in the present day, little faith would be placed in the clearness of the understanding from which they sprung. The present day does not lack superstition ; but things are now called by their proper names, and deprived of all mere conventional value. The very same opinions and actions which in the good old times—the middle ages, the period of Catholic supremacy, for example—entitled a man to the reputation of a devotee, and a place in the calendar of saints, now condemn him to the charge of insanity,

and confinement in a madhouse. However much diversified the fates of the holders of such tenets may be by the spirit of the era in which they live, the identity of their religious feelings, and the similarity of the effects of these, cannot be disputed. The never-changing attitude, the fixity of feeling, or the monotony of some incoherent exclamation, may be substituted, in the cell of the maniac, for the rigid severity of penance, the million-times repeated *ave* or *credo*, which sanctified the cell of the monk ; but the principle to which such manifestations can be traced back continues to be the same—a profound sentiment of prostration and adoration before some almighty power, undirected by a rational contemplation of the attributes of that power, and uninterrupted by those impulses of charity and love which such a contemplation would indicate as acceptable offerings at such a shrine. But Catholicism must not be stigmatised as the only faith which impregnates the mind with this description of fanaticism ; for, although the crown of canonization has lost its efficacy as a stimulus and its attraction as a reward, the spiritual elation and self-satisfaction of the devotees of other creeds are perhaps as intense and as little justifiable as those elicited by the conviction that this much coveted crown was within the grasp.

These reflections were suggested by the following observations. Among the inmates of one of the immense hospitals for the insane in France, there was, some years ago, a woman who proclaimed herself a Jesuit, and who, in the anxious hope of expiating imaginary crimes, exhibited a course of real suffering and punishment. She alternated penance with prayer, and prayer with penance : her form was emaciated by a rigorous abstinence ; her limbs bled and festered from constant kneeling ; her tongue never ceased to murmur some consecrated name or pious ejaculation ; and her whole conduct, so far as such gradual self-immolation admitted of any thing but a negation of evil, was blameless and beautiful. Her derangement was nothing but excessive devotion. Such a spectacle forced upon me the reflection, that had this woman lived and presented such claims to sanctity in former times, she would inevitably have been regarded and revered as a saint, and, in place of coercion and medicine, would have received incense and adoration. In the same vast lazaret-house of mental disease and decrepitude, was a ward which, from the number of holy personages it contained, was designated, in derisive discrimination, "*La Salle Sainte.*" Here were gods christian and pagan ; the resuscitated shadows of former saints, and substantial aspirants to the same title ; the founders of new religions, and the defenders, prophets, and martyrs of old ;—a motley assemblage, which, if at liberty, and placed in circumstances congenial to the development of their

exaggerated feelings or the fruition of their ambitious projects, might have attained to the same unenviable moral distinction and political power as Mahomet, or Mesner, or Loyola, or other enthusiasts of higher pretensions and more modern date.

Instruction is said to have been derived from comparing the career and character of distinguished men of different ages; thus establishing historical parallels or portraitures of the prominent features of particular and often widely separated epochs. Psychological parallels drawn between such minds as those to which allusion has been made, and the real actors on the stage of life who are influenced by similar motives, cannot fail to be interesting and instructive, especially if care be taken to ascertain and estimate that course of events, and that impress of the time, which invests the same attribute at different seasons with dignity or dishonour, and calls that human wisdom during one century which is stigmatised as insanity in the succeeding. A very humble attempt will now be made to put this suggestion in practice, by contrasting the conduct of men by general consent regarded as lunatics, and as such under my superintendence, with that of others who have long stood, or still stand, high in the estimation of their fellow-men. The cases to be detailed will serve at the same time to illustrate a fact long since promulgated by medical phrenologists—that insanity generally takes the direction of the predominant organs.

CASE I.—J. R.

Dimensions of the Head.

		Inches.
From Individuality	to Philoprogenitiveness, . . .	7
... Ear	to Individuality, . . .	4 $\frac{1}{8}$
... ..	to Philoprogenitiveness, . . .	4 $\frac{1}{8}$
... Cautiousness	to Cautiousness, . . .	5
... Ear	to Concentrativeness, . . .	4 $\frac{1}{8}$
... ..	to Self-Esteem, . . .	5 $\frac{1}{8}$
... ..	to Firmness, . . .	5 $\frac{1}{8}$
... ..	to Veneration, . . .	5 $\frac{1}{8}$
... ..	to Benevolence, . . .	5 $\frac{1}{8}$
... ..	to Comparison, . . .	5

Predominating Organs.—Veneration, Concentrativeness, Self-Esteem, and Firmness.

This patient has been insane for thirteen years; but his complaints appear to have undergone a total change during his confinement. His mind became affected while on a voyage to the West Indies and subsequently to an attack of fever. The predominating feelings are stated to have been at that time those of pride and ambition, manifested by delusions as to rank and property. Convinced of his dignified station in society, that of a monarch, and satisfied with the extent of his domains, he ex-
 p-

tiated on the magnificence of his possessions, the philanthropy and gigantic scale of his projects, and the respect and reverence which he claimed and would exact. He spoke incessantly of kings and emperors as his intimate friends. His loquacity disclosed that, though prudent, pains-taking, and sensible as a gardener, he would have been extravagant, vain-glorious, and aristocratic in his imaginary character. No record exists of the progress of his malady, or of the transition from the original to the present diseased train of feeling, except what is contained in the words, "from being rather talkative he has now become, in 1832, taciturn." This taciturnity is to be understood to imply rather a paucity of expression than disinclination to speak or a determination to remain silent. In place of being silent, he speaks almost incessantly; at all times, however unsuitable or improper, and upon all occasions, however ridiculous. But his vocabulary is limited to four phrases, which are repeated with interminable iteration. The religious character of these ejaculations affords evidence that, at the period of the cessation of his loquacity, a change took place in the direction of his feelings—that Veneration had become powerfully excited, and derived gratification from paying that devotion to the Supreme Being which formerly found an object in riches and high rank; and that Self-Esteem had ceased to operate, or, relinquishing the pleasures of aggrandisement, revelled in those of the enthusiastic and inflexible votary*. The words consist of a sort of invocation, uttered in complete abstraction of every external impression, and evidently with intense elation and satisfaction. He repeats, "Bless God; bless the heavens' God; bless the Holy Bible; and bless the Psalm Book;" in a whining supplicatory tone, with the eyes fixed on the skies, the hands raised, and the whole attitude and expression of the body conveying the idea of concentrated devotion. A fakir never succeeded more thoroughly. During the whole day his only occupation is to walk to and fro, or to stand statue-like engaged in this worship. His meals offer but a momentary interruption. They are despatched with great rapidity, as if salvation depended on the resumption of his devotional exercises, which are repeated at every pause. The most inclement weather produces no alteration: the pitiless storm descends on his bald head unheeded; his aspect and orison continue the same. When addressed in the ordinary tone and mode of salutation—when flattered, threatened, entreated, commanded—his reply varies not; and although plainly shewing, by his look of pleasure or fear, and by his act of obedience, that he understands what is said, he acknowledges it no further than

* Dr William Gregory examined the head of this individual in my presence, and immediately decided upon the generic character of his insanity, designating it "religious madness."

by "blessing God." To an utter stranger and to his own parent his deportment is the same. His sententiousness does not depend, moreover, as in some lunatics, upon an incapability of uttering, or forgetfulness of certain classes of words; for he possesses a Psalm book preserved with the greatest care and anxiety in his bosom, which he can occasionally be induced to read. But even in this instance his powers are limited to a single stanza. No persuasion can lead him beyond this favourite passage, Psalm civ. verse 1, which, it is singular, commences with "Bless God, my soul," and must have been selected on this account.

Some striking and rather ludicrous illustrations have occurred of the intensity and strength of this morbid disposition. Although despairing of any cure or even alleviation, I concluded that, could the latter be effected, it must be by forcibly interrupting, by means of some stronger impression, physical or mental, the train of thought to which his mind appeared bound. As the only mode within reach, the shower-bath was had recourse to. While undressing he trembled, and evidently dreaded the experiment, but persisted in his devotions. When he was placed in the bath, a few minutes were allowed to elapse, in order to give full force to the horrors of expectation; the water was then permitted to flow; but even when the stream fell most furiously, instead of the expressions of rage, or petitions for mercy, which are usually heard, he continued to "Bless God, the heavens' God," and so on. Subsequently, when the douche, a still more powerful agent, consisting of a column of cold water directed on the head while the body is immersed in the warm bath, was employed,—and while gasping for air,—his cry was the same. Again, when a cast was taken of his head, and he lay with both head and face enveloped in plaster of Paris, and respiring through tubes inserted in the nostrils, the usual sing-song monotonous hum was distinctly heard, indicating that he was still busied with his self-imposed ritual. This man is docile, innocent, inoffensive, and in the contemplation of his supererogating veneration exquisitely happy; but he is to the apprehension of all insane, and must be cared for as such. His brain had in all probability been injured by the attack of fever, and derangement was the consequence; this derangement taking the direction of the predominating organs, Veneration, Self-Esteem, Firmness, and Concentrativeness. The other powers are obsolete or extinct, and those feelings which must have given to his character its prominent features in health, now constitute the peculiar symptoms of his madness. His disease consists as much in the absence of intellectual operations, as in the intense and sustained excitement of certain feelings. It would be a vain speculation to inquire whether, had judgment continued its su-

perintending and regulating influence, there would have been more than a strong religious bias tending to actions recognised as praiseworthy; but some interest may attach to the question, whether this state of abstract spiritualization, as it is, would not at certain times, which have frequently occurred, and there is every prospect will again occur, have been esteemed a specimen of exalted and immaculate piety, worthy of all admiration and imitation. Have there not been periods when the man going about saying prayers has been preferred, or at least counted equal, to the man going about doing good? Is there, in the page of history, no psychological parallel to the case of J. R.? We believe that there are many.

Such parallels are to be found in times of great excitement, when the mind is led by early education, by the construction of society, and by that atmosphere of moral miasms which is created by public teaching and opinion tending to the cultivation of feelings purely venerative or mystical, to the exclusion or neglect of that philosophical investigation which gives to religion its stability and majesty, and of those sentiments of justice and mercy which give it practical efficacy. The first centuries of the Christian era may be pointed out as one of these periods. The irresistible truth of our Saviour's mission was acknowledged, but by men who, though they had abandoned the principles resulting from an impure and irrational faith, were strongly impregnated with the mode of thinking that resulted from it; and who, leaving the altar of an "unknown God," still ignorantly worshipped him who was proclaimed—limiting duty to propitiation, and attributing excellence and merit to him alone, who, burying the affections and forfeiting the objects of intelligence, spent his life in praise and prayer. Reason, as applied to religion, was yet in the cradle; while Veneration, Wonder, Ideality, and the lower propensities, were in the full vigour of maturity.

The cause of asceticism was thus triumphant; and the extraordinary attempts to achieve a conquest over the stomach, were equalled only by the subjugation of every mental energy to one concentrated impulse. Of this creed Simeon Stylites appears to have been the most distinguished votary. Educated in a monastery—the established austerities of which he put to shame by the ingenuity and novelty of his own devices to torture the flesh, and where it required constant care to prevent him from committing pious suicide—he returned to the world to obtain the martyrdom which he coveted. Erecting a pillar, sixty feet in height, he chained himself to the summit, and, leaving every earthly thought and wish and habit below, devoted himself to adoration. For thirty years he kept this vow. His eye and soul were bent on the skies, and he stood, even at that elevation, unmoved. The intensity of this feeling of ve-

neration rendered him insensible to impressions from without ; for heat and cold, calm and tempest and disease, found and left him imperturbed and imperturbable. Pain, privation, and silent suffering, however, he did not deem sufficient, and he never ceased to perform acts of devotion. These consisted in praying with his arms extended in the form of a cross, and in bending the forehead to the feet. From these he never desisted. Upwards of a thousand repetitions were counted, following each other in rapid succession. At last his lips and limbs refused to obey the holy desire, and he died in the odour of sanctity, on what may literally be called the pinnacle of his greatness*.

We may now sneer at this Syrian anchoret, but much may be learned from ascertaining that no such sneers existed at the period in which he lived ; that he was looked upon as most perfectly fulfilling the will of the living God ; that his example was then and afterwards followed by thousands of hermits and ascetics ; and that his conduct furnished a pretext and traditional injunction for the monachism of succeeding ages. At this moment, a small religious community almost realize his self-imposed severity by condemning themselves to perpetual silence, save when offering up the prayers of their ritual.

Yet in what do these enthusiasts differ from the maniac whose history has been detailed ? Had he lived in the same times, or under similar circumstances, would not his singular delusion have been hailed as the fruit of inspiration ? Would not his memory have been preserved and revered as a sacred thing ? Or, to render the contrast more forcible, had Simeon Stylites, his immediate followers, or the Trappistes, been submitted to the same ordeal of examination as my patient—that of common sense—is it not certain that a commission of lunacy rather than a patent of saintship would have been issued in their behalf ?

CASE II.—W. C. Æt. 55.

Dimensions of the Head.

		Inches.
From Individuality	to Philoprogenitiveness, . . .	8
... Ear	to Individuality, . . .	4 $\frac{1}{8}$
... ..	to Philoprogenitiveness, . . .	4 $\frac{1}{8}$
... Cautiousness	to Cautiousness, . . .	5 $\frac{1}{8}$
... Destructiveness	to Destructiveness, . . .	5 $\frac{1}{8}$
... Combativeness	to Combativeness, . . .	4 $\frac{1}{2}$
... Ear	to Concentrativeness, . . .	5 $\frac{1}{8}$
... ..	to Self-Esteem, . . .	5 $\frac{1}{8}$
... ..	to Firmness, . . .	5 $\frac{1}{8}$
... ..	to Veneration, . . .	5 $\frac{1}{8}$
... ..	to Benevolence, . . .	5 $\frac{1}{8}$
... ..	to Comparison, . . .	5 $\frac{1}{8}$

Predominating Organs.—Cautiousness, Destructiveness, Firmness, Wonder, and Veneration.

* See Gibbon's *Decline and Fall*, &c. chap. xxxvi.

This patient has been insane for thirty years. His previous history is scarcely known; but from the relations which he sometimes volunteers, it would seem that he was originally a farmer in a remote Highland glen, where fierce passions and dark superstition reigned in primeval power. He speaks of sanguinary feuds and protracted carousals,—of dining with this laird, and taking snuff with another great personage,—and of the familiar terms upon which he stood with the minister; for all of whom he testifies unqualified respect. He is equally at home in discourse, when recounting how such an one was possessed, and how strange and mysterious his own situation is; or when descanting on the horrors of ghosts, evil-spirits, witches, and other powers of darkness. Of the symptoms of his malady previous to confinement we are likewise ignorant; but it is probable that his friends were forced to have recourse to restraint, in consequence of the overt act of cutting off the tails of half a dozen cows, which, by this summary process, he proposed to disenchant. The keepers assert that, on admission, he was in a state of furious satyriasis; indulging in the grossest obscenities, and most revolting gestures and practices. The base of the brain is very large. The old ally of mental medicine, intimidation, was tried and with success. His frantic demeanour gave place to a calm, submissive, and obliging manner. The calm, however, is that of subjection, and not of docility; and now, from the native imbecility of his mind, began to appear the prominent parts of his character—a result explained by the small size of the organs of intellect, and his large Veneration and Love of Approbation.

Age and the chronic nature of his disease may have narrowed the circle of his delusions; but within their orbit his mind ever continues to roll, with the fixity of a natural law. His appearance is that of great humility; his reverence for every one around, almost all being in his estimation superior to himself, is profound; his ordinary occupations, for he works most willingly in the service of the establishment, are performed as duties exacted by a master, and are often interrupted by the number of his obeisances; for whenever addressed, his bonnet is raised and his head bent. He is completely under petticoat government, every maid-servant claiming him as a subject. All this bespeaks the predominance and activity of Veneration. But what renders him especially an object of curiosity is his mode of worship. When among his companions he kneels every two or three minutes, and so long continued and so often repeated have these genuflexions been, that the floor now bears their impression, and his trousers monthly tell the same tale. But this does not satisfy his longings. In his moments of greatest solemnity he prostrates himself, and kisses the earth three times; and this

This patient has been insane for thirty years. His previous history is scarcely known; but from the relations which he sometimes volunteers, it would seem that he was originally a farmer in a remote Highland glen, where fierce passions and dark superstition reigned in primeval power. He speaks of sanguinary feuds and protracted carousals,—of dining with this laird, and taking snuff with another great personage,—and of the familiar terms upon which he stood with the minister; for all of whom he testifies unqualified respect. He is equally at home in discourse, when recounting how such an one was possessed, and how strange and mysterious his own situation is; or when descanting on the horrors of ghosts, evil-spirits, witches, and other powers of darkness. Of the symptoms of his malady previous to confinement we are likewise ignorant; but it is probable that his friends were forced to have recourse to restraint, in consequence of the overt act of cutting off the tails of half a dozen cows, which, by this summary process, he proposed to disenchant. The keepers assert that, on admission, he was in a state of furious satyriasis; indulging in the grossest obscenities, and most revolting gestures and practices. The base of the brain is very large. The old ally of mental medicine, intimidation, was tried and with success. His frantic demeanour gave place to a calm, submissive, and obliging manner. The calm, however, is that of subjection, and not of docility; and now, from the native imbecility of his mind, began to appear the prominent parts of his character—a result explained by the small size of the organs of intellect, and his large Veneration and Love of Approbation.

Age and the chronic nature of his disease may have narrowed the circle of his delusions; but within their orbit his mind ever continues to roll, with the fixity of a natural law. His appearance is that of great humility; his reverence for every one around, almost all being in his estimation superior to himself, is profound; his ordinary occupations, for he works most willingly in the service of the establishment, are performed as duties exacted by a master, and are often interrupted by the number of his obeisances; for whenever addressed, his bonnet is raised and his head bent. He is completely under petticoat government, every maid-servant claiming him as a subject. All this bespeaks the predominance and activity of Veneration. But what renders him especially an object of curiosity is his mode of worship. When among his companions he kneels every two or three minutes, and so long continued and so often repeated have these genuflexions been, that the floor now bears their impression, and his trowsers monthly tell the same tale. But this does not satisfy his longings. In his moments of greatest solemnity he prostrates himself, and kisses the earth three times; and this

custom he observes, although he should lie down in the deepest and dirtiest pool of the court-yard. He is wroth when interrupted, and expressed the greatest horror and astonishment when requested to *exhibit* this self-invented ceremony. He would deny the accuracy of this appellation; as the only explanation which he will vouchsafe on the subject is, that he acts after the manner of the prophets, and that he is unhappy when he does not do so. He can repeat large portions of the Scriptures, generally containing the titles and terms of honour and dignity applied to the Supreme Being; but he seems to retain little or no conception of the principles which even these passages contain. Here likewise Veneration is evidently the presiding feeling. His visions are of two kinds,—peaceful and pastoral, or belligerent. He sees from the window of his cell multitudinous herds of cows issue from the clouds in the west, and follow each other with such velocity and in such myriads, that the whole earth is covered, the sky darkened, and the sea filled with their numbers. The procession sometimes consists of larks. The organ of Number, which is considerable in his head, may account for the nature of this apparition; while the species of animals may have been suggested by his original occupations. Four or five times during each day and night he has to witness objects much less interesting to his pastoral imagination. He is molested by evil spirits of all grades, often by their *chief*, with whom he has to wage war; and most manfully is the struggle maintained. At these moments his eye opens, brightens, and becomes fixed; his brow is puckered and lurid; his lips are livid and protruded; he suddenly shrieks out the most hideous imprecations on his antagonist, tosses his arms, and kicks most unmercifully whatever object is nearest. The tug of war is sometimes fierce and protracted; but if approached in his wildest mood, and while howling forth his abusive epithets, he becomes instantly calm, raises his bonnet, and only looks back with a scowl on his tormentor, saying, “It’s a fine day,”—a salutation which he utters even when the snow is up to his chin. His most frightful conflicts occur during the night, when the cries he sends forth would imply that the result is unfavourable. He speaks of these encounters, and of his adversaries, with a degree of terror-struck awe and respect. At the onset his look is that of defiance and vengeance; at the close he expresses reluctance to allude to the matter, kneels down, and says that he is very much troubled. The demon is here conjured up by his Wonder and Cautiousness, which are both considerable; the strife is the result of his large Destructiveness and Combativeness. The latter are besides often manifested in quarrels with his fellow patients, who are for the moment treated as equals, but who,

whenever the storm of passion has subsided, immediately assume in his eyes the aspect of superiority.

Now here is the history of a St Anthony in the nineteenth century. Here is the same ceremonial piety, and similar satanic conflicts, attended with similar triumphs. The spiritual metempsychosis appears to have been more extensive in the primitive church. The transformations of the adversaries of him who may deservedly be called the Father of Superstition, were numberless;* but although W. C.'s habits do not permit us to determine the aspect of his tormentors, that it is sufficiently hideous and loathsome may be gathered from his horror and desperation during the period of possession. In both characters there are clearly the common elements of perfect confidence in the nature of the services of worship performed, and perfect credence in the reality and presence of the phantoms which disease has conjured up. But, viewed through the medium of former opinions, or were the principles upon which these men have acted followed out to their legitimate application, what would be the conclusion of a philosopher? Simply that they have experienced strong, and to them irresistible impulses to worship the Deity, and in obeying these have chosen the most humble and abject postures expressive of submission;—that in repeated acts of this kind they have the delight of religious consolation;—that to other individuals of less intense feelings of adoration, such conduct appears exaggerated, because it is at variance with their own, and because they rest content with and receive consolation from different or less humiliating modes of worship;—but that in these devotees it is the faithful manifestation and exact measure of their frame of mind. Further, these men succumb to the suggestions of Wonder and Cautiousness highly excited, and believe supernatural agencies and appearances. If belief in, or apprehension of, the power of witchcraft, be a proof of madness, we must hold lunacy to have been epidemic in former times. Luther, Calvin, and even greater men, entertained this belief, and lived at liberty the admiration of mankind: it was, in truth, a bit of the orthodoxy of the day. Indeed the superstitious feelings of the former innovator—so his foes, and some even of his friends, allege—went much further. Rejecting as unworthy of credit his successful tilt with the blue-bottle fly, that being the incarnation in which Satan attempted to disturb him during composition, we yet find passages in his works which may be and have been interpreted as affirming the “manifest apparition of the devil to dispute with him.”†

* See the plate of his Temptation.

† For the controversy on this subject see vol. iv. p. 546. of Scott's Continuation of Milner's Church History.

Be this as it may, there is still another class of pietists whom my patient even more closely resembles. I allude to the more outrageous of the Independent and Fifth-monarchy men who figured during the usurpation of Cromwell. The majority of these fanatics—for some are chargeable with gross hypocrisy—appear to have despised all pleasure apart from the activity of their Veneration, Wonder, Combativeness, and Destructiveness. They engaged incessantly in demonstrations of these feelings: they knelt down in the highways and byways, in solitude and in society, armed with a Bible and a naked sword; intending by means of the one weapon to conciliate the wrath of God, and by means of the other to repel the attacks of Satan, with whom they asserted they were called upon to maintain a constant and personal struggle. The frightful “wrestling,” of which they so frequently boasted, was unquestionably, in some cases, a term used to represent a mental conflict; but in others the expressions were too explicit, the general demeanour was too much that of a combatant, and the strains and contortions of the body were too violent, to leave any reasonable doubt that the strife in which they were engaged was by them believed to be real, and sustained, hand to hand, with a substantial antagonist.*

Under all circumstances, their lives were a compound of the word and body worship which they condemned in others, and of the dark and malicious ferocity of the demon to whom they supposed themselves to be opposed. Yet these men assisted in subverting one throne, and in erecting another of greater power and more tyrannical sway; and they are even now recognised by many as worthy of a place in the calendar of freedom and religion. Such a title I would be loath to dispute; but it seems fair to claim that my patient, possessing qualities so identical with theirs, should be enrolled beside them.

(To be continued.)

ARTICLE II.

LECTURES ON PHRENOLOGY: Delivered before the Young Men's Association for Mutual Improvement of the City of Albany. By AMOS DEAN. Albany, N. Y., 1834. 12mo. pp. 252.

THE perusal of these lectures has gratified us not a little. Mr Dean has obviously studied the works of the European phrenologists so attentively as to imbue his mind with their ideas and spirit; and, although no pretension is made to originality, the

* For a somewhat exaggerated account of the leaders of these enthusiasts, see the novel of Woodstock.

style of his work indicates that he has thought for himself, and is far from being a servile copyist. It is eloquently and vigorously written, though sometimes rather too flowery for the British taste. But the Americans are fonder than we of florid composition.

Mr Dean offers some excellent remarks on the opposition which new doctrines generally meet with, and which he justly regards as positively conducive to the suppression of error and the progress of truth. "It is the safeguard," says he, "against useless and inexpedient innovation. It protects the existing state of things, until a state obviously preferable is offered. It checks that constant tendency to change, which is sufficiently impressed upon all human phenomena. We are far from complaining that the infant science of Phrenology has been opposed. We rejoice that it has been so. We do not, here, even complain of the spirit with which that opposition has been conducted; although we could have wished its manifestations to have been more humanized than they apparently have been. We even pass over the instruments of opposition, assertion and ridicule, after entering our protest against their use generally in the investigation and discovery of truth. What we do complain of is, unfairness of representation. The Phrenology, or rather Craniology, or Cranioscopy, of the *Edinburgh Review*, just about as much resembles the Phrenology of Gall and Spurzheim, as Paddy Blake's echo did the voice to be echoed. When asked, 'How do you do, Paddy Blake?' it would echo back, 'Very well I thank you, sir!' Our opponents have kindly taken it upon themselves to raise up a Phrenology of their own, to clothe it with their own mantle, to invest it with their own properties, and then take to themselves most immeasurable merit for knocking down what could not stand alone."—P. 14, 15.

After narrating the rise and progress of Phrenology, Mr Dean proceeds to lay down and demonstrate its fundamental principles. In adverting to the phenomena of genius, he introduces the following striking observations on the wonderful talents of the father of poetry. "Is genius the result of education? The name of Homer seems destined to run parallel with the course of time itself. And yet such was the entire destitution of the light of literature and science in his age, that we cannot now ascertain the land either of his birth or of his burial. Notwithstanding, however, this obscurity that rests upon his origin; notwithstanding this gloom that settles upon his history; notwithstanding this deep mental and moral midnight, in which all but the name of Homer seems to be involved and enveloped, we do know that he has kindled the purest fire, upon the highest altar that ever yet sent up its incense, even to Grecian skies.

Who, then, were *his* masters? We answer he had no masters! The same creative power moulded his mighty mind, that moulded and brought within its energetic grasp the mental and material universe. He had no masters. The fountain of light was within him. He found himself in the possession of poetic feelings. Nature's God had bestowed upon him the faculty that gives birth to those feelings. He had only to follow their impulse and immortality was won. He had only to portray the creations of that faculty, and he is exhibited to all after times a solitary beacon on a benighted shore—an oasis amid the desert of ages."—P. 30, 31.

As the objection that Phrenology leads to materialism and fatalism still continues to be urged with amazing pertinacity in many unenlightened quarters, we shall quote the reply given to it by Mr Dean, who treats the subject with conciseness and ability.

"This science has no such tendency. It nowhere identifies the faculties with their organs. The faculties, in fact, no more constitute a part of their organs, than the music of a piano-forte constitutes a part of the instrument. The organs are the instruments, and the faculties the musical result of their play. This science simply notes that result, it observes phenomena, and from correspondencies deduces conclusions. The fact is indisputable, that there is a dependence of the entire mind upon the entire brain. That the mind is liable to diseased affection in its manifestations, to the explosion of mania, to the weakness of idiocy, is undeniable. I would refer it to the most rigid anti-materialist to decide which doctrine is the more reasonable—that which refers these mental phenomena to diseased affection of the organ in which the mind is known to exercise its powers, or that which refers them to diseased affections of the immaterial mind itself, implying its liability to maniacal hallucinations, or to the weakness of idiocy. From our knowledge and experience, it is correct to assume, that throughout the ample range of nature, whatever is subject to disease, is also subject to death. They are both parts of one great system. Death is the ocean in which all the rivers of disease find a termination. If disease, therefore, can attach to the mind, what, I would ask, exempts it from the natural termination of that disease, a ceasing to be?"

"Again, if these diseased affections attach to the mind, I can see nothing in the death of the body calculated to divest it of that disease. The only legitimate effect of death is to hush the music of our material organs. If, then, the physic of the tomb is inadequate to afford a restorative remedy, mind must cross the dark barrier, subject to this diseased affection, and exhibit in another world the ravings of insanity, and the vacuity of idiocy.

"But if it be conceded that diseased affections of the brain are

productive of diseased affections of the mind, that concession involves the admission that the whole mind is dependent upon the whole brain. If that be admitted, in what consists the iniquity of making a particular part of the one dependent on a particular part of the other? If the whole of our corporeal acts are dependent upon the action of the whole of our muscles, where is the crying lack of logic in referring a particular act to the exertion of a particular muscle?

"It is farther objected, that this doctrine tends to fatality. What is fatality? A deprivation of will. A rejection of free agency. An absolute necessity of the performance of acts. What is taught by this science? *First*, That certain intellectual powers, sentiments, and propensities, are incorporated in our nature: and, *Second*, That each of these possesses for itself a local habitation and a name. Is the existence of these powers, sentiments, and propensities denied? I shall hazard the assumption, that their existence will not be controverted: but their existence being once admitted, whence can result the evil of their distinct and separate locations in different parts of what is conceded to be their general home? Their separate location gives them no new existence, clothes them with no new energy, invests them with no new power, nor imposes upon them any new or additional necessity of acting. *It is in the fact of the existence of strong propensities*, that the tendency to fatalism; if any there be, is to be sought and found, and not in the *mode of explaining it*. Until, therefore, it can be shewn that phrenology *creates the fact*, let it not be charged with the injurious consequences flowing from it, if there be any. But there are none. It would be as unjust to require of a being possessing these strong constitutional tendencies, the same correct course of conduct that would flow from a high moral development, as it would be to require of man, constituted as he is, that he should visit the depths of the ocean with the fish, or penetrate the mid-heavens with the eagle. Man is answerable only for the proper exercise of the faculties he possesses. Hence different degrees of accountability result from different combinations of faculties. It may require as strong an effort in one to prevent the murder of a man, as in another to avoid the killing of a fly. 'To whom much is given from him much will be required.' A less happily constituted organization will be subjected to a less rigid account. This mode of explanation accords to no one the plea of complete exemption from accountability; because no one, on this side of idiocy, is entirely destitute of any one faculty or organ, and the possession of all is coupled with an accountability for the proper exercise of all, according to the different degrees of strength. It is in this way only, that the free and moral agency of man is reconcilable with

the justice and benevolence of Deity. It is, however, in defence only of things as they exist, of the general economy of the universe, of the justice and benevolence of Deity, and not of Phrenology, that this or any other explanation of this nature can be demanded.

"So far as regards materialism and fatality, this science leaves mind precisely as it found it. It creates nothing new; it adds nothing to the old. Any objections, therefore, grounded upon these supposed evil tendencies, are valid only against things and phenomena as they now exist, and ever have existed."—P. 40-43, 102-3.

Mr Déan explains in the following manner the mode in which the combative and destructive propensities are made predominant by intoxication. Whatever may be thought of the soundness of his theory, it has at least, if we mistake not, the merit of originality.

"The effect of introducing stimulus, in the shape of ardent spirits, or in any other shape, into the system, is to *mortgage future energies to supply present exigencies*; or, in still terser terms, it is the *making a present use of future resources*. In the same proportion, therefore, in which the energies of the future are applied to the purposes of the present, will that future, when arrived at, be found deficient in its supply of energy. Hence a state of intoxication ends in the profoundest sleep, arising from the exhaustion of every mental and corporeal function. The living system must cease to act, except for the mere purpose of living, because that future has arrived which had already parted with its energies. From this general view, let the science explain the phenomena actually exhibited.

"The stimulus introduced creates an excited action in every organ of the brain, and hence every faculty feels its power, and is disposed to exercise it. A larger quantity of cerebral matter is allotted to the sentiments and propensities than to the perceptive and reflective powers. From the portion allotted to the propensities, the nerves take their departure. The action of the propensities, particularly of Destructiveness and Combateness, is ordinarily under the influence of the reflective powers. The stimulating material, through the medium of the nerves, or the circulation, or both, excites to increased action the large quantity of cerebral matter allotted to the propensities, particularly to those of Combateness and Destructiveness. Those propensities are, therefore, clamorous for the exercise of their functions. But the organs of the reflective faculties are also stimulated to excess of action, and hence enabled, for a time, to exert a controlling influence. The introduction of additional stimulus renders the propensities still stronger and more clamorous for exercise; and the reflective powers, in order to restrain them, are

driven to a preternatural energy of action. The heavy drafts they are compelled to make for this and other purposes, soon exhaust their resources; and, upon the exhaustion of those resources, they must necessarily cease from their labours. Reason strikes its flag. The directing power is removed. The propensities, unrestrained by it, instantaneously rush into a state of unmitigated action, and the inevitable results you will find recorded in the annals of drunkenness, and on the catalogue of crime."—P. 89, 90.

In treating of the organ of Colouring, the author notices, that it is largely developed in the Oriental nations, such as the Persians and Chinese. "This fact," says he, "has been observed, but it has not that I am aware of, been further remarked, that it is in the east that Nature has bestowed her strength, and beauty, and variety of colours. The tint of its sky—the hue of its landscape—the beauty of its bird and its blossom—even the gay attire of the insect that sports away life in the beams of its summer sun,—all announce, in language too clear for contradiction, that Nature has selected the land of the east to leave there the loveliest hues of her pencil. Is the striking coincidence between the full development of this faculty in the east, and the ample bestowment of that with which it is in relation there, one of those stray events that has accidentally wandered from the fountain of light, and found its way to this earth uncalled for and uncaused, or it is one of those beauteous harmonies, arising from the mutual adaptation of things, that, together with every other of the same kind, was originally cast in the grand scheme of creation?"—P. 165-6. We do not know that sufficient observations have been made to *prove* that a large development of the organ of Colouring prevails among the inhabitants of climates where vegetation displays much gorgeousness and beauty of colour. The supposition, however, has much probability, and is supported by the converse fact, noticed in our eighth volume, p. 68, that in the skulls of the Esquimaux, who see almost nothing but the sky, and snow, and ice, the organ is manifestly deficient. The subject is curious, and merits farther investigation.

Mr Dean is, for the most part, correct in his statements of phrenological doctrines; but it is necessary to point out several passages in which we conceive he has fallen into error.

Speaking of the faculty of Weight, he says, "This faculty, like all the others, is weak in infancy; hence the inability of the infant to walk, or to preserve a perfectly erect attitude. In advanced life also, when age has seared the faculties, this is a sufferer in common with others, and, from its weakness, gives rise to the uncertain totter of the feeble frame."—P. 159. Are not these effects to be ascribed rather to muscular debility than to

impairment of the organ of Weight? At all events, the former is undoubtedly *one* cause.

He says, that "where Destructiveness is coupled with Benevolence, its active manifestations are neutralized, so far as regards living beings."—P. 94. This is an inaccurate statement. Benevolence never neutralizes Destructiveness, but only restrains and directs it. Nay, it even has occasionally the effect of rousing Destructiveness to action against living beings. When the benevolent man sees a villain maltreating the destitute and helpless, he instantly experiences a strong inclination to "break the jaws of the wicked"—an inclination which arises from Destructiveness alone. An example will be found at the 68th page of this volume of our Journal.

Mr Dean's mode of comparing the development of the reflective organs with that of the perceptive, is somewhat objectionable. He imagines a plane, passing through the pupil of the eye and the axis or line connecting the two openings of the ear, to be intersected by another plane "passing from the surface of the reflecting faculties," or, as we should have said, *organs*. The angle formed at the point of intersection of the two planes will indicate, he says, "the comparative development of those two classes of faculties. The larger the angle, the more will the reflecting faculties preponderate over the perceptive and knowing. The more acute the angle, the greater the comparative strength of the perceptive and knowing over those of the reflecting."—P. 219. Now, this way of measuring applies only to the organs in the middle line of the forehead, and is moreover defective inasmuch as it overlooks the relative breadth of the superior and inferior regions.

With respect to the temperaments, Mr Dean falls into the old error of ascribing to *them* the determination of character. This blunder is certainly not a little surprising in a writer so well acquainted with Phrenology as Mr Dean. "The individual possessing the sanguine temperament," says he, "is ever of a disposition the most happy. Gay, lively, and mirthful, he possesses much buoyancy of temper, and an elasticity of spirit, that reverses may bend but cannot break. He is ever a welcome companion, and enlivens the circle in which he moves. He is inclined to the softer passions; and the net woven by love finds him an easy victim. He is well calculated to tumble about on the rough side of the world, without being subdued and overcome by its asperities."—P. 229. Again, "If the sanguine temperament inclines to love, the bilious inclines not less to ambition. Venus cannot find in the bilious temperament an Adonis, but ambition has found a Napoleon. It is the individuals of this temperament that overcome opposition by patient endurance, and determined perseverance. They are characterized by inflexibility

of purpose, unyielding tenacity of opinions, and steady, uniform, determined adherence in the use of means once employed. A wrong treasured up by them breathes in the atmosphere of vengeance until it can wreak the ruin it meditates. It is the individual possessing this temperament that stamps a people with the impress of his own mind, and then leaves a name behind him to float down to after ages."—P. 280. Now, it is shewn by daily experience, that there is no fixed and constant proportion between temperaments and particular dispositions. The activity and energy of the mind are materially affected by temperament; but every particular *bias* of disposition or talent is determined by the form of the brain. There are melancholy and frigid people of the sanguine temperament, and fickle and placable of the bilious. Mr Dean knows all this so well, that we are tempted to suspect that the sentences just quoted have been thrust into the volume by some officious friend.

From the present work, and what Mr Dean has formerly written on Phrenology, we derive the confident expectation that he will prove an able, useful, eloquent, unflinching and effective advocate of our science in the United States.

ARTICLE III.

SUGGESTIONS FOR FACILITATING AND EXTENDING THE STUDY OF MENTAL DERANGEMENT, AND IMPROVING THE TREATMENT OF THE INSANE. By Mr JAMES FOULIS DUNCAN, A. B., Dublin.

THE treatment of the insane is a branch of medical science which has hitherto been very inadequately studied and taught in the universities and schools of the United Kingdom; and, as a natural consequence, it has in practice been usually followed by a signal want of success. There is reason to hope, that before the lapse of many years, the subject may attract that degree of attention to which its undeniable importance renders it entitled; and with the view of in some measure promoting, by agitation, the change so much to be desired, I am induced to submit to the medical profession—its younger members in particular—a few hints on the study of mental derangement, and on some improvements of which the treatment of the insane appears to be susceptible.

First, I would recommend that the Lunatic Asylums for the poor should be thrown open, under judicious restrictions, for the attendance of a limited class of students. The city of Dublin is provided with two large and well conducted esta-

blishments of the description alluded to,* in which are to be found, I doubt not, many interesting examples of every form of insanity; and medical students, if permitted to visit them, and there observe the symptoms and progress of such cases, would evidently be better qualified than they are at present, to give opinions in courts of law as to the sanity of individuals, and to superintend the management of cases when entrusted to their care. Yet, it is equally evident that certain restrictions should be imposed, to confine this privilege to persons qualified to derive advantage from it, and careful not to abuse it; for it would be hurtful to many of the patients to be visited by an indiscriminate number of thoughtless young men, who would perhaps feel no regard for the peculiar nature of the patient's malady, and exercise no control over their own conduct and conversation; for even a single word, a silent action, or a passing look, might be erroneously attributed to improper motives, and, by disturbing the tranquillity of the patients, be productive of much injury. I need scarcely observe how often in these cases, offence has been taken where none was meant, and how frequently the best intentioned, and perhaps most ingenious efforts to please, have failed to produce the wished for effect. Merely to accost some patients, to cough in their hearing, even though not in sight, or to perform any other unmeaning action, whereto their disordered mind may have attached some peculiar importance or unkind intention, is occasionally quite sufficient to irritate their feelings, and excite that unhealthy action in the diseased organ, which is so prejudicial to their recovery. Now, as these asylums were originally intended for the recovery and relief of the unhappy sufferers, it would be worse than useless to sacrifice their utility as places of refuge, to the vain hope of making them nurseries of science. I say *vain*, because if either the number or injudicious remarks of the students were permitted to disturb the tranquillity of the patients, no treatment could be expected to succeed. For, as in mere injuries of the body, rest has been found to be more conducive to recovery than the exhibition of medicines, so, in this class of diseases likewise, it is absolutely indispensable; and, it is extremely probable, that this necessary rest would be interrupted by the questions which a young student would propose to the patients, in his anxiety to avail himself of the advantages afforded by his attendance at the lunatic asylum. I am therefore of opinion, that it would be infinitely preferable to have these institutions closed against the admission of stu-

* St Patrick's Asylum, founded by the celebrated Dean Swift, and the Richmond Asylum, which affords accommodation to 300 patients. Incurable lunatics and idiots are likewise accommodated at the House of Industry. I am not quite certain of the numbers admitted there, or at St Patrick's Asylum; but they are considerable.

dents, rather than permit the feelings of the patients to be outraged, and their recovery retarded, in the manner just described. But if there can be found amongst medical students—as I believe there can—some ardently desirous of obtaining information upon every subject connected with their profession, anxious to relieve the sufferings of their fellow-creatures, and willing to submit to every wholesome restriction, which the governors, medical and moral, may think fit to impose, then I am satisfied, that the doors of these institutions may be thrown open to such students, without injury to the patients, and with advantage to science.

I need scarcely, upon this point, make any allusion to the private establishments which accommodate the richer classes of society, and which, from a due regard to the feelings of relatives, must be closed against intrusion; for, even though accessible, they would afford the student such very inferior opportunities to pursue his investigations, that it is a matter of much greater professional importance to endeavour to obtain access to those larger asylums where attendance would be really an advantage.

My *second* suggestion is, that lectures upon insanity, and the matters connected with it, should be instituted in our various professional colleges and schools. Although few cities in the world are supplied with a greater number, or a higher order, of teachers of the various branches of medical science than Dublin, we have to lament that this array of talent and industry is too exclusively directed to lower and less important diseases than those which affect the human mind. In illustration of this, I may state that an eminent professor of the practice of physic, when compelled by want of time to omit a portion of his course, selected this very class of diseases as that which could be most safely discarded. Perhaps he acted more judiciously in not entering upon the subject at all, than he would have done had he glanced at it in the superficial and obscure manner in which it is usually alluded to; and I cannot help remarking here, that as, in ordinary cases, clinical lectures convey more practical information to the student than any others, so probably the best lectures which could be instituted upon insanity would be those which refer to actual cases, and illustrate at once the degree of disease, and the details of treatment. It is greatly to be wished that the medical profession of the British islands may direct their attention to this subject, with the view I have just hinted at. Other countries have already set us the example, and our continental brethren bear away the uncontested prize: but I venture to assert, that our resources in this department of medical investigation are not inferior to theirs, if we but knew how to use them; nor is there so little

yet to be ascertained in this field of research, that we may leave them to complete, without disturbance, the discoveries they have begun.

A third suggestion is, to have all establishments for the treatment of insanity built upon a large and extensive scale. Were they so constructed, not only would the students derive proportionally great advantages from attendance on them, being thereby enabled to see a greater number and variety of cases than could be accommodated in smaller institutions;—but also the facilities of cure would be much increased. For in such places, *suitable* employment and amusement can be more easily afforded to each of the inmates, and the possibility is greatly increased of intercourse amongst the convalescent patients, which has the tendency to relieve that feeling of loneliness so prejudicial to recovery, and so apt to occur when their number does not exceed one or two. It is quite obvious, that, even although the medical attendant should devote the whole of his time either directly or indirectly to the cure of his patients, he cannot always be present; and from peculiarity of taste or of temper in his patients, his presence at any time will not be equally acceptable to all. Upon such occasions, or under such circumstances, I conceive it is absolutely injurious to leave the patient altogether to himself, or to the company of a person in a different rank in life from his own. In the former case he begins to ponder on his melancholy condition, and sinks into despondency; in the latter, propriety of taste is offended by the coarseness of his companion. But when, under proper restrictions, rational intercourse is permitted amongst the convalescent patients, a cultivated mind is both occupied and pleased by the society and sympathy of equals. In some instances I have known this intercourse productive of greater advantages than conversation, even with the physician. The morbid state of the patient's mind frequently produces dislike to the medical attendant, and suspicion even of his kindness: advice from him will be disregarded, and arguments perverted, because they are supposed to arise from interested or improper motives; but a remonstrance from a fellow-sufferer seems the essence of affection,—and the intention, whatever it may have been, is immediately abandoned, and tranquillity is restored. I have known many instances of patients determining to commit some desperate design, but defeated by an underplot in which another patient acted a part, and by his timely and successful advice prevented the necessity of resorting to restraint.

In advocating this opinion, I have ventured to differ from some authors,* who condemn large establishments as tending

* See Letter of Mr Bakewell to the Chairman of the Committee of House of Commons, 1815.

to create a horror in the minds of the patients, and thus prevent their recovery. These writers conceive, that as some incurable patients must be confined for life in all large establishments, each new inmate must fear that he is to be added to the number of those in that deplorable condition. But as it is the duty of every person to report the result of his own experience for the general advantage, I am bound to say, that, out of a large number of cases in an establishment with which I am intimately acquainted, I recollect but one in which the patient either alluded to, or expressed dislike at, the circumstance of his being confined with insane persons; a patient, too, that recovered in spite of his feeling upon this point. In many cases, indeed, the patients expressed annoyance at being confined, but this was altogether independent of the place or circumstances of their confinement.

That such a feeling was not often manifested by the patients, may probably be accounted for by the attention which was paid to their classification; in proof of which may be stated the fact, that, in several instances (I distinctly recollect four), members of the same family were at one time in the house without either of them being aware of the condition or confinement of the other. Of course, large establishments are advisable only when they are so arranged as to provide for the classification of the patients, and the separation of such as might by conduct or conversation interrupt that tranquillity which is essential to the health of the convalescent and to the recovery of the insane. I believe that few asylums exhibit such a number of real recoveries and amendments in proportion to the total number of patients, as the large public pauper asylums. In these we can conceive no adequate motive which could influence the managers to falsify or exaggerate the returns; whereas in all private establishments the reverse is obviously the case, and any statement of cures and amendments coming from such quarters is not to be received with equal confidence. Certainly there may be some peculiarity in the constitution and circumstances of the poorer classes, giving rise to this superiority in the success of their treatment; but the facility with which, in large pauper asylums, suitable employment can be provided, seems to me quite sufficient to account for the difference.

In the *fourth* place, I would suggest, that all establishments, both for the poorer and the richer classes of society, should be placed under the care and management of Government. At present, the Government of the country exercises a control over all private Lunatic Asylums, through the agency of inspectors, whose occasional visits prevent the occurrence of any of those gross and lamentable abuses which were formerly so common; but I humbly suggest that some public body should be en-

trusted with the management of, and not merely a controlling power over all of them; and that such allowances should be made to the medical officers, as will secure the services of the ablest in the profession, and enable them to devote the whole of their attention to the responsible duties of their office. These duties, I hesitate not to assert, are the most difficult, as well as the most important, in the whole range of medical practice, and it would be absurd to intrust them to a person of inferior medical education from the paltry motive of economy.

I am aware that were this suggestion carried into effect, the consequences would be hurtful to the pecuniary interests of many who have undertaken this difficult and important trust. I have been told by the friends of patients to whom the observation was made, that they could not feel the same confidence in the management of Lunatic Asylums, under such circumstances, as they do at present, when the proprietor is labouring to support his own reputation amidst much honourable rivalry and some secret suspicions; and I am farther aware that it would be more difficult to conceal the name and rank of the patient than it is at present: but I am recommending those measures which appear to me most likely to facilitate the successful treatment of insanity, and one of these is, that the mind of the physician should be undisturbed by the many cares and anxieties which devolve upon the proprietors of such places, and left free to study and to treat the cases that come before him. And farther, whenever he recommended any mode of treatment, he would be unfettered by the fear that his counsel might be supposed to be dictated by self-interest. I have known instances where, from this very circumstance, removal to or continuance in an asylum was not advised, though the patient's state seemed to require it, lest it should have been supposed to have emanated from this unworthy motive; and the patient's advantage was sacrificed to this delicacy of feeling.

Another advantage following the adoption of this suggestion would be, that the statistics of insanity might be carefully compiled. The uses to which accurate and properly prepared tables could be applied are too many to be enumerated here: some documents lately published by Sir A. Halliday, comprise nearly all the information we are possessed of on this subject; and its imperfect nature furnishes a strong argument against the continuance of the present system of separate and independent asylums.

Farther, I would recommend that all such establishments should be properly adapted to the state and health of the patients. Some are continually talking aloud, singing, or shouting, either to create disturbance, or to enjoy the gratification

of a whim, or without any apparent motive whatever. The profession is happily now so far advanced as to know that the barbarous practices formerly in use to quiet these refractory patients were cruel and inefficacious. In most establishments at the present day, distinct wards are appropriated for their accommodation; but I would humbly suggest the propriety of having distinct and distant buildings allocated to their use, to prevent the annoyance of the more rational patients by the incessant monotony of this melancholy sound. In connexion with such establishment, I would have some smaller cottages or residences situated near some quiet sea-port or other desirable locality, whither such patients as might be likely to derive advantage from change of scene, sea-bathing, or even the diminution of that restraint which must characterize every large and well regulated establishment, might be removed, and yet be not altogether divested of medical control. I have known occasional exercise beyond the limited precincts of an asylum, country excursions, and even extended travelling, to relax the morbid action of the intellect, give rise to a train of new thoughts, recall pleasing associations, and facilitate and promote recovery.

Lastly, I would advise students not to confine their attention or practice to diseases of this description, even though it be desired to make them the chief objects of study. The relatives of a patient are so fearful lest it should be supposed that any of their family or friends labour under mental derangement, and so cautious to prevent such a supposition from gaining ground, that if a person by his ability and perseverance should attain the unenviable distinction of being skilful in treating insanity, his opinion would be the last they would apply for—his carriage the only one which they would object to stopping at their door. So much is this the case, that I have known persons studiously avoid a physician of such an obnoxious reputation, lest it should be thought that their acquaintance with him originated in the melancholy manner just described. On the other hand, the friends of a patient will never object to ask the opinion and assistance of a man who has the reputation of being skilful in other classes of disease.

We have much pleasure in giving a place in our pages to the above interesting communication; because, although Mr Duncan no where alludes to Phrenology, his remarks are in accordance with its spirit, and with the principles so zealously inculcated by Drs Spurzheim, Georget, Falret, Dr A. Combe, and other phrenological physicians, in their respective works,

and in various contributions to our journal. Mr Duncan, for example, suggests that students be admitted to public asylums to study insanity in the same way as they do other diseases, by the personal examination of the patients; and he argues that by selecting the students properly, and having a control over them, no harm will result to the patients visited. He might have added, that the experiment has been extensively made, and been attended with complete success. Dr Combe mentions in the introduction to his work on *Mental Derangement*, that he had the good fortune to attend the first course of clinical lectures ever given on insanity, viz those of Esquirol at the Salpêtrière, near Paris, so long ago as 1819. On that occasion students were admitted to the patients at the time of the visits, without reserve or restriction; and although numbers availed themselves of the privilege for several months in succession, we are assured by Dr Combe, that in no one instance did any unpleasant or injurious consequences follow, while on the contrary many of the patients were amused and gratified. M. Esquirol, of course, exercised his own discretion in passing by those cases which he considered likely to suffer from the intrusion, and his presence operated as a restraint on the evil propensities of any of the visitors who might have been inclined to provoke or ridicule the patients; but beyond these precautions there was no other form or ceremony observed or required in the admission of students.

Since that time, now sixteen years ago, the same system has been not only continued but extended in the Parisian hospitals. At the immense asylum for male patients at Bicêtre, Dr Ferrus, the enlightened physician of the establishment, admits students to his visits, and delivers regular lectures on the more remarkable cases which present themselves to his notice; and he also bears testimony to the double advantage to both students and patients which results from the practice.

We may even go a step farther, and say that there is more than presumptive evidence to prove, that the profession owes this important step in the study of mental diseases to the humanity and genius of the late lamented Spurzheim. In his work on insanity, published in 1816, after alluding to the obscurity in which the subject was involved, and the splendid opportunities for improving our knowledge of it, possessed by men at the head of large establishments like those above named, he feelingly remarked; how painful it was that persons thus favourably situated should communicate so little of what they learned to the public. In Spurzheim this sentiment was the offspring of the purest and profoundest humanity; but it was very differently viewed by some of the friends and admirers of the justly celebrated Pinel and Esquirol. By them the sentiment

was stigmatized as a gross and almost defamatory personal attack; it was resented and repaid by virulent abuse and the most captious criticism; and a great effort was made to destroy the reputation of the best work on insanity which had till then appeared.

Strong in the simplicity of truth and innocence, Spurzheim stood unmoved. His feelings were wounded, but he knew he was in the right, and feared not for the result. The storm passed over and was apparently forgotten; but two short years after, clinical lectures on insanity were announced, and pupils regularly admitted to the visits, where no such instruction was obtainable before; and, to his honour be it said, Esquirol, who, we have been informed, really believed himself rivaled by Dr Spurzheim, was the man who led the way in this new and untried field; and he has since ably been supported.

In regard to Mr Dupeyron's second suggestion we may mention, that a lectureship on mental diseases was established in Edinburgh about ten years ago, by Dr Morrison, the author of some very sensible works on the subject. Dr Morrison was bound to give one course annually, which he did for several years. From some cause or other these lectures have of late been discontinued. The lectureship, however, yet stands in the Edinburgh Almanac among the existing things.

The soundness of Mr Duncan's remark, that the chance of cure is much greater in large asylums than in small, is not only deducible from the principles of physiology, but likewise demonstrated by experience. Even in the healthy condition, solitude, or a too limited circle of associates, is very prejudicial to the mind, by withholding from the social feelings their appropriate stimulus and food, and by giving undue ascendancy to the selfish propensities; and these evil consequences are greatly aggravated by the presence of disease. The success attending the mode of treatment adopted by Dr Ellis, in the large Pauper Asylum at Hanwell, (of which some account will be found in our 41st Number) shews, in a very striking manner, the utility of social intercourse, active employment, and a proper classification of the insane.

We repeat, that we insert Mr Duncan's paper with great satisfaction; because, although it does not contain any thing strictly new, his views are important and well brought out; and it is only by the repeated agitation of a subject that all its bearings come to be perceived and appreciated. We think the author would derive much gratification from the careful perusal of Dr Spurzheim's treatise.—*EDITOR.*

ARTICLE IV.

MR CARMICHAEL'S EXAMINATION OF MR MACNISH'S OBJECTIONS TO HIS THEORY OF SLEEP, IN THE PHRENOLOGICAL JOURNAL FOR DECEMBER 1834.

Mr MACNISH has set me an admirable example in the good temper and kindly feeling with which he has combated my hypothesis of the proximate cause of sleep. I trust I shall be able to convince him that my views are rational and well grounded, notwithstanding his objections; and I still more anxiously hope, that, in executing my task, if I have not his abilities, I have at least a wish to imitate his courtesy in our common pursuit,—the ascertainment of a curious and interesting, even though it be an unimportant, truth.

My proposition is, that “*The Process of Assimilation in the Brain is the Actual Cause of Sleep;*” but Mr Macnish cannot conceive how a natural and healthy deposition of new particles should occasion a cessation in the functions of any organ: he argues, that “before such a deposition can take place, there must be an augmented circulation of blood in the part; and that the greater the quantity of blood sent to an organ, the greater is the energy of its manifestations. During sleep,” he adds, “the blood is propelled in greater abundance into the liver and stomach than in the waking state; the consequence of which is, that these viscera act more vigorously, and that digestion is carried on with increased activity.” And he asks, “Why should the brain be an exception to this general law?”* That the brain is an exception to this general law is the opinion of Blumenbach and other physiologists, including Mr Macnish himself.† Blumenbach even considers the *diminished or impeded flow of oxygenated blood to the brain* as the proximate cause of sleep.‡ His able and learned translator observes, “Analogy renders it extremely probable that during the inactivity of sleep, the brain, having less occasion for arterial blood, has a less vigorous circulation than during the waking state; and we know that whatever diminishes the ordinary determination of blood to the brain, or impairs the movement of the blood through it, disposes to sleep. But although this be granted, it must be viewed, *not as the cause*, but as a circumstance, or, in fact, a consequence, of ordinary sleep.”§ Ri-

* Phrenological Jou

176.

† Id. 177.

‡ Edinb. Trans.

§ His Physiology, p. 262. Lond. 1828.

‡ Id. 285

cherand expresses the same opinion: "During sleep the inward or *assimilating functions* are going on; digestion, absorption, circulation, respiration, *secretion*, *nutrition*, are carried on; some, as absorption and *nutrition*, with more energy than during waking, whilst others are evidently *slackened*. During sleep the pulse is slower and weaker; inspiration is less frequent; insensible perspiration, and all other humours derived from the blood, are separated in smaller quantity." * "While it lasts, the cerebral mass collapses; a sign that the flow of blood into it is remarkably lessened." †

My theory, therefore, did not, as he supposed, lead Mr Macnish to conclude that the brain is least active when the circulation is most urgently at work within its substance. On the contrary, it appears that, in accordance with my theory, while the brain is least active, so is also the circulation within its substance. He calls upon me, however, to shew "that assimilation may proceed with increased activity, without any additional impulse being given to the circulation;" and allows that, if I shall do so, my doctrine may then acquire plausibility. ‡

This is easily done, for, as already noticed, Mr Macnish himself admits that, "so far from there being any increase of blood in the brain during healthy sleep, it is proved that the circulating fluid is actually lessened;" § and he even goes so far as to state that sleep is the period in which the *regeneration of the body chiefly takes place*. || And Darwin shews the mode by which it may be rationally supposed that this is accomplished. He argues that all the elements composing the solid parts of the body, have possessed, or do possess, the power of contraction, and of consequent inertia or elongation; and that it seems probable that the nutritive particles are applied during their times of elongation, when their original constituent particles are removed to a greater distance from each other. "For," he continues, "each muscular or sensual fibre may be considered as a row or string of beads, which approach when in contraction, and recede during its rest or elongation; and our daily experience shews us, that great action emaciates the system, and that it is repaired during rest." ¶

But, still more closely to meet Mr Macnish's challenge, is it necessary to remind him, that during the over-accelerated circulation of the blood which attends fever, the secretions of the several glands are more or less disturbed, and are sometimes even interrupted altogether; while the first effect of a return

* Richerand's Physiology, p. 344. Lond. 1815.

† Id. 347.

‡ Phrenological Journal, No. xlii. 176, 177.

§ Id. 177.

|| Philosophy of Sleep, 2d edition, 21.

¶ Zoönomia, § 37-3. Vol. i. of the Dublin edition of 1800, p. 529.

to a slow circulation is the restoration of those organs to a due performance of their healthy functions? Then wakefulness, raving, and restlessness give way to a deep, profound, and lengthened sleep—the exhausted brain is renewed, and invigorated—the crisis is past, and sanity of mind is rapidly succeeded by sanity of body.

Again, is it necessary to remind Mr Macnish, that one of the earliest consequences of inflammation upon any secreting organ is a cessation of its functions, and that these functions cannot be restored until the inflammation is allayed, and the circulation reduced within its ordinary bounds? It follows from all these facts, that increased activity in the circulation may impede instead of impelling the process of assimilation; but, to come still closer to the point at issue, I have already cited Richerand's observation, that *nutrition* is carried on during sleep with more energy than during waking. He says elsewhere, that "*nutrition* is but a peculiar mode of secretion, which is different in every organ;"* and he continues, "The nerves, of which there is always a certain number in the structure of the secretory organs, give to each of them a peculiar sensibility, by means of which they discover in the blood which the vessels bring to them, the materials of the fluid which they are destined to secrete; and these they appropriate to themselves by a real selection."† Permit me to add, that the complicated form of the glands, consisting as well of nerves as of a number of vessels of all kinds, whose convoluted arrangements and capillary calibre must necessarily impede and lessen the rapidity of the fluids circulating in them, apparently indicate a slowness of motion as *one of the conditions* by which the peculiar secretion is produced; the slowness of the circulation, therefore, in the brain seems happily fitted for the production of the nervous substance—that fine and exquisite soil, intended by the Author of Nature for the nurture of the thoughts, the passions, and the powers of action. *Another condition* is, that there should be nerves to select from the circulating fluid, the appropriate materials, the scattered ingredients of this soil: whether the brain itself performs this office, or whether it contains a peculiar machinery for the purpose, is a question that must be left to future physiologists to decide; but if the accessions of new particles be considerable, it is not very irrational to suppose that the as yet unassimilated mass should act like an extraneous body on the delicate structure of the brain, and paralyze its powers of thinking, feeling, and willing, until perfectly assimilated with the original organ.

I have nothing to object to Mr Macnish's observation that I

* Richerand, 230.

† Id. 231.

look upon sleep "being occasioned purely by mechanical compression, or something closely resembling it." The whole of my hypothesis rests in the supposition that the new mass of particles acts like an extraneous body on the cerebral substance, and occasions the paralysis of sleep,—a healthy and natural paralysis, very different from the paralysis of disease occasioned by "the effusion of blood, or serum, or purulent matter," or "the beating in of a portion of the skull-cap on the brain."

But, asks Mr Macnish, supposing that healthy sleep is always occasioned by mechanical compression, how are we to account for people being so easily awakened? What, in such a case, becomes of this pressure? Is the load at once lifted off the person's brain? What becomes of the assimilative particles which are squeezing his senses out of him and submerging him under the billows of sleep?†

People are not *always* so easily awakened as Mr Macnish here supposes. It is true, very trifling causes will awake a person who has taken nearly his full complement of sleep, or who is not constitutionally what is called a heavy sleeper. But do we never hear of an individual that could not be roused from an intense sleep by any effort to awaken him? and who has even been carried asleep from his chamber amidst the alarm of fire or of flood? Which of us, if suddenly disturbed in the middle of the night, has not started from bed half asleep and half awake? which of us has not occasionally felt "that species of headach, which scarcely amounts to pain, and is little more than a lethargic and sluggish inertness, accompanied by mental confusion and ineptitude, occasioned apparently by the pressure of the new nervous particles not yet perfectly assimilated?"‡ Does it not sometimes require considerable exertion, whether muscular or mental, to keep ourselves awake? But if we *gradually* shake off the pressure, the load is not at once but *gradually* lifted off the brain; "the assimilative particles which are squeezing our senses out of us" entering into perfect assimilation with the substance of the brain, and becoming adequate instruments of perception and reflection, feeling and will—operations in which they never had assisted before. But in the natural course of things, this perfect assimilation takes place before our awaking senses bring us into communication with the external world; and as organ after organ becomes fitted for exercise, the thoughts in which it is engaged are embodied in a dream.

It is not necessary, therefore, to suppose, that "one part of the brain may be fattening while another is starving;" *the fat.*

* Phrenological Journal, No. xlii. p. 177.

† Id. ib.

‡ See Tilloch's Philosophical Magazine, liv. 326.

tening has already been accomplished, and *the starving* scarcely is an applicable epithet, as the fattening is *then* merely turned to the use for which it was intended by nature. Mr Macnish, however, says, that it is just as rational to infer that the assimilative operation is at work in one leg, and at a stand in the other.* But how will this illustration suit his own theory? The "*nervous energy*" has at least as general an influence as the process of assimilation; and he will find it as difficult to set it to work in one leg, and make it stand still in the other, as the task he is pleased to impose upon me. As far, therefore, as Mr Macnish's legs can contribute to the support of his argument, either of us may be right, or both of us wrong.

I have nothing new to say as to the idiosyncrasies of General Elliot and Dr Reid; one of whom, it seems, acted on the principle of the chameleon, and the other of the boa constrictor. There is no very wide difference of opinion between Mr Macnish and me with respect to these gentlemen, their habits, and the result. Nor have I any farther objections now to adduce against "*the sensorial power*." Mr Macnish avers that he can shew "that one organ may have an excess and another a deficiency, with as much ease as that one body may be positively and another negatively electrified."† I wish he could shew that these two powers were one and the same. This would be an undertaking worthy of his abilities. He will then have exchanged a mere word, a mere general term, comprising a variety of meanings, for a real, definite, acknowledged, substantial existence. I shall willingly admit its operation in all the phenomena which can be legitimately assigned to it; and if he can prove that it performs the office which I have ascribed to the process of assimilation, by such a concentration of facts as I have brought forward, I promise him faithfully to relinquish my hypothesis in favour of his new and improved one, even if there be in the balance but the weight of a feather against me.

I must, however, dissent from almost every word Mr Macnish has said, in contrasting "active-minded, deep-thinking, care-worn men, that sleep ill," with "men of dull, easy, contented minds, that eat like horses, and think of nothing but the next meal, and lay their stupid heavy heads upon a pillow, and instantly fall into a profound slumber." Neither of these classes can sleep well, unless they take a due portion of bodily exercise. If they do, Mr Macnish may be assured that they sleep equally well; unless, indeed, the latter be "a sluggish obtuse glutton, who devours more than is good for him," and in that case his nights are still more restless than those of his care-worn neighbour. His slumber, like Dr Reid's, is "a tor-

* Phrenological Journal, No. xlii. 178.

† Id. ib.

por similar to that which falls over the snaky monster of the wilderness when gorged with food,"* and approaches the nature of apoplexy rather than of sleep; whatever of it is sleep, I would ascribe to the pressure of the assimilative particles; whatever of it is apoplexy, I would attribute to the pressure of the overswollen blood vessels. Mr Macnish, on the contrary, conceives that "the sensorial power which kept the brain awake is transferred by an easy process to the stomach, which, reinforced in this manner, acts vigorously, and enables the individual to fatten upon its labours. The two organs (he observes) are here reacting upon each other; in the one case, the brain starving the stomach, in the other, the stomach starving the brain, and giving a practical vindication of the Shakspearian aphorism, that '*fat paunches make lean pates*.'"

Shakspeare here was obviously metaphorical, by "*lean*" he meant meagre of knowledge, not of flesh, for fat paunches are generally accompanied by fat pates, and both of them are unequivocal indications of the lymphatic temperament. The most usual accompaniment of this temperament is a large organ of Alimentiveness; and if this propensity overbalances the influence of the various intellectual powers, the organs of the latter will lie fallow and unproductive, acquiring neither size nor strength, while their more sensual companions will "*fatten*" on the nervous deposit, which, there is reason to presume, is abundant in proportion to the exercise of the organ, and thus contributes to the size of that fat contented ignorant brain, which entitles its lymphatic owner to the well-known sobriquet of "*big head and little wit*."

Mr. Macnish reserves his strong argument for the last, which he conceived would strike with fatal effect on my theory. He gives a consecutive detail of the whole process of digestion, observing that the drowsiness, which takes place shortly after eating seldom lasts above an hour or two, and that "Mr C. would say that this arises from the brain being oppressed by the deposit within it of *new particles*, which must necessarily be derived from *the food lately taken*."† But I have neither said so, nor would say so. What I have said on this point in my original essay is directly the reverse, and is as follows. "It is true that sleep after meals is most irresistible while the food is still in the stomach, after digestion has commenced, and long before assimilation has taken its turn. But we are ignorant how far the arrival of new matter in the bloodvessels may instantly contribute to the deposition of the old, as an additional number of balls put into a tube at one extremity, will force out some of their predecessors at the other."

* Phrenological Journal, No. xlii. 178.

† Id. 180.

"I enter into no argument on the subject; I repose on the rational presumption that sleep is something more than rest after fatigue;—that it is probably the consequence of an important vital process in the delicate and fragile instruments of the mind,—and that no process can be more requisite to these instruments, or more likely to produce the effect, than the process of assimilation."*

Such, therefore, are my observations on this subject in my original essay; but Mr. Machisi, in his theory of the sensorial power, appears to be a devoted disciple of the celebrated Darwin. In reference, therefore, to his master's authority, I might now remind him, that the process of assimilation frequently takes place by means of particles which have escaped the three hours' sojourn in the duodenum, and the common circuit through the lacteals, the thoracic duct, the left subclavian vein, the lungs, the heart, and the arteries. But I rest not on the cited experiments of Monro,† who gave madder to some animals, having previously put a ligature on the thoracic duct; and found their bones and the serum of their blood coloured red;‡ nor on those of Krattenstein, Charles Darwin, Hughes, and others;§ in some of which nitre and asparagus, shortly after they were taken into the human stomach, gave evident proofs of their presence in certain secretions, while at the same time they could not be detected in the blood. Nor do I rest on the other instances in which similar evidence is derived from various other facts equally satisfactory; nor on any circumstance inconsistent with my original views. The nervous substance, before it is deposited on the brain, must undergo all the sublimation and refinement it can receive, in the most powerful and efficient laboratories of the frame, to fit it for its high and pre-eminent destination. This cannot, therefore, be the raw and unprepared material, hurried from the stomach to the head by any short and narrow by-way. It must be the highly-wrought and elaborately animalized material, which has passed through every necessary process, and has advanced through the circulation to the very spot prepared to receive it. The nervous communication between the stomach and the brain may announce, with telegraphic despatch, that a new supply has arrived in the frame, and may stimulate, with the speed of electricity, the capillary terminations of the arteries, to deposit in abundance the congenial particles with which they have been furnished from a preceding supply of nutriment; and if the deposit be abundant, the sleep may be sudden and profound.

* Transactions of the King and Queen's College of Physicians, ii.; or Tilloch's Philosophical Magazine, liv. 258.

† Zoönomia, § 29-2, vol. i. p. 354.

‡ Id. 359, 367, 371, 372. See the whole section.

Of the truth and justness of this simple view, the instantaneous slumber which sometimes follows a dose of morphia is at once an illustration, a proof, and almost a demonstration.

Mr. Macnish, in his concluding paragraph, observes, "that there are other points in my essay which he thinks could also be made the subject of criticism." I do not controvert the supposition; but perhaps, on a reference to my original essay, he would find many of not all of these points already disposed of. I have not yet been assailed by an objection (that I found too trifling or sturdy to rebut). So far my hypothesis wears the semblance of truth. It is not of sufficient moment to take any farther trouble with it. That it should be admitted by future physiologists as a conjecture, not to be rejected as unsupported and irrational, but one which may be considered as founded in nature and reason, explaining every circumstance, and removing every difficulty connected with the subject, is the highest point of ambition to which I can aspire. To bring it to the test of experiment, and demonstrate it to be an incontrovertible fact, is not within the scope of any investigation which I know how to institute. I do not see, even if it were established, that it could lead to any higher result than the gratification of the careless curiosity of a few, upon a phenomenon about which a few only are curious; or if to a higher, it may perhaps convey the important instruction that we ought not to be satisfied with a shadow when we can grasp at the substance, nor with words when we may possibly attain to things. But even so I have done as much as the matter will justify. Other objections may be started; but, if my theory be true, they will be as easily dissipated as their predecessors. But I should be ashamed again to take the field, even in the cause of truth, where the truth at issue is of such pany importance.

As this is the last time I shall approach the public on the subject, I may be pardoned if I still linger to obtrude a short and comprehensive view of my whole hypothesis, as I am at present disposed to maintain it.

The absorbents and secerning vessels never remit their offices — those carrying off the old particles from every part of the frame, and these depositing new ones in their place; the absorbents being most busy with the muscular fibres which are most exercised by labour, or the nervous fibres most exercised by the operations of sensation, volition, and thought. Yet these fibres, so exercised, are always the strongest and most powerful of their kind in the frame: the secerning vessels must, therefore, be equally busy in restoring new particles in the

place of the old, or, during certain intervals, rather more busy, because more are restored than are taken away, as is proved by the increase of size, proportioned to the occasional or habitual exercise of the parts. Yet it is evident that it is not during the moments of exercise that the great mass of new matter is deposited, otherwise the muscular and nervous fibres in question would go on thickening and strengthening the longer the exercise of labour and thought was continued; and this, we know, is contrary to fact;—fatigue ensues, and rest is necessary, and during that rest it is probable that the secreting vessels, though always depositing new particles, deposit much more, or the absorbents remove much less, than at other times. By rest, I mean a mere cessation from labour; and such rest is not sleep. The large mass of new particles deposited on the muscles cannot affect their tough and insensible fibres by any striking phenomenon; but when such a mass is deposited on the delicate, tender, and sensible structure of the brain and nerves, how different must be the effect. If small in quantity, and while these organs are in a state of active energy, it may be hurried unobserved into the existing activity of the living matter; but if large in quantity, and while these organs are resting from their labours, can it be that the extraneous and unassimilated mass does not press its increasing weight on their fragile machinery, and produce an effect something like the pressure of the overswollen bloodvessels, but natural, necessary, and healthful—the PARALYSIS, not of apoplexy, but of SLEEP?

While the incumbent mass thus paralyzes the *encephalon*, the body is powerless; there is no voluntary motion, no perception, no thought, no dream. But when the assimilation is complete in any one of the organs of the mind, then thoughts arise; but there is no perception until the assimilation is also complete in one or more of the organs of the senses; until then the simple current of our thoughts constitutes an ordinary *dream*.

If the nerves of motion continue invested in a newly deposited mass of nervous matter, while the mind anxiously desires and essays in vain to move the limbs—this is *nightmare*. If these nerves are extricated from their trammels, and those desires and efforts of the mind still continue—if they command and the nerves obey—this is *somnambulism*. But these dreams, whether ordinary and natural, or attended with the horrors of nightmare or the perils of *somnambulism*, vanish as our senses admit the impressions of the external world. We are then *awake*; but while thus awake, if the nerves of motion are still asleep—if their trammels still continue upon them—this is the *daymare*, so feelingly described by Mr Macnish. If through any idiosyncrasy the process of assimilation were never sufficiently considerable to paralyze, by the mass of new particles,

the brain and nerves of sense, the individual would exist as one that *never slept*, even though his nervous system should obtain in some degree those blessings which are the peculiar concomitants of sleep, a sufficiency of nourishment, and a renovation of vigour. If, through an opposite idiosyncrasy, the deposit of new particles should be so superabundant and incessant as to continue the paralysis beyond the usual and natural period of slumber, this state would present the rare and hitherto mysterious phenomena of *protracted sleep*, sometimes terminating even in death, as in the case of Elizabeth Perkins, detailed by Mr Macnish. These two opposite idiosyncrasies seem to arise from opposite diseases of the secreting vessels of the head, one promoting to excess, and the other in an equal degree preventing, the effusion of the due quantity of nervous matter requisite for the healthy and vigorous state of the nervous system.

If it should be asked, How can the same cause operate in different ways? How can the assimilating process at one time cause sleep, and at another not cause it? How can it, though unremitting in activity, at one time paralyze the brain and nerves, and at another rather enliven and invigorate them?—These questions are difficult, and the more difficult because in the material world we can find no object wherewith to compare and illustrate the phenomena of mind. The element of fire must suffice on the present occasion, where no better ligament of analogy between things so different can be had:

Nutritur ventis, ventis extinguitur ignis;
Lævis ait flammæ, gravior aura necat.*

If a fire burns clearly, brightly, and fiercely, still it requires a constant supply of fuel to keep up its intensity, and replace the solid particles expended in combustion. A small quantity frequently added, so far from paralyzing, increases the activity of the fire; but when that activity is exhausted, when the very energy of the flames, like the exertion of a powerful mind, has wasted away the substance on which it fed, and these flames sink enfeebled, and the fire is diminished and dull, if you heap over it a heavy mass of fuel, the flames are smothered, the activity ceases, the element sleeps. Hours are required to extend the vivifying influence to the new matter; at length the increasing warmth pervades the whole mass, the assimilation is complete, and the smallest incitement stirs up again all the energies of the furnace. If too little aliment be supplied to the glowing mass, it will burn out, like an over-worked brain in similar circumstances; while too great a weight of fuel cast on the exhausted hearth overwhelms the expiring embers, and the result is the slumber of death, not of sleep.

A. C.

ARTICLE V.

CASTS OF THE HEADS OF TWO SWEDISH LAPLANDERS,
AND OF THE SKULL OF A CRIMINAL, Presented to the
Phrenological Society by Mr G. M. SCHWARTZ of Stockholm.

In September, 1833, the above-mentioned casts were transmitted by Mr Schwartz to Edinburgh; but they were accompanied by no information as to the names and characters of the individuals. The box having been delivered to Mr Robert Cox, Conservator of the Phrenological Society's Museum, he immediately wrote to Mr Schwartz in the following terms:—

"I have had the honour to receive the casts transmitted by you from Stockholm for the Phrenological Society of this city. . . . May I beg the favour of a letter from you, containing particulars regarding the dispositions and history of the individuals whose heads the casts represent? This will add very much to their value. The two heads, I conjecture, are those of Laplanders, and the skull that of a criminal. The former exhibit a lymphatic temperament, and the individuals seem to have a strong endowment of Secretiveness. The person of whose skull you have sent a cast, must have been, if not a malefactor, at all events a selfish, irritable, revengeful, cruel, headstrong, quarrelsome, vain, unprincipled, coarse, shallow-minded character. If his constitution was active, he must have been very restless and troublesome. I shall be anxious to receive an account of him. His only good quality is affection for children, and also, though in a less degree, for friends. He would be tyrannical, proud, intractable, and overbearing; without philanthropy, profundity of intellect, or poetical or musical talent. Be so kind as to say whether these inferences from the cast are correct."

To this letter Mr Schwartz returned an answer, dated 24th September 1833, of which the following is a translation:—

"Sir, The casts which I had the honour of forwarding to you for the Phrenological Society of Edinburgh, are, in the first place, of the heads of two Laplanders—a lad of 18 years, and a girl of 23. On the cast of the latter will be observed the mark of a feather, which was put into her mouth, because she was *enrhumée*. They were cousins, and I have been informed that the boy resembled his mother, and the girl her father. Of their characters I have been unable to obtain any account; and I can say nothing myself, except that the girl appeared to be very

rational in her conduct, but the young man had less judgment. Both, in perfect accordance with the configuration of their heads, were very reserved in their manner (*tres retenus dans leur manière d'être*), and doubtless partook of the general character of the Laplanders, which is well known. I had hardly time to take the casts; and previously, in order to render the configuration of the heads more visible, made both the girl and the lad cut off as much of their hair as they would part with. It was of equal length round the head of the latter as worn by the Laplanders.

"The third cast is that of a criminal who died in one of the prisons of Stockholm, and whose body was, according to custom, dissected at the Surgical School from which the skull was lent me by one of the professors in 1804. These are all the particulars with which I am acquainted. I have preserved the cast on account of its conformation, which is the most unfavourable that I have ever seen of a human head belonging to a civilized country in the north of Europe; and it is in this view that I thought it worthy of a place in the Society's collection.

"I shall undertake in a few days a voyage of brief duration to London, and regret much that the advanced stage of the season will not permit me to visit Edinburgh likewise, to inspect the collection of the Phrenological Society, and become acquainted with Mr Combe. His moral work, 'The Constitution of Man,' is now translated into Swedish, and will be printed on my return, under the title of 'The Doctrine of Happiness on Earth.'

"Accept, Sir, the assurance of the consideration with which I have the honour to be," &c.

(Signed) "G. M. SCHWARTZ."

We have looked into Malte-Brun's *Universal Geography* for "the general character of the Laplanders," to which Mr Schwartz refers; and have been gratified by finding a striking description of the manifestations of very powerful Secretiveness. That organ is very large, not only in the two heads noticed above, but also in the skull of another Swedish Laplander, a cast of which was presented by Mr Schwartz to the Society in 1832. The entire lateral regions, indeed, are very much developed in all the three; indicating Acquisitiveness, Destructiveness, and Cautiousness, to be also large*. Hence the whole present a globular appearance. The Laplanders, says Malte-Brun, "are at once passionate and timid; their choler may be easily excited, but their fear prompts them to dissemble or sup-

* The two heads are *Busts* 161 and 162 in the Museum; the Lapland skull is No. 184 of *National Skulls*; and that of the criminal is *Skull* No. 27.

press it. Every stranger is considered as a spy, whose object is to discover their wealth, that a heavier impost may be exacted. Paper money was attempted, without success, to be introduced amongst them; fathers then concealed their gold and silver in the cavities of rocks, and forgot sometimes to tell their children where the wealth was deposited. This distrust is accompanied with great avarice and selfishness; he who has any thing to sell always tries to cheat the purchaser, and the cunning Russian is often the dupe of the Laplander." (Vol. vi. p. 466.) Destructiveness renders them passionate, Cautiousness timid, Acquisitiveness avaricious, and Secretiveness suspicious and dissembling.

ARTICLE VI.

REMARKS ON INHABITIVENESS AND CONCENTRATIVENESS.

THE few observations now to be offered on the function of the organ No. III., we shall introduce in the shape of a commentary on a section devoted to this subject by Mr Dean, in his recently published *Lectures on Phrenology*. That writer starts objections to the views both of Dr Spurzheim and of Mr Combe. As these two phrenologists have left this faculty open for consideration, and as the best mode of arriving at truth is to listen to the suggestions of every honest inquirer, we subjoin all that Mr Dean says on the subject.

"The function ascribed to this faculty by Dr Spurzheim, is the propensity to inhabit a particular place. He grounds the existence of the propensity upon the assumption that nature intended every region should be inhabited, and has, therefore, bestowed upon all her animated productions an inhabitive propensity.

"The objection that occurs to me goes to the existence of a faculty possessing this kind of function. The original intention of nature, that different climates should be inhabited by different animals, and that, in this manner, every region should be peopled, is clearly indicated by the fact that she has adapted the physical constitution and capacities of the animal to the climate she intends it to inhabit. The same great system of adaptation that fits man to be a tenant of this earth, fits the various races of animals to inhabit the varied climates, where we actually find them. The disposition to inhabit, therefore, is a general and not a particular result. A faculty possessing this specific function, for the purpose of being a faculty, must be independent. If, in the exercise of that independence, it should

select a climate to which the constitution and capacities of the animal are adapted; its exercise would be useless; because the animal possesses an original tendency to such selection. If it should select one to which the animal is not adapted, its exercise would be worse than useless. To bestow a faculty that at best can do no good, and at worst can do harm, never could have been originally intended.

Mr. Combe and the Edinburgh Physiological School, name the faculty which they locate in this part, Concentrativeness; and ascribe to it the function of concentrating and continuing the exercise of mental power upon one particular object; or rather, perhaps, of holding up the object itself as the only subject of contemplation, at the same time excluding all others from interference. They observe that some individuals are much more abstracted than others, and possess, to a great extent, the power of concentrating and continuing upon one object their intellects and feelings.

"There are objections to the existence of a faculty possessing the function here ascribed to it.

"The functions of the several faculties are nothing more than their several modes of action, consequent upon the relations existing between them and the objects upon which they are destined to act, and be acted upon. These relations have the force and effect of natural laws. To allow the existence of a faculty, the function of which is of a supervisory character, and the office of which is to combine, concentrate, and continue the action of the different faculties, when nature has already established the relations between them and their objects, would seem to be nothing more in effect, than to suppose that nature made a second provision for the purpose of controlling and thus rendering nugatory the first; or to save her credit by its efficiency, supposing the first should fail.

"If one faculty of mind predominates, its stimulus will arouse, and in some measure direct, the energies of other faculties, the peculiar action of whose functions can assist it in its investigations. If this stimulus be what is meant by the function of this faculty, it could not, perhaps, be deemed objectionable. But we are precluded from making this supposition, for the reason that if it were, this faculty would be dependent upon the predominating faculty for any the least operation of its peculiar function, and if dependent, could not fall within the definition of a faculty, which is defined to be an independent power.

"Between other faculties and external objects, relations exist, and consequent upon those relations are the operations of their functions. But here relations *can only exist* between this and other faculties, not external objects. What these relations are. I am unable to perceive, unless they consist in the stimulus.

a predominating faculty, exerting the function of this into action. But if this be their nature, this function itself is clearly dependant on the stimulus, and, therefore, no faculty at all! Suppose this faculty alone possessed of ibordinate strength in a head in which every other organ was equally well developed, and, consequently, every other faculty possessed of equal strength, could it, under these circumstances, act at all? If its action were obedient to stimulus, it clearly could not, because here there is none. Its independence must preclude it from acting, and, under this state of things, leave it to rust in its matrix, a lord in the garb of a menial, a monarch in the bonds of a slave.

"But if no dependence exist, its action must be of an arbitrary nature; and an arbitrary power, to co-ordinate or more faculties to combine, and concentrate, and continue their energies; I should regard as an innovation upon existing relations, and hence doubt the propriety or necessity of its services. Not to urge that the possession of this arbitrary power, which is not intellectual, and, therefore, not susceptible of being enlightened, would be of dangerous tendency. If it be urged that the function of the faculty is rather to continue the object as the single subject of contemplation for the faculties, to the exclusion of every other; it may be answered, that the same original power that is competent to apprehend or seize upon the object, is also competent to retain it as the subject of contemplation; for all the purposes for which it was apprehended."

"I have thus given my views somewhat at large in relation to the alleged functions of this faculty. I consider the whole as open to future investigation. An appeal on all sides is made to facts, for the phrenologist is ever more solicitous to have the truth established, than his own particular views."—B. 82-86.

The objection here urged against the views of Dr Spurzheim, appears to us of no force whatever, and indeed is fully answered by Dr Spurzheim himself in his work entitled "Phrenology." It is true that the constitution and capacities of animals are adapted to the circumstances in which they live; but as observation shews, it is equally true, that there is a special instinct directing them to choose the situations to which their constitutions are adapted. This is a blind instinct, and is followed before any opportunity has been enjoyed by the animal of ascertaining what place is most suitable for its abode. Nor is such an instinct superfluous; for the understanding is in many animals insufficient to serve as a guide,—and even where the case is otherwise, half a lifetime might be spent before discovering the appropriate habitation. Moreover, without supposing the existence of such an instinct, it is impossible to explain why similar constitutions—different varieties of the same race—often choose to live in dissimilar localities.

So far as the lower animals are concerned, therefore, we have no doubt of the existence of this faculty contended for by Dr Spurzheim, in whatever part of the brain its organ may be situated. As to the possession of a peculiar faculty of this description by the human race, we are not without scruples; for attachment to the place in which a person happens to have been born, or to have lived for many years, is, in our view, essentially different from a propensity to choose an abode, and appears to fall naturally enough within the sphere of Adhesiveness.

Mr Dean's objections to Mr Combe's opinion are, for the most part, purely metaphysical, and apply with equal force to the organ of Firmness, whose function is beyond the reach of controversy. It appears to us, however, that Mr Combe has laid himself open to some of the objections of Mr Dean, and also of Dr Spurzheim, by ascribing to the organ two radically different functions, one of which he passes over in a very cursory way, without illustrating it fully as he does the other. "Concentrativeness," says he, "*quote along with the feelings as well as the intellect, and prolongs emotions.*" Now, to prolong emotions is just to prolong the period of activity of the feelings; an operation of Concentrativeness by no means the same in kind with that which it is said to perform in relation to the intellect, namely, the detention of particular ideas in the mind—the fastening of the attention on a particular subject of thought. An intellectual faculty might have its activity prolonged, to any extent, and yet be all the while engaged with a quick succession of straggling and unconnected ideas. In reality, therefore, Concentrativeness seems to influence the intellectual faculties alone; attention being a mode of activity peculiar to them. Its function, we conceive, is, in the words of Cowper,

To arrest the fleeting images that fill
The mirror of the mind, and hold them fast."

But though unable to see how Concentrativeness can prolong emotions by acting "*along with the feelings,*" we have no difficulty in understanding that this result may indirectly flow from it. If Acquisitiveness be grieved by loss of fortune, the grief will, in all probability, be more enduring where Concentrativeness is large, than where it is small. The idea, circumstance, or fact, of the pecuniary misfortune, will be maintained by Concentrativeness before the mind; the attention will be riveted upon it; and thus, through the medium of the intellectual faculties, will Acquisitiveness be affected and kept in a state of excitement. In other words, we are far more apt to grieve when thinking of a misfortune than when the thoughts are employed on a totally different subject.

It would be difficult to find a better illustration of what we conceive to be the true influence of Concentrativeness on intellectual faculties, than a case of its morbid impair

lated by Sir A. Crichton, in his work on Mental Derangement, vol. i. p. 281. The patient (attended by Dr. Fothergill and Sir Alexander himself) was a young gentleman of large fortune, who, till the age of twenty-one, and he does not seem to have been much more at the time of describing his case, had enjoyed a tolerable share of health, though of a delicate frame. His absence of mind was extreme, and he would sometimes willingly sit for a whole day without moving; yet he was in no degree melancholy; and it was easy to discover, by his countenance, that a multiplicity of thoughts were constantly succeeding each other in his mind, many of which were gay and cheerful; for he would laugh heartily at times, not with an unmeaning countenance, but evidently from internal merriment. He was occasionally so strangely inattentive, that, when pushed by some want which he wished to express, if he had begun a sentence, *he would suddenly stop short after getting half way through it, as though he had forgotten what else he had to say.* Yet, when his attention was roused and he was induced to speak, he always expressed himself in good language and with much propriety; and if a question were proposed to him which required the exercise of judgment, *and he could be made to attend to it,* he judged correctly. It was with difficulty he could be made to take any exercise; but he was at length prevailed upon to drive his curricule, in which Sir Alexander at times accompanied him. At first he could not be induced to go beyond half a mile; but, in succeeding attempts, he consented to go farther. He drove steadily, and, when about to pass a carriage, took pains to avoid it; but when at last he became familiarized with this exercise, he would often fall into desultory and wandering thoughts, and allow the reins to hang loose in his hands. *His ideas seemed to be for ever varying.* When any one came across his mind, which excited anger, the horses suffered for it; but the spirit they exhibited at such an unusual and unkind treatment made him soon desist, and re-excited his attention to his own safety. As soon as they were quieted, he would relapse into unsettled thought: if his ideas were melancholy, the horses were allowed to walk slow; if they were gay and cheerful, they were generally encouraged to go fast.

Here the intellect seems to have been perfectly sound, and capable of judgment and thought; but, apparently from some derangement of Concentrativeness, the subjects thought on underwent a perpetual change. The case resembles closely that of Dr John Walker, noticed in our 8th volume, p. 400. It would appear that although attention is undoubtedly a mode of activity of the intellect, yet Concentrativeness is essentially necessary to keep the intellectual faculties at their duty in this sort of employment. If this view be sound, inability to fasten the attention upon a subject of thought may arise either from deficiency

of intellect, *which attends*, or from weakness of Concentrativeness, *which enables the intellect to attend*. And may not this reconcile some apparently contradictory observations of phrenologists, by shewing that the thoughts may sometimes be apt to wander, even though Concentrativeness is full?

The foregoing hints are from the pen of a correspondent, who says that they are thrown out with diffidence, and rather in the hope that they may aid in leading to a correct analysis of the faculty, than under the belief that they are entitled to be placed much above the rank of conjectures.

~~and I thought that the following hints might be of some use to you.~~

~~and I thought that the following hints might be of some use to you.~~

~~and I thought that the following hints might be of some use to you.~~

ARTICLE VII.

CHRISTIAN PHRENOLOGY; OR THE TEACHINGS OF THE NEW TESTAMENT RESPECTING THE ANIMAL, MORAL, AND INTELLECTUAL NATURE OF MAN. Three Lectures delivered in the Thistle Hall, Dundee, on Sundays Jan. 25, Feb. 1. and 8., 1833. By HENRY CLARKE, Minister of the Congregation. Dundee: Sold by the Booksellers; also by John Anderson Junr, Edinburgh, and R. Hunter, London. 8vo, pp. 48.

THE relation between Christianity and Phrenology appears to us to be the following. The communications of the Bible may be divided into two great classes; the one relating to matters which the human intellect could never, by its own powers, have discovered; and the other consisting of descriptions of beings which exist in this world, and of rules of duty to be observed by those beings,—which rules and beings appear to be subjected to the examination of every ordinary understanding. To the former class belong the character and offices of Jesus Christ, and the state of man after death; and in the latter are comprehended human nature such as it now exists, and all moral and religious duties which bear relation to human happiness in this world.

The Calvinist, Arminian, and Unitarian, entertain views widely different regarding the character and offices of Jesus Christ. On such subjects Phrenology can throw no light whatever, and therefore it would be unphilosophical to mix up a discussion of the one with a treatise on the other;—and this observation is equally applicable to every announcement contained in the Bible regarding matters which are not permanent portions of ordinary nature.

The Bible, however, contains numerous descriptions of human nature, and numerous rules for the guidance of human conduct; all of which may be compared with the constitution of the mind as it is revealed to us by observation, and with the

inferences which may be drawn from that constitution concerning its most becoming and most advantageous modes of action. The result of this comparison appears to us to establish the harmony between Phrenology and the representations of Scripture on the points alluded to. But let us come to details.

We are informed in Matthew's Gospel (xv. 19), that "out of the heart" (clearly meaning the mind) "proceed evil thoughts, murders, adulteries, fornications, thefts, false witness, blasphemies;" and statements essentially to the same effect are made in the Epistles of St Paul to the Romans (i. 29-31), and to the Galatians (v. 19-21). Now, according to Phrenology, excessive and irregular action of various faculties produces evil thoughts;—an abuse of Destructiveness occasions murder; an abuse of Amativeness gives rise to adulteries and fornications; an abuse of Acquisitiveness produces thefts; an abuse of Secretiveness leads to falsehood; and an abuse of Destructiveness and Self-Esteem is the origin of blasphemies.

Here, then, is a striking accordance; and the harmony will be more fully appreciated if we put the faculties enumerated by Mr Dugald Stewart to the test of a similar contrast. Mr Stewart's "Active and Moral Powers" are the following:

I. APPETITES—Hunger; Thirst; Appetite of Sex.

II. DESIRES—The Desire of Knowledge; of Society; of Esteem; of Power; of Superiority.

III. AFFECTIONS—Parental and Filial Affection; Affections of Kindred; Love—Friendship; Patriotism; Universal Benevolence; Gratitude—Piety.

Malevolent Affections.—"The names which are given to these in common discourse," says Mr Stewart, "are various:—Hatred; Jealousy; Envy; Revenge; Misanthropy. But," continues he, "it may be doubted if there be *any* principle of this kind implanted by nature in the mind, excepting the principle of resentment; the others being grafted on this stock by our erroneous opinions and criminal habits."

IV. SELF-LOVE.

V. THE MORAL FACULTY.

VI. PRINCIPLES WHICH CO-OPERATE WITH OUR MORAL POWERS IN THEIR INFLUENCE ON CONDUCT; viz. Decency, or Regard to Character; Sympathy; the Sense of the Ridiculous; and Taste.

These faculties, then, joined with intellect, compose the human mind, according to Mr Stewart; and it will be found much more difficult to account, by means of his single malevolent af-

section of resentment, or the abuse of any of the other powers enumerated by him, for such actions as those mentioned in the quotation from St. Matthew, or as we see daily around us.

Secondly, Christ says in the Gospel of St. Luke, that "every tree is known by its own fruit: for of thorns men do not gather figs; nor of a bramble-bush gather they grapes: A good man, out of the good treasure of his heart, bringeth forth that which is good; and an evil man, out of the evil treasure of his heart, bringeth forth that which is evil: for of the abundance of the heart (his mouth) speaketh;" (Luke vi. 44, 45.) And in Matthew's Gospel, he counsels his followers thus: "Let your light so shine before men, that they may see your good works, and glorify your Father which is in heaven;" and again, "I am not come to call the righteous, but sinners to repentance;" (Matt. v. 16; ix. 13.) Of Nathaniel he said, "Behold an Israelite indeed, in whom is no guile;" (John i. 47.) Explaining the parable of the sower, he uses the following words: "But that on the good ground are they which, in an honest and good heart, having heard the word, keep it, and bring forth fruit with patience;" (Luke xiii. 15.) And in the parable of the lost sheep: "I say unto you, that likewise joy shall be in heaven over one sinner that repenteth, more than over ninety and nine just persons, which need no repentance;" (Luke xv. 7.) Of Zacharias and his wife Elisabeth we are told, that "they were both righteous before God, walking in all the commandments and ordinances of the Lord, blameless;" (Luke i. 6.) And the Apostle says, "Follow righteousness, faith, charity, peace, with them that call on the Lord out of a pure heart;" (2 Tim. ii. 22.) And again: "Unto the pure, all things are pure;" (Titus i. 15.) Thus also the Psalmist says: "For thou, Lord, wilt bless the righteous; with favour wilt thou compass him as with a shield;" (v. 12.) "Oh let the wickedness of the wicked come to an end, but establish the just." (vii. 9.) "With the merciful thou wilt shew thyself merciful, with an upright man thou wilt shew thyself upright: With the pure thou wilt shew thyself pure, and with the froward thou wilt shew thyself froward;" (xviii. 25, 26.) Finally: "Mark the perfect man, and behold the upright; for the end of that man is peace;" (xxxvii. 37.)—See also Psalms i. 1, 2; xv.; xxxii. 11; xxxiii. 15; xxxvii. 16, 17; xcvi. 10-12; cxii.; cxxviii.

Thus it is abundantly evident, that while the human mind is represented, in Scripture as liable to commit every species of wickedness, it is at the same time spoken of as possessing moral qualities of a pure and exalted description; "A good man," we are expressly told, "out of the good treasure of his heart, bringeth forth that which is good." Now, Phrenology shews us

that although the mind is endowed with strong animal propensities, which are, in the majority of individuals, prone to rush into abuse, yet it has received also various moral powers,—Benevolence, Veneration, and Conscientiousness. This system of philosophy, therefore, in representing human nature as possessing excellent and amiable qualities, is also in harmony with Scripture.

In the third place, St Paul, in his Epistle to the Romans, argues, that “when the Gentiles, which have not the law, do by nature the things contained in the law, these, having not the law, are a law unto themselves; which shew the work of the law written in their hearts, their conscience also bearing witness, and their thoughts the meanwhile accusing or else excusing one another;” (Rom. ii. 14, 15.) It will be recollected that the two classes of faculties, the propensities and moral sentiments, do not appear to the understanding to possess the same excellence and authority; but that we are instinctively conscious that the latter class is of a higher order, and has been framed by nature to govern the former; and that it is from the dictates of the moral sentiments that our natural notions of duty begin. Now this is precisely, out and out, the doctrine of St Paul. The Gentiles were endowed by nature with Benevolence, Conscientiousness, Veneration, and Intellect; their intellect, on comparing the irregular and excessive manifestations of the animal propensities with the dictates of the moral sentiments, perceived the opposition between them,—and instantly their minds stood convicted of offending against a law of morality written in their hearts.

In the fourth place, we are taught in the Bible that God has given different talents to different individuals; to one five talents, to another two, and to another one, and that each shall be accountable only for that which he hath. (See Matth. xxv. 14–30; also Rom. xii. 6, 7, 8; 1 Peter, iv. 10, 11; 1 Cor. iv. 7; vii. 7.) It is impossible to look at the cerebral development, either animal, moral, or intellectual, of any two individuals, and not be convinced that Scripture and Phrenology precisely coincide in this view of human nature; and here also, while Phrenology accords with the Bible, many of the other systems of mental philosophy stand in opposition to it: for not a few philosophers maintain that all men are created with equal talents; and even those who admit a difference, merely state the fact, and do not point out the nature, the causes, or the extent of the variety apparent in the capacities and dispositions of individuals—which Phrenology makes palpable even to the senses.

Finally, St Paul observes, “I know that in me (that is, in my flesh) dwelleth no good thing: for to will is present with me; but how to perform that which is good I find not. For

the good that I would, I do not ; but the evil which I would not, that I do. Now, if I do that I would not, it is no more I that do it, but sin that dwelleth in me. I find then a law that, when I would do good, evil is present with me. For I delight in the law of God after the inward man. But I see another law in my members warring against the law of my mind, and bringing me into captivity to the law of sin, which is in my members;" (Rom. vii. 18-23). And again, in the Epistle to the Galatians (v. 17) : " For the flesh lusteth against the spirit, and the spirit against the flesh ; and these are contrary the one to the other ; so that ye cannot do the things that ye would. But if ye be led by the spirit, ye are not under the law. Now, the works of the flesh are manifest ; which are these : Adultery, fornication, uncleanness, lasciviousness, idolatry, witchcraft, hatred, variance, emulations, wrath, strife, seditions, heresies, envyings, murders, drunkenness, revellings, and such like ; of the which I tell you before, as I have also told you in time past, that they which do such things shall not inherit the kingdom of God. But the fruit of the spirit is love, joy, peace, long-suffering, gentleness, goodness, faith, meekness, temperance : against such there is no law." St Paul is here speaking of his own experience as an individual ; and his description of himself is exactly in accordance with that of one class of characters with which Phrenology make us acquainted—namely, those in whom large organs of the animal propensities are combined with large organs of the moral sentiments and an active temperament. The history of St Paul's life shows that he belonged to this class. His original conduct in relation to Christianity was " breathing out threatenings and slaughter against the disciples of the Lord ;" he " made havoc of the church, entering into every house, and hauling men and women, committed them to prison ;" (Acts, viii. 3 ; ix. 1.) At this period the propensities held the ascendancy. After his conversion he continued to feel the solicitations of those feelings in the manner forcibly described in the passages just quoted from his Epistles ; but he no longer yielded to their abuses. The moral sentiments, under the influence of altered views, had now assumed the supremacy. It will be remarked that he distinctly recognises the action of both sets of faculties within his own mind : " I delight," says he, " in the law of God, after the inward man ; but I see another law in my members warring against the law of my mind, and bringing me into captivity to the law of sin, which is in my members." We are aware that some divines construe the " spirit " mentioned in the verses quoted from the Epistle to the Galatians, to mean the Spirit of God, as contradistinguished from human nature : but it appears to us that such an interpretation is not only unwarranted, but inconsistent with the words

just cited in italics, where both "laws" are spoken of as equally inherent in Paul's nature; and that the Apostles, in speaking of "the spirit" in opposition to "the flesh," allude to the moral and religious sentiments of the human mind, as contradistinguished from the animal propensities. The works of the flesh above described by St Paul, are, without exception, abuses of one or several of the faculties. He describes also "the fruit of the spirit," which is "love, joy, peace, long-suffering, gentleness, goodness, faith, meekness, temperance;" and every one of these, it will be observed, is a legitimate action of the moral sentiments and intellect. He says, most truly, that "against such there is no law." Certainly none—because the moral sentiments are the ruling powers, and their dictates, when enlightened by intellect, are supreme.

Similar views are eloquently expounded by Mr Clarke in the Lectures of which the title is copied at the commencement of the present article. We are happy to see Phrenology finding its way into the pulpit, and cannot entertain a doubt that, were clergymen in general to call in the aid of physical science and philosophy to illustrate and support the truths of religion, they would soon perceive a decided augmentation of the interest excited and instruction communicated by their discourses.

Mr Clarke has prefixed to his Lectures a Table of the Phrenological Organs, divided into three columns; the first containing the names and uses of the organs—the second, their abuses—and the third, the effects of their deficiency. And he adds the remark, that "if the first column be read from top to bottom through the whole Table, it will be seen that the uses of the organs are all good—highly important—absolutely necessary: but if the second column be read in the same manner, it will be perceived that the abuses of the organs produce all the crimes known among men; while reading the third column wholly by itself will show that deficient organs, even those that may be most awfully misapplied, are by no means to be desired. The deficiency would not be an improvement.....By looking at the uses and abuses of Veneration, Hope, and Wonder, it will be found that they may either exalt to high-toned religion, or debase to grovelling superstition—belief in prodigies, magic, ghosts, and all kinds of absurdities; and even Conscientiousness may, when joined with these in its abused state, aid the delusion and swell the evils. The *abuses* of the organs only are sins; and from these sins the majority of human miseries flow. To use the organs aright is of course to avoid transgression and to escape suffering; and this again is to be virtuous and happy."

In the first lecture, Mr Clarke shews that Christ and his Apostles teach that man has animal propensities, from which

chiefly sin has its origin ; that these are alluded to as powers in themselves both necessary and good ; that, according to the Christian Scriptures, they may be kept within the limits of virtue and religion ; that man is to be rendered religious, not by their destruction, but by directing them aright ; and that human nature is by no means the mass of unmingled degradation which it is so frequently represented to be.

“ Both Christianity and Phrenology,” says he, “ forbid us to view man’s nature as a mixture of brute and demon. They who are become half brute half demon are said to be ‘ without natural affection,’ and to be ‘ given up to vile affections.’ ‘ As they did not like to retain God in their knowledge, God gave them over to a reprobate mind, to do those things which are not convenient ; being filled with all unrighteousness.’ They are ‘ men of corrupt minds.’ They are in an unnatural state. They are degraded, debased, and ‘ gone out of the way.’ But while we may point to them as melancholy proofs of what human beings may become, we must not point to them as evidences of what human nature in its essence and constitution is. We might as justly adduce Socrates, Newton, and Howard, as proofs that the nature of every man is wise, and good, and great, as hold up Nero, King Henry the Eighth, and Judge Jeffreys, as evidences that the nature of every man is base, cruel, and depraved. To place the crimes of men to the account of an uncontrollably sinful nature, is to exculpate them from blame. It is more : it is asserting that man is unimprovable. It is condemning all plans and attempts which aim at exalting the human mind. It is pronouncing all human means unavailing to elevate the human character. It is representing a human being as too worthless, despicable, and vile, to be the object of virtuous affection. Let man be the loathsome reptile that he is sometimes supposed, and he is unworthy of regard, undeserving of respect, and utterly destitute of any claims upon the laws of benevolence and truth. Then, duty to each other men cannot owe. Beings who were compounded of only brute propensities and demon hate, worked up to a nature radically and universally depraved, must invariably act as demon-brutes. But is this the case ? Are our social, scientific, charitable, and religious institutions, proofs that we are demon-brutes ? Whenever a man sincerely laments that the human race is nothing but beast and demon, his own lament demonstrates that his views are false. He is not himself a demon-beast ; for, if he were, no such lamentation could escape him.

“ Does the tiger lament his own fierceness, or the serpent mourn over his degradation and poison ? And as impossible would it be for man—for any man—to sigh for human nature, if the nature of every human being were brutified and demon-

ized. The good man's sighs over sin prove that he is not all sin. Man has indeed an animal nature, but he has also an intellectual nature. When the former absorbs the latter—when the mind, or soul, is swallowed up in mere sense—then truly man becomes an awful offender! His enormities are terrible. He would then disgrace the beasts, and perhaps even dishonour demons. But, when the animal part of man is purified by man's moral sentiments and absorbed by his intellectual faculties, then is it manifest that there is a noble spirit in man, and the inspiration of the Almighty giveth him understanding. 'His deeds then are wrought in the love of God and man.' 'He then evinceth the same mind which was also in Christ;' and then he gives forth evidence that 'God hath made him but a little lower than the angels, and hath crowned him with glory and honour.'"

The second lecture is devoted to the moral sentiments, regarding which the teachings of Phrenology and Christianity are thus compared. "The one teaches that there are certain natural moral sentiments, which are elementary constituents of the human mind; the other appeals to these sentiments as to things which actually exist in man. By one it is asserted that these sentiments, rightly directed, will lead to the discharge of individual, relative, and religious duties; by the other it is affirmed that man must employ those powers to do as he would be done unto,—to serve his God, and to work out his salvation. One system teaches that human beings are constituted moral agents; the other treats them as such. Every page of man's history proves his possession of those moral powers. Every page of the New Testament addresses itself to them. Too often have they been most woefully neglected, misapplied, enfeebled, and debased. But was there ever upon earth a people devoid of the sentiments of right and wrong, honour and dishonour? Did ever a people exist who evinced no sentiments of wonder and veneration towards things stupendous and a power superhuman? The religion of the most superstitious is evidence of some natural powers in man which prompt to the adoration of superior objects; the grossest idolatry must be the effect of some mental cause. What is it? From the animal propensities alone it could not possibly proceed. Were man reduced to the condition of the ourang-outang, he would not then be a worshipper of even an idol. Paganism, under its most disgusting forms, still points up to mental powers which in their nature must be good and noble, and in their designed use most salutary. The worshippers of Boodh in India, of Foe in China, and of Lama in Thibet, evince the very same mental sentiments as those which are manifested by the worshippers of the only true God. Only change the object of worship and the truth of this position will be demonstrated. The inhabitants of India, China, and Thibet,

might worship the Christian's God without undergoing a change of nature; and any people might exchange an inferior code of morals and religion for one that was better, without exchanging a single power of the mind for some other."

Mr Clarke has included among the moral sentiments Self-Esteem, Love of Approbation, and Cautiousness; because, says he, "they have in their uses a decided moral tendency." Self-Esteem he regards as "the basis of all true honour, dignity, and moral greatness," and as "that which exalts the mind above meanness, servility, and baseness." We suspect that few of our readers will here concur with Mr Clarke; for humility, which is the only result of deficient Self-Esteem, is neither inconsistent with "true honour, dignity, and moral greatness," nor necessarily accompanied by "meanness, servility, and baseness." When directed by higher faculties, Self-Esteem, Love of Approbation, and Cautiousness, have doubtless, like every other mental power, "a moral tendency;" but still, in themselves, they have no tincture of morality. Indeed, we have long been much inclined to the opinion that the received list of "moral sentiments" is far too extensive; and that Benevolence, Veneration, and Conscientiousness, are the only affective faculties which exercise a disinterested control over the animal powers. So far as we are able to perceive, neither Hope, nor Wonder, nor Wit, nor Firmness, nor Imitation, exercises any such control; and even Ideality can hardly be looked upon as a barrier in the way of selfish indulgence, at the expense or to the annoyance or disregard of other men. Every one of the six faculties last named, may be so harmoniously leagued with the propensities, as to start no objection whatever to the performance of the most immoral acts.

In the third and concluding lecture, Mr Clarke treats of the human intellect, and the necessity of cultivating and enlightening it before Christianity can be fully realized. "As the intellectual faculties," says he, "are the only media of access to the moral sentiments, and the moral sentiments are the only instruments by which the animal propensities can be duly restrained and beneficially directed, virtue, piety, and true religion, must be in proportion to the strength, activity, and harmonious co-operation of the intellect and moral powers. It has been said, that 'ignorance is the mother of devotion.' But of what devotion? Can ignorance produce the devotion of the wrapt-enobled soul? Can it send forth the devotion of Christ?—No. The devotion of ignorance is low, grovelling, superstitious; it is mere fear, tintured deeply with the dark colouring which the animal nature has given it. It is false devotion. That which is true is ever brightened highly by the glowing tints that the combined energies of the intellect and moral powers have impressed upon it. There is no beauty in the devotion which is

the offspring of ignorance; its parentage is base; the issue is of but little worth; too often has it proved worse than worthless. It has led men to fanaticism and persecution—to the commission of the most atrocious crimes, and the infliction upon themselves and others of the direst miseries. It has given the name religion to that which was positive madness. But such insanity was never produced by hearing the Word and understanding it, and receiving the good seed into the good ground of the mind. Thirty, sixty, or a hundred fold of bigotry, anger, wrath, and malice, are the very counterpart of those fruits of love, and joy, and peace, that the religion of Jesus is designed to produce; and ‘by their fruits shall ye know them.’ ‘If a man have not the spirit of Christ, he is none of his.’ But, to know what that spirit was, requires the exercise of both the perceiving and reflecting powers. The fundamental command, ‘Learn of me,’ cannot be obeyed without a vigorous use of the intellectual faculties; but, the more carefully these are trained, and the more assiduously the moral sentiments are at the same time cultivated, the higher must the individual ascend in excellence, true religion, and positive enjoyment.”

These lectures evince in their author a refined and cultivated understanding, great purity of moral and religious feeling, and an ardent desire of the improvement and instruction of mankind. We trust that their circulation will be extensive, and are sure that they will meet with a favourable reception from every enlightened Christian, whatever opinion he may entertain with respect to Phrenology.

ARTICLE VIII.

CHARACTER AND CEREBRAL DEVELOPMENT OF WILLIAM MANUEL, A PRECOCIOUS CHILD.

WILLIAM MANUEL, the subject of the present sketch, was born in Flintshire, in March 1830. He is the object of public curiosity, on account of his being able to read five languages, though he is but four and a half years old: they are English, Welsh, Latin, Greek, and Hebrew. His father is a lead-miner, of a dull and heavy aspect, and slothful in disposition; but his mother is of an active temperament, and appears to be possessed of more than common shrewdness and sagacity. They have five children, of whom this is the third; and the whole are healthy and intelligent.

His mother affirms that he was always a boy of very quick observation. When only ten months old, he was very fond of

having a book in his hand; which exciting her attention, as soon as he was able to speak she taught him to read, by pointing to each word as it occurred in the book, and pronouncing it to him; and this she did without teaching him to spell, or even letting him first learn the alphabet or single letters. His easy acquirement of English and Welsh having attracted observation, a gentleman supplied him with a Latin book, to which he applied with similar success; and he was afterwards taught Greek and Hebrew in the same way by another gentleman. He can now read all these languages with nearly equal facility, whichever way the book may be turned; and, though his pronunciation is not very distinct, and he is quite unacquainted with the meaning of the words, he contrives to execute his task not only without hesitation, but even with rapidity. His mother has taught him to repeat some little prayers and hymns; and she distinctly states that his verbal memory is not superior to that of other boys of his own age, though in other respects he is decidedly in advance of them. In disposition the boy is resolute and determined, and in character he combines boldness with caution: he is fond of truth, and particularly fearful of being ill advised: he is candid, kind hearted, and benevolent; not to be compelled by force, yet easily led by affection. His principal fault is passion; but he is very open to the conviction of error, especially when gentleness and reasoning are employed to produce the effect.

In general appearance, the boy is of large growth and healthy aspect. His temperament is sanguine, and there is a restless activity of mind and body. His manners are engaging, and his look intelligent. The three great divisions of the brain are in pretty equal proportion.

DEVELOPMENT.

1. Amativeness, large, .	18	19. Ideality, very large, .	20
2. Philoprogenit. very large, .	20	20. Wit, large, .	19
3. Inhabitiveness, large, .	19	21. Imitation, very large, .	20
4. Adhesiveness, rather large, .	17	22. Individuality, very large, .	20
5. Combativeness, rather large, .	17	23. Form, very large, .	20
6. Destructiveness, very large, .	20	24. Size, large, .	18
7. Secretiveness, very large, .	20	25. Weight, moderate, .	11
8. Acquisitiveness, very large, .	20	26. Colour, rather small, .	9
9. Constructiveness, very large, .	21	27. Locality, moderate, .	10
10. Self-Esteem, very large, .	20	28. Number, moderate, .	10
11. Love of Approbation, large, .	18	29. Order, rather small, .	8
12. Cautiousness, very large, .	21	30. Eventuality, very large, .	20
13. Benevolence, very large, .	20	31. Time, full, .	14
14. Veneration, large, .	19	32. Tune, rather large, .	17
15. Firmness, very large, .	20	33. Language, moderate, .	10
16. Conscientiousness, very large, .	21	34. Comparison, very large, .	20
17. Hope, large, .	19	35. Causality, full, .	15
18. Wonder, large, .	18		

In comparing the leading features of this boy's character with his cerebral development, we perceive at once the relation they bear to each other with respect to the propensities and moral sentiments. He evidently belongs to that class of persons in whom the ultimate direction of the character depends more on the circumstances in which the individual is placed, than upon any preponderating influence in his own natural dispositions. By the judicious exercise of authority on the part of an intelligent parent, the inferior faculties have hitherto been restrained within proper bounds, and have evidenced themselves only by that restless activity and indisposition for repose already alluded to; and by occasionally displays of passion, of the guilt of which he has afterwards been easily made sensible.

In looking at the intellectual region, our attention is attracted to the extraordinary size of the three organs situated in the middle line of the forehead. In the unusual development of these, but especially of the lowest, with a moderate endowment of Language, we shall find the elements of the talent which renders this boy so remarkable. From observing the last named organ to be but moderately developed in a boy so quick in the acquirement of language, some have been disposed to draw inferences unfavourable to Phrenology; a little consideration, however, will show that this is one of many instances in which apparent exceptions to its rules have subsequently served to confirm the principles on which the science is established. If we attend to the manifestations of his power, and analyze the nature of the mental exercise, I think we shall be brought to admit that the faculty of Language takes a part of but secondary importance in the process. At his age, the ideas or mental conceptions excited by their appropriate signs, as he meets with them in the book, must be very few, even in the English and Welsh, and in the others he is unacquainted with them all. Yet he reads each language with equal facility, and is quite indifferent as to the position in which the book is placed.

It appears to me, that in the act of reading the boy recognises each word as a single object, which he individualises from the rest as a distinct and separate existence. To one who understands its meaning, every word is the arbitrary sign of some specific idea, and therefore requires the exercise of the organ of Language to receive and retain it as such. To William Manuel the words are not arbitrary signs, but simple objects of existence; in fact, the sign itself becomes to him the thing signified: the mental action thus far is confined to the organ of Individuality, and those about the brow, and the exercise of that of Language is limited to the extent of associating a particular sound with each word, as he has been taught and accustomed to apply it. He is assisted by pointing to the words with his

finger, when reading, and proceeds from line to line without any alteration in his tone or cadence. When he meets with any word that is too long to be taken in as an individual, he divides it without any hesitation into two; if the word, for instance, in the Greek is *μαθηματικα*, he will individualize the *μαθη* as a single word, and pronounce it as such, and then the latter half in like manner, making a pause between the two, as distinct and long as between any other two words in his reading.

If these views are correct, the strength of the boy's talent lies in his organ of Individuality, which is extremely large. The faculty has been exercised more in this way than in any other; but the boy has a very quick and accurate observation in all things, and nothing in the room escapes his notice. There are numerous facts to prove that a moderate endowment of the faculty of Language, when accompanied with largely developed organs of Comparison, Eventuality, and Individuality, will fit a person for eminence in scholarship, better than a much larger development of the same organ, if the other three are inferior in size. The former combination occurs in this instance; but I conceive that the organs of Comparison and Eventuality take no part in the present limited exercise of this particular power. Such an endowment will certainly afford him great capacity for literary acquirement. Considering, however, the general development of his cerebral organization, I think that if equal scope be afforded for the exercise of all his faculties, the chief tendency of his mind will be in a different direction. With a more than moderate development of the organs of the perceptive faculties in general, he combines an extraordinary development of the organ of Constructiveness; and, with a combination of this kind, I should conceive, that under favourable circumstances he would be less likely to prove remarkable as a linguist, than to distinguish himself in the capacity of a civil engineer, or in some other department of physical science, affording a sufficient field for the exercise of his organ of Constructiveness.

It is gratifying to notice, that the boy is likely within a short time to be placed in a situation favourable for the cultivation of his moral and intellectual faculties, and for the proper restraint of the inferior powers. Some benevolent individuals having opened a subscription for defraying the expenses of a plan they have in view, have made a proposal to his mother, to which, after some unwillingness, she has at length acceded. It is intended to place him under careful tuition till he is of age to be removed to Christ's Hospital in London; and it will then be left to time, and the effect of past education, to determine the direction of his future movements.

If there be any thing to make this sketch worthy of a place

in a public journal, it is the circumstance I have just mentioned ; for, being acquainted, as we are, with his development when a child, it will be interesting to observe the changes produced on it by time, habit, and education ; as well as to watch the influence exerted by his organization upon these. I desire to add, that it is not without some hesitation I have offered any remarks upon this case, as my acquaintance with the boy's development has been derived from a single examination of the living head ; and though I have reason to think it is correct as far as regards the leading features of his cerebral organization, I doubt not there are some errors which a more accurate examination would unfold.

BATH, Dec. 18. 1834.

H. J. PRINCE.

The foregoing interesting communication has been sent us in consequence of a note in our 42d Number, p. 192 of the present volume ; and we return our best thanks to Mr Prince for his attention, and also to Dr Barlow, at whose suggestion the sketch was written. As we possess neither a cast of the head nor a note of its dimensions, it is impossible for us to judge of the accuracy of Mr Prince's statement of the cerebral development. If possible, a cast should be obtained, as it would throw light on some rather obscure points in intellectual philosophy, and serve hereafter as a standard whereby to measure the future changes which the head may undergo.

Mr Prince ascribes the remarkable facility with which the boy reads to the great development of Individuality ; but we are decidedly of opinion that Form is the organ chiefly concerned. It is the physical appearance of printed words which he remembers so accurately, and the appropriate articulate sounds are recalled chiefly by association. When forms are not presented to him, there is no great verbal memory. So little did we anticipate a large development of Language, that the note in our 42d Number is entitled simply " ORGAN OF FORM ;" and the only remark made on the case is, that " Supposing the brain to be healthy, the manifestations are those of a large organ of Form." We refrain, however, from offering any farther observations, founded on the development as given by Mr Prince, because he himself is doubtful whether it is correctly stated, as he had only one opportunity of examining the head. We admire the spirited and philosophical philanthropy of the gentlemen at Bath, in so generously rescuing the boy from the dangers of his wandering life, and placing him in a situation so favourable for future improvement. We trust, however, that special care will be taken not to hurry on his intellectual education so rapidly, as to endanger the health of the brain, and lead to the loss of the talents by

which he is at present distinguished. "He appears to be in safe hands.

A printed circular, containing the following additional particulars, was kindly sent us, about three months ago, by Dr Barlow.

"It may be proper to inform the friends and patrons of this highly gifted child, that he has been for some time at Merthyr Tydvil, living under the same roof with his parents, and receiving daily tuition from the Rev. J. Jones, from whom several very satisfactory reports have been received of the daily improvement and gradual development of his intellectual faculties.

"In order to provide for every contingent expense for three years,—including a sum of money already given to the parents to enable them to establish themselves at Merthyr Tydvil,—an annual allowance for the board of their child (as any attempt to separate him, in tender infancy, from his parents, would have been a measure that might very properly be deemed harsh, unfeeling, and unnatural),—and the expenses attending his education,—it is proposed to raise the sum of L. 200. This amount will not only be sufficient for the important object intended, in the first instance, to be accomplished, but will leave a small surplus to be appropriated for the future benefit of William Manuel.

"Of this amount, the sum of L. 100 has been already collected, and it is to be hoped that the publicity of this advertisement will re-excite a generous interest in behalf of this highly gifted child, and soon procure, in liberal contributions, what may be necessary to carry fully into effect the earlier stages of his education. At the end of three years the means will be afforded of forming perhaps a more decisive opinion on the quality of his intellectual powers, and the practical application which it may be right that they should subsequently receive.

"Subscriptions will, as heretofore, be received at any of the Banks in Bath; and also by Mr Musgrave, at the Post Office."

Farther accounts of William Manuel will always be acceptable.—EDITOR.

ARTICLE IX.

LETTER FROM SIR G. S. MACKENZIE, BART. ON MR SIMPSON'S VIEWS AS TO THE SENSE OF RESISTANCE.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,—I have been deeply interested by the perusal of Mr Simpson's paper on Force and Resistance, in your last number;

and as he appears to wish that its effects on my mind should be made known to your readers, I now sit down once more to reflect on the subject, and to endeavour to place in as clear a light as possible, some ideas that have occurred to me in reference to what is understood by the terms Sense of Touch.

It is needless to go back in order to take a view of former errors. Mr Simpson has done me the honour to place my speculations on the metaphysical dissecting table, and has wielded his scalpel in such a manner that I have felt no pain, but, on the contrary, very great pleasure. Although I might, perhaps successfully, infuse some agreeable sensations into his mind by a similar operation, conducted in the same spirit, on his paper, I think it is better to go forward at once into another branch of the road to truth; and I feel assured that my highly-valued fellow-traveller will be delighted to accompany me, and be ready to support me should he perceive any loss of equilibrium in my steps. Having perused his excellent paper, it at once occurred that something had been missed by both of us which may yet be found; and, while I doubt Mr Simpson's affirmation that his powers for the investigation in which we have been engaged are inferior to mine, I hope that our joint efforts may elicit something of value in the science of mind.

In the departments of observation and reflection phrenologists have yet much to do; and I own that I should be rather pleased to see the rising generation applying itself to the metaphysical department, than that it should be left to heads that have passed their meridian: not that any excuse is wanted for such heads not working as long as they can; but that younger phrenologists should get into the habit of observation and reflection, to enable them to rectify any mistakes in the speculations of their predecessors. All of us labour under one disadvantage—the poverty of language. Were we richer in terms, we should be more able to express and explain our ideas. This poverty, and perhaps also some error in the conventional meaning of terms which we have, has, probably, not only retarded the improvement of Phrenology, but also furnished the enemies of its progress with means of retardation. In other sciences their votaries are continually forced to invent new terms. From the rapid multiplication of these, some confusion has certainly arisen, in consequence of the desire for new names having in some cases become a mania, causing unnecessary and puzzling substitution for old and received terms, as well as the invention of new ones when really wanted. Although phrenologists have experienced inconvenience from the want of terms, still it is best to accommodate known words to their wants as far as that may be practicable, and to explain them carefully, so that, in the use of them, all may attach to them the same ideas.

Keeping this in view, I now propose to attempt discovering whether there be any real difference in the meaning of the terms Touch and Resistance; and, at the outset, I announce my present belief to be, that touch, in the common acceptation of the term, and resistance, are precisely the same thing, and that the faculty of force is necessary to the sense of touch; that is, that the perceptions of the sense have all a direct reference to the faculty of force, which cognizes them. This is not very correct language perhaps, but the meaning will be obvious. That there is another, a sixth sense, usually comprehended under the term touch, seems also unquestionable; but it is not Resistance. Mr Simpson has not given us any definition or explanation of resistance, to shew that it is unconnected with touch; and I propose to shew that every thing connected with touch is the perception of force, and counterforce or resistance; and that the idea of resistance is nothing more than an estimate of the amount of muscular force in reference to that of other forces.

It must be kept in view that the sense of touch, as commonly understood, is not confined to the fingers, but is diffused over the whole surface of the body. Let us suppose now, that, desiring to know its qualities, we move a finger towards a body at rest. The faculty of force moves the muscles of the arm; and being ignorant of the qualities of the body, the force communicating motion to the finger is small. The finger comes into contact with the body; and the first sensation is plainly that of resistance, and nothing else. Now, if we inquire into the cause of this resistance, (which, supposing our eyes to be shut, informs us of the presence of the body), the cause, viz. of its remaining without motion, we find that it is retained in its place by one or more forces operating in a direction different from that of the force which moved our finger towards it. This is obvious, in whatever circumstances the body may be. Hence the office of the sense of touch is, in the first place, to inform us that there exists a body distinct from our finger, on which certain forces are operating, sufficient to counteract or stop the motion of the finger produced by the muscular force we willed to exert. This first office is clearly to indicate what we call resistance, and nothing else. Now, let us increase the force with which the finger is pushed forward, and we may find that the resistance applies not to the whole point of the finger, but to different parts of it. This want of uniformity in resistance is what we call roughness, in contradistinction to smoothness; which last quality is indicated by a general sense of resistance *uniform* over the whole surface of skin applied to the body under examination. Hardness can be estimated only to the extent of the force that can be exerted by the muscles. Softness is nothing more than a low degree of hardness. When a body

yields to the muscular force with which the finger is pressed upon it, we estimate this quality by the degree of force employed. If the body yields, but recovers its shape when the finger is removed, we call this elasticity,—a fact, however, made known to Eventuality. Degrees of what is called softness, when within the estimating power of muscular force, are ascertained by causing muscular force to act upon the body in two opposite directions; by pressing it between the finger and thumb, for example. Here we have the same organ directing the finger and thumb, so that we experience the same effect as in touching a body with one finger. Or, if we simply connect the finger and thumb, the sense of touch or resistance, and the estimating faculty of force, are both active without the intervention of an external body.

Shape or form, in solid bodies, is discovered by forces resisting in different directions. And here the notion of a faculty for cognizing *direction* occurs; and this is that of locality or relative position. The external senses administer to all the faculties; and as there are but five external instruments of sense, the skin, the eye, the nose, the ear, and the tongue, I consider this as a fixed and immutable argument against the existence of any greater number of senses, properly so called. Perhaps Mr Simpson may have confounded perception exercised by the faculties which have their organs in the cerebrum with external sense. We are very apt to do this, and probably it has been the cause of the prolonged discussion, which, however, has not been without its use.

It may be asked, what are the forces the exertion of which constitutes that which is cognized by means of the sense of Touch? Perhaps their enumeration, with some remarks, may assist in settling the question at issue. Suppose we see before us a statue; or suppose (a thing I should not advise on every occasion) that we shut our eyes in proceeding to the investigation, and trust entirely to the sense of touch. When we experience resistance, we discover, by means of our hands, the degree of hardness and smoothness by the simple exertion of muscular force. We discover the form or shape by the variety of the direction in which the resisting force meets our muscular force relatively to our own position, and of the position of the parts relatively to each other, the faculties of Locality and of Form being called into activity. If we now wish to acquire knowledge of the nature of the material of which the statue is made, we first discover that it does not yield to the pressure of the finger. We try more force by interposing the nail of the finger. If it does not resist this, then we conclude that the statue is made of wood or of lead. We have the means, however (supposing that we have had some previous experience),

to determine this point, by calling in the aid of another sense, which shall address Eventuality. We tap the statue in a manner to elicit sound, and the quality of the sound determines the matter. But we may determine this point by employing force. We may set our shoulders to the statue, and if it be not fixed by any other force than its own gravity or weight, we can ascertain whether it be of a light material like wood, or of a heavy one like lead. Lead would be distinguished from bronze by a sound produced by tapping with the nail or some hard substance taken into the hand, through which intervening substance resisting force is communicated. Natural philosophers perhaps err when they speak of the communication of motion, instead of the communication of force; motion being the effect of one force overcoming another or other forces. In the present case, we estimate the force of the adhesion of the particles of the substance of which the statue is made, and then the density. If we overturn the statue, we overcome its gravitating force. If we break it, we find that it is fixed by some other substance, such as an iron bolt at the base, which has a stronger adhesive force than the material of the statue.

The first time a person saw a piece of cork, he might, when desirous to ascertain its qualities, use far more force than was necessary to move it, and drive it to a distance. Next time he touches it, the faculty of force directs him to use very little. He finds that so little resistive power is inherent in the cork, that he takes it up in one hand, and supplies it with as much additional force as will enable him to proceed in his examination by means of his other hand.

I said that force is constant. Where, in what department of nature, is it not in continual unceasing action? Resistance is only a mode of force in reference to ourselves, and to bodies among each other. Resistance is not constant to our fingers, in reference to our *perceptions*, though it be so in reality; for the pressure of the atmosphere is upon us constantly. I used the word *constant* solely in reference to perception. In this I may have erred. But granting constant resistance to Mr Simpson, it is nothing in reality but a constant force, acting in a particular mode and direction in reference to some other force; so that, probably, the error may be mutual, since resistance and touch appear to be the same sense, the one term defining the other. If Mr Simpson had pointed out any perception which he can derive from a sense called touch, which had no connection whatever with force, then I might yield to his sixth sense. But until he completes such a demonstration, I must remain in my present opinion that the sixth sense is unconnected with resistance.

In all the circumstances of external bodies in reference to our-

selves which have been enumerated; supposing our eyes shut, we have no experience till contact is made, and then we estimate force. If Mr. Simpson makes a false step in the dark, the shock at once leads him to the estimate of the force with which he moved, and of the force with which he was opposed. The instant his foot comes into contact with the obstacle, or, in other words, touches it, he begins to estimate force. He never thinks of the common thing touch extending beyond a very slight degree of force; nay, he regards a small degree of force as something different. This error misled me also, more perhaps than my ignorance of the fact of two nerves being in one sheath. On that fact I reason differently. On one point, that one of the nerves is that which discharges the office of muscular contraction and relaxation, Mr. Simpson and I are at one. But the other nerve is that of the well known sense touch, and which I certainly should prefer to name *resistance*, because touch implies merely the circumstance of contact, whereas resistance is generally understood as a word connected with and implying force; and it is the office of the nerve to make the faculty of force aware of opposing force. I can discover nothing connected with the vulgar notion of touch, but degrees of force made known to us as external. If Mr. Simpson can discover any thing else, I shall be much beholden to him. At present, I am disposed not to abandon the word *touch*, but to retain it in the understanding that it is the sense by which the presence to us of external force is conveyed to the organ and faculty of force specially, and to other faculties, to enable them to determine certain qualities of external things. The word *resistance* conveys at once all this definition. But as a definition may be wanted at any rate, it may be as well to be in no haste to change the conventional term.

Mr. Simpson has accused me of having abandoned my first love Resistance. I am certainly obliged to him for having taken her under his protection; otherwise it is probable her veil might not have been lifted up so as to discover to me so very old an acquaintance as Touch. I do not yet see that my error was so very great as to prevent my seeing all the truth. I saw two things, and the puzzle was, what were they? I was aware that the sense of touch conveyed the sensation of resistance; and now I see, or at least think I see, the whole matter clearly, and that the faculty is that of force, having its organ in that part of the cerebrum formerly marked Weight, connected by means of nerves with the instruments of sense. I might wait, then, for Mr. Simpson's demonstration, that the sense commonly called touch has other functions than to cognise force, and by that means to enable the mind to ascertain certain qualities of bodies. But without arrogating to myself any thing like the merit of a

discovery, I beg to submit to you whether we should not determine on a sixth sense, to which I propose to apply a term in common use, and of which the skin is also the organ. The sensations of Heat, Cold, Pain, Itching, &c. in all their degrees and varieties, have hitherto been assigned to the province of touch. We have now ample reason, if we chuse, for limiting the term touch to forces; and the name of the sixth sense I propose should be FEELING, if we are to have one. This term has been in common use, and been assumed as synonymous with touch. It appears now to be probable that physiologists may hereafter find the complete separation of the two terms useful; and it may be so in ordinary discourse.

Before concluding, allow me to remark on the extraordinary economy observed in the structure of our bodies,—an economy which weighs strongly against the farther multiplication of senses, without good cause shewn. Taking the instrument of the sense of Touch, as heretofore understood, and which I have shewn reason for believing to be the instrument of more than one, this single instrument conveys to us ideas of Force in all its varieties, and of Form, and of all the causes of resistance to force, which are so many distinct qualities of external objects,—of heat, cold, &c. The tongue conveys perception of Taste; but it also is capable of enabling us to distinguish forces, and form to a certain extent. It also assists in deglutition and swallowing. It regulates the tones of the voice, by enlarging or diminishing the capacity of the fauces; and the instinctive rapidity with which it obeys the will, so as to produce precisely the tone desired, is truly astonishing. The functions of the nose are more limited; yet it is contrived to secure breathing, should the passage by the mouth be closed, and serves as a passage for the expulsion of useless excreted matter. The ear warns us of the presence of moving bodies, and, by a comparison of the qualities and intensities of sound, it informs of the distance from which sound proceeds, and of the nature of the thing which produces it; and all this exclusive of the pleasures of music. The eye conveys to us the perception of light, and its absence,—of form, colour, position, distance, height, depth, bulk, motion, rest, smoothness, roughness, transparency, opacity, &c. Now, although the skin be the instrument of many things that might be called senses, we speak only of one sense belonging to it, calling it Touch, which, as has been shewn, gives, by means of contact and forces, a knowledge of the presence and qualities of a great variety of external objects. Heat and cold may be merely qualities of some form of matter made known to us by its impinging, with a force insensible to resistance, on the skin, over which nervous fibres are spread to convey this and many other perceptions. We cannot appreciate the force of heat any more

than that of light. But that they move, and that their movement implies force, however minute in degree, is obvious; and we recur to resistance: and thus I may be forced once more to embrace my First Love, as Mr Simpson good-humouredly calls it, but not as a *faculty*, in which character I abandoned her, but as a sense, and an old acquaintance under a new name, who seems to say, *Noli me tangere*. We must take care of each jade's tricks.

I firmly believe that there is a distinct nervous fibre for every distinct impression which we receive from external nature, through the fine instruments called those of the senses; but it would be endless to attempt analyzing and giving names to them all. It is also my belief, that, in every organ of the brain, there are parts innumerable, each destined to give to the mind special information, and to enable it to operate in a special manner on special subjects. But it would be useless, probably, to attempt giving names to each. It is better to retain a few terms, and to understand what they include. On this principle, the term Touch may still be retained, and both Resistance and Feeling left as they were. I am, &c. G. S. MACKENZIE.

[We refrain at present from expressing any opinion upon the question at issue between Sir George Mackenzie and Mr Simpson, in the hope that some of our medical readers will be kind enough to communicate such illustrative pathological cases as they happen to be acquainted with. Instances of loss of sensibility to heat, cold, pain, and tickling, without impairment of the power of voluntary motion,—and *vice versa*,—are sufficiently numerous, and do not bear on the present question: what we want are cases of patients who, on coming into contact with unseen solid bodies, are made aware of this contact either by the perception of resistance alone, or solely by the sensation of heat, cold, pain, tickling, or some other analogous feeling not resolvable into the sense of resistance. We have little doubt that cases of this nature are not uncommon.—ED.]

ARTICLE X.

CEREBRAL DEVELOPMENT AND INFERRED CHARACTER OF KABOOTI, AN EGYPTIAN MUMMY, presented to the Belfast Museum, by THOMAS GREG, Esq. of Ballymenoch, county of Down. Read at a Meeting of the Belfast Natural History Society, 4th March 1835, by Mr ROBERT PATTERSON, Vice-President.

THIS mummy was unrolled on the 27th of January 1835, in the presence of a large number of the shareholders in the Mu-

some, the members of the Natural History Society, and other scientific gentlemen. From an examination of the inscription on the case in which it was contained, the Rev. Dr Hincks of Killybegh announced that the mummy was that of a female named Kabouti, the daughter of a priest of Ammon at Memphis. She was unmarried, and, although not more than from 25 to 60 years of age, had survived both her parents. The measurements and development of the organs mentioned in the annexed Table, were taken by my friend Mr Grattan and myself, the ensuing morning. The measurements may be relied on, but the development may not, in every instance, be correctly stated, from the want of that extensive practice by which alone perfect accuracy can be obtained.

As the remarks on the probable character of the individual were written for an audience few of whom had given any attention to the study of Phrenology, all the terms peculiar to that science have been sedulously avoided, and the subject has been illustrated by reference to the works of some of our most popular authors.

Dimensions of the Head.

		Inches.
From Philoprogenitiveness	to Individuality,	7½
...	Cautiousness	5½
...	Destructiveness	5½
...	Acquisitiveness	5½
...	Ear	4½
...	to Comparison,	5
...	to Benevolence,	4½
...	to Veneration,	5½
...	to Firmness,	5½
...	to Philoprogenitiveness,	5½
...	Ideality	4½

Development.

- | | |
|--------------------------------------|-------------------------------|
| 1. Amativeness, moderate. | 19. Ideality, very small. |
| 2. Philoprogenitiveness, very large. | 20. Gaiety or Wit, full. |
| 3. Adhesiveness, large. | 21. Imitation, small. |
| 4. Inhabitiveness, large. | 22. Individuality, large. |
| 5. Combativeness, full. | 23. Configuration, large. |
| 6. Destructiveness, full. | 24. Size, full. |
| 7. Secretiveness, full. | 25. Weight, full. |
| 8. Acquisitiveness, full. | 26. Colour, moderate. |
| 9. Constructiveness, moderate. | 27. Locality, large. |
| 10. Self-Esteem, large. | 28. Calculation, small. |
| 11. Love of Approbation, large. | 29. Order, small. |
| 12. Cautiousness, very large. | 30. Eventuality, large. |
| 13. Benevolence, small. | 31. Time, small. |
| 14. Veneration, large. | 32. Tune, small. |
| 15. Firmness, very large. | 33. Language, moderate. |
| 16. Conscientiousness, large. | 34. Comparison, rather large. |
| 17. Hope, large. | 35. Causality, rather large. |
| 18. Marvellousness, full. | |

The orphan female under our consideration would be a general favourite with her companions, both from the affectionate nature of her disposition, and from her wish to gain their approval. In her childish sports she would most sedulously avoid danger. To her parents she would yield almost undeviating submission: deeply would she deplore their loss; but her mind would, in time, gradually regain all its former elasticity. Her destitute condition as an orphan might suggest gloomy anticipations of the future; but these, when they arose, would soon be dispelled by Hope, and her affections would entwine themselves around new objects of interest. Highly social in her disposition, and attached to her native city, she would regard with pride the everlasting pyramids and other works of her countrymen, and say in her heart, "This is my own, my native land." The accumulation of wealth would to her not be a permanent object, but "troops of friends" would be indispensable. Those friends would not be such as pay homage only to superior talents or superior worth brought prominently forward: they would be won by her unobtrusiveness, and attracted by the estimable qualities that lay concealed within. Excessive diffidence would pervade her general behaviour, but on occasions this would be thrown aside, and a firmness of purpose previously unsuspected would suddenly be displayed. Like Desdemona, she would act with decision when the time for decision had arrived, and to Kabooti, as well as to the gentle daughter of Brabantio, might the description of the poet have been applicable:—

"A maiden never bold;
Of spirit so still and quiet that her motion
Blush'd at herself."

Othello, Act I. Scene 11.

But although such would be her general demeanour, she would not be incapable of resentment; and when once *thoroughly* roused, a spectator might justly describe her in terms similar to those applied by Benedict to Beatrice,—

"She speaks poignards, and every word stabs."

Much ado about Nothing, Act II. Scene 11.

Her general backwardness would not be unmixed with pride; for nothing is more certain than that pride is not incompatible with bashfulness. Though kind to her friends and most affectionate towards children, benevolence abstracted from those individuals would be but little displayed in her conduct. The noble avowal of the poet,—

"Homo sum, et nihil humanum ad me alienum puto,"

would touch no responsive chord within her breast. To Isis and Osiris she would pay the deepest and most reverential ho-

mage: the magnificence of their temples would dwell in her recollection,—the legends of their power would be received with unsuspecting credulity,—and the music which breathed from Memnon's statue would, to her ear, be the voice of a divinity. None amid the inhabitants of Memphis would yield more entire obedience to the commands of the priests, none celebrate with more devotional feeling the festival in honour of Apis, wail with more real grief the supposed death of the god, or hail with sincerer joy the prospect of his reappearance. If she lived at the time when Cambyses, with his victorious army, entered Memphis, slew the sacred ox, the representative of Apis, and scourged the priests who were attendant on the god, she would be horrified at impiety so glaring. Had the conqueror, desirous of winning a daughter of the priest of Ammon from the religion of her fathers, offered to her the greatest riches and honours he could confer, she would have unhesitatingly rejected them all. Had he threatened her with punishment—nay, even with death—for her obduracy, she would have been equally unmoved. Neither promises nor threats would, in this instance, have produced even a wavering in her determination. While her mind possessed the high and varied principles of action which I have been describing, it must have been deficient in all those imaginative powers, which exalt and embellish life. Music and poetry would be to her all “sound and fury, signifying nothing.” She could well detect the difference in the forms of external objects, but these, however familiar to her, would not, in her mind, be associated with numerous trains of bright and glowing fancies. A flower consecrated to the gods, might, for that reason, be valued; but, in other cases, she would resemble the individual portrayed by Wordsworth:

“The primrose by the river's brim
A yellow primrose was to him,
And it was nothing more.”

The methodical arrangement of time or occupation which has been so frequently recommended, would not be adopted by her. The events which took place before her eyes would be well remembered, and she would, in referring to them, be apt to mention that they were preceded or followed by others which she would name; but she would probably not adopt for her ordinary chronological computation the custom which prevailed in Egypt, of designating the year by the number of those of the reigning monarch. Under favourable circumstances she might have become a naturalist; as such she would veraciously have recorded facts, but in the descriptions which we may conceive her to have written, the rich and imaginative diction which Humboldt has shed over the most scientific disquisitions would have been totally wanting.

Such appear to have been the characteristics of this Egyptian girl, so far as they can be deduced from her skull; and on the presumption that the organic constitution of her brain was good. But, ignorant as we are of the training of children in ancient Egypt, and of the degree in which their religious opinions tended to excite particular faculties, it would be rash to affirm that the foregoing remarks may not be erroneous in some of their minor details.

ARTICLE XL

OBSERVATIONS ON THE PHRENOLOGICAL STANDARD OF CIVILIZATION.

SOCIAL civilization is the intellectual and moral improvement of the individuals of which a nation is composed. The progress of a nation in civilization must, therefore, keep even pace with the degree of approximation of its members to that use of the faculties of man for which these faculties were bestowed, for civilization is essentially that right use. These faculties are in abuse, in different degrees, directly as the animal propensities preponderate over the right-regulated intellectual faculties and moral sentiments. Of three eras or stages in man's history, namely, the Savage, the Barbarous, and the Civilized, this animal preponderance distinctly marks the first and second. The ancients adopted a tripartite division also,—two eras of which they considered as past,—the golden age of innocence and peace, in other words, of pure morality; the silver age, of a deteriorated morality; and their own period of moral degeneracy, which they termed the iron age. While we deny the golden age as ever having been, and the silver age as even yet past, we admit the age of iron as an accurate character of ancient times and all that had preceded them; and we have no objections to adopt the characteristic names of the Golden, Silver, and Iron ages, only inverting the order adopted by the ancients. The Iron age is the infancy of society. It divides itself into the Savage and the Barbarous, with a sort of analogy to the legal division of nonage into pupilarity and minority. Savage life is unqualified animalism, as is well testified by all our nautical discoverers. It is difficult to trace in their descriptions of the dispositions and conduct of savages, excepting perhaps attachment to their young, any thing higher than sensuality, cunning, covetousness, revenge and cruelty, pride, vanity, obstinacy, and superstition. An act of well-distinguished and unmingled benevolence is rarely to be found recorded of the savage; and if he manifests the

faintest perception of justice, his Conscientiousness operates in invariable combination with an inordinate Self-Esteem, which demands justice, but makes no return of it. The feeblest endowment of Conscientiousness is adequate to this selfish feeling of justice, while the rights of others are unsafe in its hands, it complains bitterly of the slightest invasion of its own. The occupations of the savage, after he has constructed his hut with its rude furniture, his weapons, his canoe, his dress and ornaments, are, scarcely with any variation, destructive. Without agriculture, he gathers the spontaneous fruits of the earth, and destroys wild animals for food; and, when in a very low and ferocious savage state, he devours his fellow-men. Gorged with food, he sleeps, or lies in lethargic ease, till the instinct of food rouses him to take his bow and lance for fresh destruction. Excited by offended Self-Esteem, his Destructiveness becomes active; and revenge, another word for the combination of these two impulses, impels him to destroy his enemy in war. He is proud and vain of his prowess, valour, and address; and glory, the aim of the savage's Self-Esteem and Love of Approbation, prompts him to fight even when he has no injury to revenge. He is not yet ambitious, or desirous of conquest,—the result of Acquisitiveness added to the love of glory,—for his enemy offers him nothing to plunder but his scalp; territory is not yet an object of desire or appropriation, beyond a new settlement of his tribe in better hunting ground, after he has dispossessed, by destroying them, the former occupants. Covered with glory and blood, the savage feasts, and eagerly seeks the luxury of intoxication, if he possesses the fermented liquor or the drug, and falls down in sleep and lethargy. His very love is sometimes mixed with Secretiveness and Combaticiveness. He carries off his bride by cunning and force: the New Hollander steals towards the woman he courts, springs upon her like a wild-cat, stupifies her with blows, and in that state drags her home. The government instrument is the club of the strongest savage, the *ipso facto* chief,—the origin, by the way, of the mace of the Lord Chancellor.

The Barbarous period of the iron age may be said to date its commencement with the rude culture and appropriation of land, and the building of cities. Tradition never begins earlier, for savages leave no records. We know nothing of the Jews, Greeks and Romans as savages. We have a glimpse of Nimrod as a mighty hunter, but we find him and his daughter building the walls of Nineveh. We have no better than a hazy picture of the naked and painted bodies of our own British ancestors, not from themselves, but in the descriptions of a more advanced people who visited and subdued them. The patriarchs were shepherds with territory, flocks, and herds, while cities abounded around

them. The heroic age of Greece, as it is called, was an age of cities, and kings, and councils; and a city which, like Troy, stood a siege of ten years, must have been something more than a huddle of mud huts. This was a great improvement upon the savage era. While there was, on the one hand, a decided advance in knowledge and reflection, and a corresponding increase of physical power and resource, there was, on the other, just enough of that conventional mutual forbearance, dictated by expediency more than conscientiousness, without which the rudest social rights could not be respected, and society would be dissolved. This mutual forbearance was secured by the despotic government of a chief, who, reserving to himself the power of being as unjust and cruel as he pleased, enforced that degree of honesty and mercy among his subjects, which is essential to their existence in the same community. The club-law of the savage was exchanged for the sway of the magistrate; and civil liberty, if it was known at all in the barbarous period, held a direct ratio to the extent of control which fixed law exerted over the will of the ruler or rulers. It is evident that the barbarous age has occupied a large portion of the historical period of the human race, that period not much exceeding three thousand years. In truth, it extended to a very recent day in modern times, even in the few nations which can be said to have outgrown it. The Greeks and Romans were barbarians from the first epoch to the last hour of their history, and were extinguished in their own barbarism. These communities passed through many stages of social progress. The human intellect never developed itself more brilliantly. In no age or nation have men of more splendid talents appeared—more gifted statesmen, lofty orators, graphic historians, ingenious philosophers, consummate generals, able lawyers, sublime poets, exquisite artists, and, considering the state of physical science, more skilful mechanics. Their cities were models of architectural grace and symmetry; their ways and aqueducts were stupendous; their temples, their theatres, their palaces, have no parallels in modern times. Elegance and luxury were carried to their very acmé among them. The Roman armies were the most tremendous engines of human power ever produced by human combination. The description given by Josephus of the force which invaded Judea, and destroyed Jerusalem, impresses us with the idea of the art-military improved to its *ne plus ultra* in discipline, tactics, promptitude, and co-operation; as if it had been one complicated, yet simply and irresistibly acting machine of iron and steel. We are accustomed to associate all that is graceful with Greece, and all that is powerful with Rome; we were early told that the world was refined by the one, and prostrated by the other; we were trained from boyhood almost to worship their books,

and the very languages in which they are written; we are familiar with venerable institutions and princely endowments in our own island for the study of these languages alone, while Greek and Roman wisdom, valour, patriotism, and virtue, have been to us as household words.

It is time for us to try all this by another standard, and one which, had we been educated on right principles, we would have applied long ago. This may be summed up in a word,—*genuine, practical, Christian morality was unknown in Greece and Rome.* Mercy and justice did not form the foundation, or the actuating principles of their institutions, their polity, or their private life. The virtue of their republics was a mere mode of self-exaltation, called patriotism, which was accompanied with gross injustice and cruelty to all other nations; while a pampered appetite for military glory, and a systematic grasping ambition, produced almost perpetual war for conquest and plunder, with all the horrors and miseries of that worst form of crime. The Roman share in these wars, with a few exceptions of retributive invasions by the more powerful victims of their injustice, was exclusively aggressive. The nation, and every individual of which it was composed, either joined in, or heartily sympathized with, these grand outrages of moral principle. Hence war, bloodshed, pride, ambition, with an insatiable rapacity, formed the basis of the Roman character, actuated their policy, controlled their education, and constituted their very being. This is what we mean by Roman barbarism. It differed from the savage state only in the improved combination of extended intellect, which enlarged its range, and increased its power of evil. Poets sang its abominations as the acmé of human glory,—for there is no greater test of barbarism than to be blind to its own features, and mistake its crimes for virtues. Orators lauded the deeds of blood and rapine, in which sometimes as soldiers they had borne a part; and listening senates hung upon their lips, as they fed to fulness the coarsest appetites of national vanity and selfishness. Historians were ready with their pens to record the proud crimes of their countrymen in their imperishable pages; and philosophers systematized a spurious virtue out of the lower impulses of human nature. Such was the actual national practice from the days of Romulus to those of Constantine. We say the practice; for there were minds in Greece and Rome which could not fail to see and appreciate a higher morality than the selfishly-patriotic and belligerent; and accordingly we have the philosophers of the Academy and the Porch, with their Roman pupils, Cicero and Seneca. Their speculations seem to have existed as elegant contemplations for literary leisure, which no one dreamed of rendering practical, or of applying to humanize the private lives or public policy of his

countrymen. When, however, the speculations themselves are brought to the Christian and Phrenological standard, they are found to be a most dwarfish morality. These systems,—with the exception of the morality of Epictetus and Marcus Antoninus, which is of the highest cast, and eminently practical,—consist of vague declamations about virtue, which lose all practical force in mere generalities, and exhibit a striking contrast to the precision of the ethics of Phrenology. The philosophers themselves have not condemned, and, we may suppose, regularly attended the savage exhibitions of the amphitheatre. Pompey slaughtered in five days 500 lions, for the public gratification, in his second consulate. In honour of Trajan's victories over the Dacians, 11,000 wild beasts were killed in the Circus, and 10,000 gladiators fought, of whom the one-half at least must have perished. Whole days were spent by the citizens of all ranks in the Circus, witnessing the combats, with breathless interest, and feasting their eyes with blood and torture. There never existed on earth a more bloodthirsty people than the admired Romans. The gross sensuality of the ancients, and the corruption which arose out of and ministered to it, the want of honesty which characterized public and private life, was utter barbarism in the midst of all the gorgeousness of merely physical civilization. Morally they were uncivilized, and, as the course of the selfish faculties in predominance is downwards, they gradually sank, and ultimately perished.

The destroyers of the Romans were not less barbarians than the Romans themselves. They chanced for the time to possess more physical force, and barbarism prevailed in the dark ages, and the chivalric period, and that in our own country of Britain, with slight admixture of civilization, down to the other day. We need no other characteristic of barbarism than a state of constant aggressive war, of wholesale murder and plunder, as objects national and individual, with which the intermediate period between the ancients and our own times, has been nearly filled. In point of what we have called physical civilization, even the destroyers of the Roman empire were immensely behind the Romans, from whom indeed they borrowed any remnants which their own Destructiveness had spared; and although physical improvement advanced, we are accustomed to characterize our ancestors in Britain, till within the two last centuries, as barbarous even in the arts of life, to say nothing of their moral condition.

Many deep stains of the moral barbarism of our ancestors yet inhere in our institutions, customs, habits, and modes of thinking; but some redeeming benevolence and conscientiousness have mingled in these habits and modes, and gradually improved the moral condition of the last 150 or perhaps 200 years, so as

to entitle that period and the present to rank as the *Silver age*. The best proof of this title is, that the moral humanization has been steadily progressing, each generation exhibiting a slight improvement on its predecessor, while the hope of farther advance, and in an accelerating ratio, never was better founded than at present. As a general allusion to modern times, or even to modern Europe, would be apt to lead to vague premises, and therefore disjointed conclusions, we shall keep England in our view when treating of the indicia of that mixture of civilization with barbarism, which marks the middle period, and which we have agreed to designate by the convenient figure of the silver age. Whatever advances other countries have made in physical power, no one will deny that England is ahead of them in this branch of national improvement; nor will it be disputed that deductions from the sum of moral civilization which must be put to the account of barbarism in England, are true, to the like extent at least, of any other country in the world. Exceptions shall, of course, be noticed. Like the barbarous period, the mixed, in which we now live, exhibits a gradation of civilization, from the hour when it began to shed a glimmer of its mild beams on the deep shadows of barbarism, progressively to that broader light which, in the present day, serves both to bless society directly, and to expose yet more the monuments of ignorance which still disfigure the social system. We cannot fix the earliest dawn of English civilization earlier than the reign of Charles I. The popular intellect—we speak of the educated class—had then made a considerable advance. Arbitrary imprisonments and exactions were felt to be gross violations of conscientiousness as unjust, and of benevolence as cruel, and seen by the reflecting powers to be inconsistent with good government and sound policy. These were the moral impulses which first forced the barriers opposed to English liberty, and consequent civilization. Political tyranny is essential barbarism. As it is blind as well as selfish, it never has yet renounced its own unjust and merciless power. It was forced from John at Runnimeade,—one barbarism, however, in that case, only driving out another, for the king was weakened that the nobles might be strengthened. It was again forced from the grasp of the Stuarts; and Combativeness and Destructiveness were the necessary ministers which, in the people, vindicated the claims of higher moral feelings. These struggles were not themselves civilization, any more than labour is rest; but they cleared the obstructed path to English civilization; and this with various degrees of difficulty, arising from much ignorance that survived the revolution 1688, has progressed ever since; has defeated three noted attempts to restore the reign of darkness; and is daily removing the lingering bulwarks of barbarism which yet remain.

When despotism ceased; the era commenced of popular law and uninfluenced judicature. Equal laws and pure courts of justice are the offspring of prevailing Conscientiousness. The existence of these, no doubt, indicates the presence or possibility of the barbarism of injustice and selfishness in those whom they are meant to control. In this latter view, civilization will be slow indeed. Individual barbarism will be found in all in whom animal brain prevails,* for human beings who are criminally predisposed, from the great preponderance of animalism in their constitution, are savages in the midst of a civilized country. The greater the number of moral brains, the more will the balance incline to national as well as individual civilization.

Civil liberty, equal law, and upright administration of justice established in England, the progress of national improvement was rapid in a degree unheard of in former times. Person and property being safe, genius, talent, and enterprise were left free to run the course for which they were intended; physical science and literature have flourished, agriculture and the arts have advanced, commerce extended, wealth, with all its systems of interests, accumulated; while in mechanical and chemical power, in the vastness of the combinations of political economy, and in all the accommodations, luxuries, and elegances of life, England has decidedly outstripped all other nations, ancient and modern.

All this may be true, and yet England's *moral* civilization have lagged greatly behind her achievements in physical power; and we are inclined to think that this has been the fact just because of the engrossing tendency of these very achievements. Our social morality has got no farther than the negative position of the obstructions of bad government removed. When the barriers were withdrawn, the race was eminently selfish. Acquisitiveness has been the impelling power which has led by degrees to England's present physical gorgeousness. The ardent course of self-enrichment and aggrandizement would have jostled more generous purposes out of the course, had it been possible for them to have entered it in company so unsuitable; hence a vast systematic selfishness is the real aspect of England's moral condition, and selfishness is barbarism. Besides the heart-chilling effect of selfish pursuits, for which to this hour the youth of England are almost exclusively educated as the chief business of life, while every other, especially where benevolence is engaged, is regarded as waste of time, there remained, long after the age of Charles I., very many positive barbarisms, and there remain to this day not a few, inherited from darker times. We have not room for a particular enumeration, but a few examples will serve our purpose.

* See Tripartite Division of Human Beings, p. 111 of vol. viii.

"The Criminal Code of England, till the other day when justice and mercy have called for its mitigation too loudly to be denied, long continued its self-defeating exercise of vindictive animalism, only a little above the degradation of the crimes which it punished." It was not greatly worse in the darkest of the dark ages. All inflictions of pain and torture are *barbarous*, and the very term has been adopted to designate the common feeling of that truth. It is impossible to imagine a more barbarous, a more savage, a more immoral act, than the infliction of a military or naval flogging,—the sufferer writhing in indescribable torture for the long time necessary for the infliction, the flesh torn from the back with knotted cords, and the blood, as is actually the case, covering the persons of the inflictors, and sprinkling the very clothes of the bystanders. The treadmill, though less cruel, is, from its being purely inflictive, not less barbarous.

The game-laws originated in a barbarous age, and bear its selfish character. The slaughter of game, yet held an elegant pastime for the highest ranks in society, and country *sports*, as they are called in mockery of the sufferings they inflict on sentient beings, are all as destructive as the occupations of the savage. Systematic fox-hunting, with all its costly accompaniments, is a custom so irrational, so unworthy of intelligent men, that in a more civilized age, when it has ceased as it must do, it will scarcely be credited that it could ever prevail as the serious and almost daily business of men who hold themselves, and are held by the multitude, who would hunt if they could, to be the elite of society.

The *inheritance* of honour and distinction, whether the corresponding merit be inherited or not, the mere wearing a badge or bearing a name, is perhaps one of the most irrational remnants of a ruder age, and therefore we think cannot survive a higher grade than that of the *present* of social civilization. France has got the start of England in freeing herself from this last mentioned absurdity. Titles of honour remain, but being bestowed as the personal and intransmissible rewards of actual merit, are not nearly so likely to be found disjoined from it. A high degree of civilization, we have before observed, will bring Self-Esteem and Love of Approbation to their just level as inferior sentiments, and badges of distinction will be felt to be too much associated with them to be worn with satisfaction. It is the misapplied Veneration of the multitude,—itself a proof of barbarism,—which pays homage to what reason declares to have no right to it. When that homage shall cease, the badge will be voluntarily disused by its wearer; and it will be matter of almost incredulous speculation to future enlightened times, that there ever was a stage of intelligence and moral feeling when, like the

ring in the nose of the South Sea chief, it was valued and almost worshipped.

The slave-trade and slavery, but very lately abolished, were the result of Acquisitiveness utterly extinguishing mercy and justice for nearly two centuries; and demonstrating to what an extent, in the mixed period, the iron of former times predominated over the silver of our yet imperfectly civilized inconsistent age.

England's jealousies of other nations and restrictions on their commerce are founded in ignorant, selfish, and withal self-defeating barbarism. The navigation code is no advance upon the days of the Heptarchy. The Moral Sentiments and Intellect disclaim the whole system, and will infallibly clear it away. The internal monopolies which remain to certain trades, and all the injustice of petty corporations, must likewise fall before the same intelligence and morality which will not endure the navigation laws. The trades absurdly protected by monopolies are what are called the ancient crafts of towns, which have existed since men associated in communities as indispensable to their daily wants. The occupations which science has added, have no such protection, and these are after all the most thriving.

National antipathies are barbarous. To hold another nation to be our "natural enemies," is to sacrifice every moral feeling to an absurd Self-Esteem and Destructiveness. It is not easy to determine how much of England's wars, during her last 150 silver years, has arisen out of this puerile temper. That people is not civilized which has been engaged in war for a century and a half, with short intervals of truce rather than peace. Offensive war is the eldest born of barbarism. Defensive war may be forced upon a highly moral people;* but every step of the foot, and stroke of the sword, beyond the strictest line of self-defence, actual or preventive, is immoral, and therefore barbarous. England's wars of the last century and a half, will stand *this* test in some degree better, certainly, than the barefaced slaughter and robberies perpetrated by her previous barbarous kings; but they will, one and all, be found grievously wanting when weighed in a justly poised moral balance.

There are other barbarisms disfiguring our public polity which it were unnecessary to enumerate. Keeping in view the standard we have laid down, and the examples which we have adduced, the reader has the means of judging for himself, the test is in his own hands; when he contemplates any institution, custom, act or practice, if its directing impulse is disowned by Benevolence and Conscientiousness, if it is either unfeeling or unjust in both, if it rises no higher than, or at least is an abuse of, Acquisitiveness, Self-Esteem, or

* See the subject treated, vol. vii. p. 529. of this Journal.

Love of Approbation, it is marked with the brand of barbarism, and is out of place in a civilized community.

Barbarism may continue to deform the manners of a people long after they declare and believe themselves civilized. Duelling, the lineal descendant of trial by "singular battle," affords an example, and that operating in a two-fold manner. It is, on the one hand, defended as a check upon insolence and rudeness, and a protection from insult; an admission that these characteristics of barbarism do yet debase society in England, and that portion of it, moreover, which is deemed the highest and most polished. It is, on the other hand, itself a barbarous custom, prompted by Self-Esteem, and executed by Combativeness and Destructiveness, and an absurdity, when viewed intellectually, as a mode of redress. Reflection, Mercy, and Justice, enter not into its conception or perpetration. Phrenologists might call Self-Esteem the *duelling faculty*.

Gambling of all kinds is a barbarian's pastime. It consists in an active Acquisitiveness and Hope, both in abuse, and is disowned by the Moral Sentiments and Intellect. Our uncivilized ancestors were passionate gamblers. Savages gamble their very persons into slavery. Even the refined card-table is a remnant of barbarism, and is fast disappearing.

Excessive conviviality is barbarous. If it have yet entirely ceased to be the reproach of the gentry of England, it has but lately ceased to be so, that drinking is not only a sensual indulgence, but an accomplishment and boast, as much as it was among the hordes of her Danish invaders. Intemperance was, till very lately, held a point of honour, a sort of duty which it was fair, nay imperative, to enforce; and while the guest felt ill treated, and even affronted, if so far neglected as to be left sober, the host fulfilled his part by locking the door, if his visitor was not to be depended upon, and, by a special ap-
pliance of the most wasteful hospitality to his particular case, lodging him under the table, or carrying him to bed. When this degree of beastliness was current in society, it was of course attended with other kindred abominations; besides much additional profligacy, and violence to the public peace, which filled the watch-houses with young men of fashion, who had been breaking lamps and heads as they staggered home, it must be known to many who have arrived at even middle life, that the conversation current at these coarse banquets was gross and disgusting, to a degree which the young men of the present day refuse to credit.

It is consolatory to the moralist to observe, that the hour is advancing when he will be enabled to say of most if not of all the barbarisms, public and private, which we have enumerated, "fuerunt." A century ago there were professed duellists who

infested the coffee-houses of London, and gloried in a tyrannical sway, which their skill with small sword or bullet gave them over the frequenters of the place. Such nuisances would now be hanged for the first murder they committed. The race is extinct. A duel is a rare occurrence at the present day, a proof of the extending prevalence of a higher morality and intelligence, which not only disapproves that solecistic custom, but have taken the place of the ignorance and insolence of a less advanced social intercourse, and thereby diminished in a great degree the causes of duelling. Drunkenness, grossness, gambling, lamp-breaking, and the watch-house, are no longer reputable. Voluntary institutions of benevolence and charity are numerous, and every day on the increase. But even these expose a lamentable outnumberation of the benevolent, who give or act, by the selfish who neither act nor give, in humanity's cause.

The barbarisms of England's social system have by degrees been giving way before the prevalence of intelligence, and the irresistible power of justice and benevolence. A legislation doing justly and loving mercy, if not walking humbly, (for this comes later yet), began to dawn towards the end of the eighteenth century. A Chatham arose to avert a savage vengeance from our brethren of America; a Burke to undo the iron grasp of a merciless avarice which wrung from the Hindoo "the very opium in which he forgot his oppressions and oppressors;" a Wilberforce to wage a thirty years' war with that grand felony the African Slave Trade, to hurl it from its place, and to live to see younger senators, trained in his school of benevolence, seal the doom of the slavery itself to which the detestable traffic ministered. Acts of Parliament, with "no drop of alloying self in them," purely for a just or merciful end, either to originate a positive good or to remove a hurtful barbarism, have occasionally appeared, and given promise of yet better things to come. Just views are subverting national prejudices, and a fairer allotment of political rights has been the natural consequence. The effect of civilization on a nation's political morality, and the state of its parties, would come to be treated of here, but the subject is too extensive, and would require a separate discussion.

There have been epochs in the onward course of civilization. Discoveries, such as the art of printing, have been made by the faculties of man, which have given a powerful impulse to it. The Reformation, the early fruit of the press, rescued Christianity from that load of imposture and darkness, which, in the barbarous ages of popery, obscured and nullified it; and gave a beginning at least to that religious liberty, without which there can be no practical Christianity. In a sermon preached at St Paul's Cross by the Vicar of Croydon, at the time of the first spread of the art of printing over Europe, he said, "we must root out printing, or

legislature would be put in possession of every information necessary for a comprehensive view of the measure. Secondly, by a judicious division of labour, which requires a numerous body for committee details, all the light attainable from the best qualified persons would be systematically shed on the subject, and conflicting interests investigated. Thirdly, with the whole details purified and concentrated, before them, the entire body would then discuss the principle of the new law with its practical consequences. Speeches on the principle and consequences would be brief, when these were not impelled by a puerile love of approbation, but were moved by justice and benevolence, and guided by knowledge and reflection. Differences would be easily reconciled when intentions are pure and straight-forward, and the grand object, the public good, the same in every bosom. The standard of the decision would then be, Is Conscientiousness satisfied? Is Benevolence at ease? Is Veneration respected? Do Comparison and Causality promise, as the result, the general good? Is there no sacrifice of any of these to the inferior sentiments, and most decidedly none to the animal propensities? Legislation like this would provide amply for the legitimate enjoyment of all the faculties, inferior as well as superior, and would tend to provide the necessities, comforts, and even the luxuries and refinements of life for the entire population.*

One word, in the close of all, on the refinements and luxuries of genuine civilization. It is a great but almost universally prevalent error to conclude that these refinements and luxuries necessarily enervate and corrupt a people, and lead to their downfall. Abuse of these pleasures alone has these ruinous consequences; in other words, the use unregulated by the moral sentiments and intellect. This was the corruption of the ancients. It is said that the Americans of the United States, for some time after the achievement of their independence, acted on the error now alluded to, and maintained so rigid a simplicity that their very theatres and ball-rooms were refused ornament. Captain Basil Hall saw the ball-rooms at Washington little more than rough-cast, and, probably erroneously concluding them finished, referred the phenomenon to the exemplary Spartanism of the metropolitans. But this absurd and puerile pedantry is no longer prevalent in the Union. It arises from ignorance of the human constitution—from having yet to learn that there is a special faculty, and one of the Creator's best gifts,

* We consider the bills of which Mr. Buckingham, member for Sheffield, has given notice, to be results of actual civilization, and promises of yet more. By a salutary regulation and restraint of intemperance, and a benevolent and liberal provision of edifying, healthful, and refined pleasures for the humbler classes of society, he will do more for genuine civilization than half a century of legislation has done before.

puted empirically, and without the aid of a sound philosophy of human nature, the Sacred Volume itself is seen in a different light from each of the endless varieties of endowment and combination which exist in the human faculties; while a blind Self-Esteem weds every interpreter to his own views as absolutely right, and inspires him with a hatred of all others, and of their authors; in the very worst use of Destructiveness. In politics, a legislative measure is rarely proposed without raising a perfect hurricane of opposition and denunciation, as if it were the most monstrous of errors, the greatest of crimes; while scarcely a plan or project civil, municipal, economical, or even ornamental, is brought forward, without tearing to pieces the ties of courtesy and good neighbourhood; and presenting a variety, inconsistency, and often absurdity, of human thinking, with a loss of time, labour, and money, that render social improvement the most arduous, almost the most hopeless, of all human attempts.

This is gross barbarism, and it is reserved for Phrenology to remove it. This it will do by ascertaining the human faculties, observing their relation to each other and to the external world, and thereby establishing practical principles in human affairs, about which controversy will nearly cease; and by fixing standards of right judgment, the only sources of and warrants for prompt and beneficial action. Legislation itself will become, in an increasing ratio, an easier task, till in a very high state of civilization it will well nigh cease. New laws and changes of laws imply positive evils to be cured, or impediments to good to be removed. In the three last sessions of Parliament, how many notices were given of *changes* to be proposed. If every change shall be beneficial, there will be the less reason for changing again; till at last legislation will come to be confined to changes rendered necessary, not by existing institutions of long standing and obstinate growth violating the moral sentiments and intellect, but by the unfettered and natural progress of human affairs. In the golden age, an existing law, we shall suppose, is to be repealed, or a new law enacted, by a legislature which we assume to consist of thoroughly educated and generally informed practical men, free from the selfishness and barbarism of party spirit and personal ill-will, without admixture of the empty vanity of personal display, with no pride of caste, or leaning to what are called interests, above all, unfettered by pledges to a constituency less enlightened than themselves, and animated by a single-hearted love of their country and their species;—what would be the course of such a legislature? First, we take it, they would announce their intention so long before the actual discussion of the new law, as to afford ample time to all who think it might affect them injuriously to bring forward their objections, with the reasons thereof; by which means the

legislature would be put in possession of every information necessary for a comprehensive view of the measure. Secondly, by a judicious division of labour, which requires a numerous body for committee details, all the light attainable from the best qualified persons would be systematically shed on the subject, and conflicting interests investigated. Thirdly, with the whole details, purified and concentrated, before them, the entire body would then discuss the principle of the new law with its practical consequences. Speeches on the principle and consequences would be brief, when these were not impelled by a puerile love of approbation, but were moved by justice and benevolence, and guided by knowledge and reflection. Differences would be easily reconciled when intentions are pure and straight-forward; and the grand object, the public good, the same in every bosom. The standard of the decision would then be, Is Conscientiousness satisfied? Is Benevolence at ease? Is Veneration respected? Do Comparison and Causality promise, as the result, the general good? Is there no sacrifice of any of these to the inferior sentiments, and most decidedly none to the animal propensities? Legislation like this would provide amply for the legitimate enjoyment of all the faculties, inferior as well as superior, and would tend to provide the necessities, comforts, and even the luxuries and refinements of life for the entire population.*

One word, in the close of all, on the refinements and luxuries of genuine civilization. It is a great but almost universally prevalent error to conclude that these refinements and luxuries necessarily enervate and corrupt a people, and lead to their downfall. Abuse of these pleasures alone has these ruinous consequences; in other words, the use unregulated by the moral sentiments and intellect. This was the corruption of the ancients. It is said that the Americans of the United States, for some time after the achievement of their independence, acted on the error now alluded to, and maintained so rigid a simplicity that their very theatres and ball-rooms were refused ornament; Captain Basil Hall saw the ball-rooms at Washington little more than rough-cast, and, probably erroneously concluding them finished, referred the phenomenon to the exemplary Spartanism of the metropolitans. But this absurd and puerile pedantry is no longer prevalent in the Union. It arises from ignorance of the human constitution—from having yet to learn that there is a special faculty, and one of the Creator's best gifts,

* We consider the bills of which Mr Buckingham, member for Sheffield, has given notice, to be results of actual civilization, and promises of yet more. By a salutary regulation and restraint of intemperance, and a benevolent and liberal provision of edifying, healthful, and refined pleasures for the humbler classes of society, he will do more for genuine civilization than half a century of legislation has done before.

which delights in ornament, elegance, and even splendour. To gratify that faculty his own works are full of adornment super-added to utility. He enamels the plains and paints the lily beyond the glory of the most glorious of earthly kings. He gives majesty to the woods and melody to the groves. He gems with countless orbs the azure of the heavens, and deepens the blue of the sea. He purples the mountains with all the graduated beauty of aerial distance; and of this the most splendid paintings in the saloons of wealth are but a feeble imitation. He hORIZONS the morning sun in living gold, tempers the setting ray with a curtaining of gorgeous colours, and ordains an effulgence at noontide too intense for human gaze. If He, that made the eye sees, that made the ear hears—He, that created the faculty of Ideality designed it for its own legitimate enjoyment, an enjoyment truly boundless. It follows as a consequence of the Divine arrangement, that the pleasures of taste and refinement, under the regulation of the moral sentiments and intellect, cannot do harm; for evil cannot come of the right exercise of any faculty; to deny that exercise is an ignorant error. Phrenology disowns all such fetters. Its precept is the Christian precept, "Use without abusing." It is the philosophy of perfect freedom, of enjoyment regulated only by right feeling and sound judgment. It is in beautiful harmony with Scripture in this as in many other points. Yet the precept to "use all things as not abusing them" is forgotten by the strict adherents of some religious sects; who, while they indulge in some pleasures which suit their own taste, abjure and censure others in which there is no difference in moral principle; and thus become censorious, unsocial, and decidedly unjust. When in their company, which is an exceedingly irksome position, we feel fettered with a constant dread of touching their sores, and encountering their grave looks and solemn reproofs. This sanctimonious mummery is irrational and intolerable; it is pharasaical self-conceit and uncharitableness. There is no sin in the eye of Phrenology, or Christianity either, but abuse of the faculties: their legitimate use a benevolent Creator has made boundless in variety and delight; and, be it never forgotten, the higher the moral rank of the faculty gratified, the higher is the real gratification.

ARTICLE XII.
 THE CONSTITUTION OF MAN CONSIDERED IN RELATION
 TO EXTERNAL OBJECTS. By GEORGE COMBE. 2d Edition. John
 Anderson Jun., Edinburgh; Longman & Co. and Simpkin & Marshall,
 London; and Hodges & Smith, Dublin. 12mo. Pp. 446.

It was mentioned in our seventh volume, p. 655, that the late W. R. Henderson, Esq., younger of Warriston and Eddon Hall, had bequeathed a considerable sum to certain trustees, to be applied in diffusing Phrenology; "in whatever manner shall appear to them best suited to promote the ends in view: Declaring, that if I had less confidence in my trustees, I would make it imperative on them to print and publish one or more editions of an 'Essay on the Constitution of Man, considered in relation to External Objects, by George Combe,'—in a cheap form, so as to be easily purchased by the more intelligent individuals of the poorer classes, and Mechanics' Institutions, &c.; but that I consider it better only to request their particular attention to this suggestion, and to leave them quite at liberty to act as circumstances may seem to them to render expedient; seeing that the state of the country, and things impossible to foresee, may make what would be of unquestionable advantage now, not advisable at some future period of time. But if my decease shall happen before any material change affecting this subject, I request them to act agreeably to my suggestion. And I think it proper here to declare, that I dispose of the residue of my property in the above manner, not from my being carried away by a transient fit of enthusiasm, but from a deliberate, calm, and deep-rooted conviction, that nothing whatever hitherto known can operate so powerfully to the improvement and happiness of mankind, as the knowledge and practical adoption of the principles disclosed by Phrenology, and particularly of those which are developed in the Essay on the Constitution of Man above mentioned."

Mr Henderson died on 29th May 1832, and his trustees recently assigned a part of his funds for printing a cheap edition of Mr Combe's work. Two thousand copies were accordingly published on 1st April last, at the price of two shillings and sixpence; all of which were sold in little more than a month. An edition on larger and finer paper was at the same time published at six shillings, but its price has now been reduced to four, in order to supply the continued demand. In this second edition many improvements and additions have been made; in particular, a long introductory chapter is prefixed, and two are added, one on the Relation between Science and Scripture; and another on "Punishment under the natural laws!" Having formerly given an account of the first edition of the work, we think it unnecessary to

enter into any analysis of its contents on the present occasion. Mr Combe, as the reader may remember, treats of the natural laws by which the inanimate creation, and the organic, mortal, and intellectual constitution of man, are regulated. One of the most striking and original points which he has evolved, as the independent operation of these laws—from which it happens, that however well some of them may be obeyed, yet, if others be neglected, the punishment of the neglect must inevitably be endured. This principle, we think, dispels many obscurities and difficulties which formerly appeared in the mortal government of the world. The most virtuous crew of a ship are liable to be drowned if they neglect the physical laws according to which their ship may float in safety; while persons the most depraved enjoy perfect security in a ship that is properly managed and strongly built. And, in like manner, if the organic laws—in other words, the laws of exercise, nutrition, sleep, cleanliness, and the like—be neglected, the individual is punished with bad health, though engaged in occupations purely benevolent and religious. The following cases, illustrative of this subject, appear to us full of instruction:—

“A gentleman far advanced in years fell into a state of bodily weakness, which rendered the constant presence of an attendant necessary. A daughter, in whom Adhesiveness, Benevolence, and Veneration were largely developed, devoted herself to this service with the most ceaseless assiduity. She was his companion for month after month, and year after year, happy in cheering the last days of her respected parent, and knowing no pleasure equal to that of solacing and comforting him. For months in succession she did not go abroad from the house; her duty became dearer to her the longer she discharged it; till at length her father became the sole object on earth of her feelings and her thoughts. The superficial observer would say that such conduct was admirable, and that she must have received a rich reward from Heaven for such becoming and virtuous devotion. But Providence rules by other laws, and never yields. Her enjoyment of mental happiness and vigour depended on the condition of her brain, and her brain was subject to the organic laws. These laws demand, as an indispensable condition of health, exercise in the open air, and variety of employment, calculated to maintain all the faculties in activity. She neglected the first in her constant attendance in her father's chamber; and she overlooked the second in establishing him as the exclusive object of her consideration. The result was, that she fell into bad health, accompanied by weakness of brain, extreme irritability and susceptibility of mind, excessive anxiety, hysteria, and even symptoms of insanity. Some judicious friends at last interfered, and by forcing her to leave for a time, although much

against her inclination, the object of her solicitude, rescued her from death, and confirmed mental derangement. If this case had been allowed to proceed uninterrupted to its natural termination, many pious persons would have marvelled at the mysterious dispensations of Providence in afflicting so digne a daughter; whereas, when the principle of the divine government is understood, the result appears neither wonderful nor perplexing. In the works of religious authors, many erroneous views of divine dispensations may be found, traceable to ignorance of the natural laws. The Reverend Ebenezer Erskine, speaking of the state of his wife's mind, says, "For a month or two the attacks of the Almighty were within her; the poison whereof did drink up her spirits; and the terrors of God did set themselves in array against her." He called in the assistance of some neighbouring clergymen to join in prayers on her behalf; and she was induced to pray with them; but she still continued to charge herself with the unpardonable sin, and to conclude that she was a castaway. Such feelings occurring in a woman of blameless life, clearly indicated diseased action in the organs of Cautiousness. "Before she fell into these depths," he continues, "she told me that the Lord gave her such a discovery of the glory of Christ as darkened the whole creation, and made all things appear as dung and dross in comparison of him." These expressions indicate excessive excitement of the organs of Wonder and Veneration. She subsequently recovered her mental serenity; and her husband treats of the whole phenomena as purely mental and religious. He, however, afterwards incidentally mentions that she was subject to bad health, and that "melancholy was a great ingredient in her disease." We now know that melancholy is a diseased affection of the organs of Cautiousness. At the time when Mr. Erskine lived and wrote, the physiology of the brain was unknown; the occurrences which he describes had a real existence; and he had been taught to attribute them to the agency of the divine spirit, or of the devil, according to their different characters. He is, therefore, not deserving of censure for the errors into which he unavoidably fell; but now when the facts which he describes, and analogous occurrences in our own day, can be traced to diseased action of the organs of the mind, we are authorized to view the providence of God in a different light. While it would be subversive of all religion to throw any doubt whatever on the reality and importance of religious feelings, sound in their character, and directed to proper objects, it is nearly equally injurious to the sacred cause, to mistake the excitement and depression of disease for the influence of the Holy Spirit, or the agency of the enemy of mankind.

"It is mentioned also in the Life of Mr. Erskine, that his wife

bore several children to him while in precarious health, and that the situation of the *mother*, or *personage* *house*, was *unwholesome*. We are told, also, that in the year 1712, three of his children died; that one died in 1720, and that in 1723 a fifth was on the brink of death, but recovered.* He treats of all these events as 'severe trials,' and 'severe afflictions,' without having the least glimpse of their true causes and objects, or their relation to the natural laws.

"Again, Hannah More, in a letter to the Rev. John Newton, dated Cowslip's Green, 23d July 1788, says, 'When I am in the great world, I consider myself as in an enemy's country, and as beset with snares, and this puts me upon my guard.' 'Fears and snares seem necessary to excite my sinewspection; for it is certain that my mind has more languor, and my faith less energy here, where I have no temptations from without, and where I live in the full and constant perusal of the most beautiful objects of inanimate nature, the lovely wonders of the munificence and bounty of God.' Yet, in the midst of his blessings, I should be still more tempted to forget him, were it not for frequent nervous headaches and low fevers, which I find to be wonderfully wholesome for my moral health.'†

"This passage contains several propositions that merit attention. First, according to the natural laws, 'the most beautiful objects of inanimate nature,' and 'the lovely wonders of the munificence and bounty of God,' are calculated to invigorate the moral, religious, and intellectual faculties, 'in all well constituted and rightly instructed minds; yet Hannah More's mind 'had more languor, and her faith less energy,' amidst such objects, than 'when beset with snares.' Secondly, according both to the natural laws and to Scripture, 'evil communications corrupt good manners;' but 'when in the great world,' and 'in an enemy's country,' her faith was improved. And, thirdly, 'nervous headaches and low fevers' are the consequences of departures from the organic laws, and are intended to reclaim the sufferer to obedience that the pain may cease; yet she 'found them wonderfully wholesome for her moral health,' and they prevented her from 'forgetting God'!

"Only disease or errors in education could have produced such perverted experience in a woman so talented, so pious, and so excellent as Hannah More. Can we wonder that the profane should sneer, and that practical religion should slowly advance, when piety exhibits itself in such lamentable contradiction to the divine institutions? And still more so, when, from proceeding on a false theory, it contradicts itself? Hannah More,

* Life and Diary of the Rev. Ebenezer Erskine, 1831, pp. 266, 301, 286, 290, 320.

† Memoirs of H. More, Vol. ii. p. 110, 111.

in her Journal in 1794, says, "Confined this week with four days' headache—an unprofitable time—thoughts wandering—little communion with God! *I see by every fresh trial, that the time of sickness is seldom the season for religious improvement.* This great work should be done in health, or it will seldom be done well." Vol. II. p. 418. This passage is full of sound sense; but it is in contradiction to her previous assertion, that "nervous headaches and low fevers were wonderfully wholesome for her moral health."

"These examples, to which many more might be added, may serve as illustrations of the proposition, That without a philosophy of human nature, even religious authors, when treating of sublunary events, cannot always preserve consistency either with reason or themselves; and hence that religion can never become thoroughly practical, nor put forth its full energies for human improvement, until it is wedded to philosophy." In proportion as men shall become acquainted with the natural laws, and apply them as tests to theological writings relative to this world, they will become convinced of the truth of this observation."

MISCELLANEOUS NOTICES.

EDINBURGH.—On 80th March, Mr Combe concluded his course of Lectures on Phrenology, delivered during last winter to the Edinburgh Association for procuring Instruction in Useful and Entertaining Sciences. It appears from the Fifth Report of the Directors, read to a general meeting of subscribers on 23d March, that the number of tickets sold for this course was 224, and that 1114 visitors were admitted to single lectures, at 6d. each. On Monday 11th May, Mr Combe commenced a course of weekly lectures on Moral Philosophy founded on Phrenology, in Clyde Street Hall.

STIRLING.—We learn that a Phrenological Society was established here several months ago, and beg to be favoured with some account of its proceedings and success.

ARBROATH.—In consequence of an invitation from "The Arbroath Society for the obtaining of Useful Knowledge," two lectures on Phrenology were delivered there on 13th and 20th May, by our active friend Mr W. A. F. Browne of Montrose. The audience, we understand, amounted to about 600. Mr Browne restricted himself chiefly to the proofs that the brain is the organ of the mind, and to the general principles of Phrenology; but we trust that he will speedily resume the subject at Arbroath, and pursue it into its details. We are glad to learn also that he is about to deliver, at Montrose, a course of six lectures, before the managers of the Lunatic Asylum under his superintendence, the medical men of the town, and such other individuals as may feel an interest in the subject,—upon Insanity generally, but confined more especially to the principles upon which the disease ought to be treated, and to a description of what asylums *were*, what they *are*, and what they *ought to be*. These lectures, of course, will be purely phrenological. Mr Browne's proposal to deliver them has been received in a very flattering manner; and as the subject is one respecting which the public at large stand greatly in need of being enlightened, we anticipate much good from the course.

LAUDER.—We have learned, with great pleasure, that the inhabitants of this town have seriously betaken themselves to the study of Phrenology. Mr William Tait, surgeon there, after carefully studying the science, commenced, in March last, a course of weekly lectures upon it, which have excited great interest, and have been the means of making many phrenologists. Much attention is now paid to Phrenology in Lauder, and some of its greatest opponents have become its warm supporters. The course, we believe, is not yet finished. Mr Tait has been requested to deliver an introductory lecture on Phrenology at Galashiels, where Mr. M'Dougal, surgeon, intends to commence a short course immediately. These and similar facts confirm us in an opinion which we have long cherished, that the provincial medical men are to be the chief instruments in diffusing Phrenology throughout the kingdom. As it falls directly in the way of their professional studies, many of them are well informed respecting it; they are under no theological fetters, and the respect with which their opinions are generally regarded, enables them to make a decided impression on their hearers. We solicit communications from Messrs Tait and M'Dougal, and hope to see their example widely followed by young surgeons throughout the country.

WARWICK.—Letter from W. D. Watson, Esq., Secretary of the Warwick and Leamington Phrenological Society, dated 13th February 1835:—"Our members, I am happy to say, increase, and we have a very respectable Society. The Mayor has kindly permitted our meetings to take place at the Court-House until our funds will allow of our procuring rooms. Our casts, &c. are likewise kept there. At our fifth meeting, on the 5th of December, we had a pretty full attendance of members, and a good many visitors. A committee was appointed to reconsider the rules, and recommend such amendments and alterations as they judged proper. The Committee consisted of Dr Conolly, Mr Watson, Rev. George Childs, Mr Wilmshurst, and Rev. J. A. Morris. Dr Conolly read a very interesting paper on the history and cerebral development of King Robert Bruce, which called forth the warmest thanks from all present. The Doctor, in the first place, read such historical portions of different writers as related to the character of this celebrated Scottish monarch, and, in the next, pointed out upon the cast of the King's skull the peculiar developments which accorded with his history as far as it is known. Dr Conolly then, in the most candid manner, read over the development as given by the more expert and experienced phrenologists of Edinburgh, to shew wherein he had erred in his estimate of the development, and concluded by recommending a similar method of acquiring dexterity in reading developments to the members of the Society generally. The following gentlemen were elected Ordinary Members:—Mr D'Arcy Boulton, Surgeon, Leamington; Mr Sidney Field, Solicitor, Leamington; Mr George Matthew Paget Kitchen, Solicitor, Bedford; Mr Samuel Bucknill, Surgeon, Rugby; Mr W. M. Shillito, Birmingham, (W. B. Costello, London, corresponding), Mr Henry Blenkinsop, Surgeon, Warwick. Corresponding: George Hayes, Esq. Barrister, London; Mr John Lee, Surgeon, Market-Bosworth, Leicestershire. The Rev. Edmund Roy, B. A., Leamington, and Mr William Groves Perry, Warwick, were proposed as Ordinary Members. No phrenological subject was given out for discussion at the next Ordinary Meeting, as the members would be occupied with the new rules. The Sixth Meeting took place at the Court-House on Friday the 6th of February inst., when the new rules were formed and ordered to be printed. The Rev. Edmund Roy, B. A., Leamington, and Mr W. G. Perry were elected Ordinary Members, and Mr John Kimbell, Surgeon, Knouk, a Corresponding Member; Mr Henry Dale, Surgeon, Leamington, was proposed as an Ordinary Member. The Anniversary Meeting of the Society will take place at the Court-House, Warwick, on Friday the 6th of March next. By some unaccountable omission, I neglected to mention the name of Mr J. L. Levison of Doncaster, as an Honorary Member, and shall feel obliged by his name being inserted in the next number of the Journal as such. We now muster, with Honorary and Corresponding 38 Members, and one proposed 39. I have the honour to be, Sir, your most obedient Servant, W. D. WATSON."

SOUTHAMPTON.—Phrenology, we learn, is fast gaining ground in Southampton. "A class," says a correspondent, "has been formed at the Mechanics' Institution, for instruction in the science, which is attended by about twenty members. They have heretofore met fortnightly, but have now agreed (March 1836) to meet weekly; and their plan is, that some member of the Class shall deliver a lecture or read a paper of his own composition at each meeting. They began with the bones of the Skull; then followed the Anatomy of the Brain, the Temperaments, and the three great divisions of the head; on each of which several subjects some excellent observations were made. The class is now proceeding regularly with the organs according to their order; and on the organ of Acquisitiveness, a mere mechanic, who shews a good development of the moral and intellectual organs, recently read a paper full of original matter derived principally from his own observations, in which he introduced the following Epitaphs and Eulogy on Phrenology. As these may be considered almost extempore productions, they ought to be publicly recorded, and any faults which may be discoverable in their composition are excusable.

Epitaph on a Miser.

Here lies a Miser—worst of wretches he:
Rich for this world, poor for eternity,
Gold was his god! who life nor soul could save,
Or grant one ray of hope beyond the grave!

On a Prodigal.

A Prodigal's beneath—vain man! to spend
His life and money for no other end
Than here to play the fool, dance, eat, and drink,
To swim in sin, and then in sorrow sink!

On a Thief.

A Thief is here entomb'd—a friend to none;
He'd rob the poorest wretch beneath the sun;
Though bold in life, in death his courage fled—
The prospect then was dark and full of dread!

On a Christian.

This grave is Christian's.—Yea, the orphans' friend
Is gone—but mark! his was a peaceful end;
His gold, his life, his soul to God was given,
He fell asleep in Christ, then woke in heaven!

Eulogy on Phrenology.

Phrenology, though all the rage,
Says one, my thoughts shall ne'er engage;
What man of sense will place reliance
In so contemptible a science?
I can't think one would dare maintain
The seat of mind is in the brain,
That skulls or bumps, whate'er their size,
Can prove their owners fools or wise.
Another says, I hate it much,
Because its principles are such
As will to fatalism lead,
Cause infidelity to spread,
A thousand other evils bring,
Abuse the laws of God and king,
Expose one's conduct, good or bad,
Distract men's minds, and drive them mad.
A third, T'will die, like Jonah's gourd;
This man's deranged, don't take his word.

For, lo! it spreads on every hand,
Both far and wide, by sea and land.—
Well, *Antis*, is this all you find
Against the doctrine of the mind?
Pray hide your heads, end the debate;
'Tis plain you've each a shallow pate.
Next to religion, find who can
A system so befitting man;
His mind t'exalt, delight his sense,
Or teach him pure benevolence.
If gold or silver you compare
With Gall's rich boon, they're light as air;
This German science all should prize,
And ne'er philanthropy despise.
Soon may its philosophic truth
Be taught at school to every youth.
It cannot die, but must obtain
While sun, and moon, and stars remain."

Future communications from Southampton will be acceptable.

Extract from an Address delivered at the First Anniversary Meeting of the Provincial Medical and Surgical Association, July 19. 1833, by Edward Barlow, M. D., Physician to the Bath United Hospital and Infirmary, &c. &c., published in the Transactions of the Association.

"The next death which I have to record, is one on which, if I was to yield to the impulse of my own feelings, I should dwell with deep and painful interest. In December, died at Boston, in the United States of America, Dr J. G. Spurzheim, the coadjutor of Dr Gall, and the able advocate and expositor of the doctrines which Dr Gall first promulgated. It would be out of place here to enter on any vindication of the science which these distinguished fellow-labourers established by evidences sufficient to carry conviction to every unprejudiced mind.

"Of the rancour with which it was early assailed, and of the puny endeavours still made from time to time to decry it through means of ridicule and abuse, I take little account, being well assured that its truths will survive, and be acknowledged when its objectors shall have passed into oblivion. My own faith was no effect of raised imagination, but the result of calm and deliberate judgment; and, after two and twenty years of observation and reflection, it remains unshaken. However the doctrines of Spurzheim may be impugned, his personal merits will be readily acknowledged by all who ever had the happiness of holding intercourse with him. With a vigorous intellect were combined moral qualities of the highest order, and dispositions the most amiable; and it was impossible to know him, without blending with the admiration due to the profound philosopher, sincere esteem and the warmest affection for the man."

ITINERANT PHRENOLOGISTS.—Complaints have reached us from various quarters, both in this country and in America, against illiterate persons who go about, lecturing on Phrenology and taking developments for a fee, and whose proceedings are such as to injure Phrenology in the eyes of persons unacquainted with the subject. One of them, we are told, has published in the newspapers a narrative of a visit said to have been made by him, to a prison in a distant town, and of his success in divining the dispositions and talents of a criminal there confined; and this narrative is suspected to be a fabrication. Of this matter, and the individuals alluded to, we have personally no means of judging; but we are certain that, in Phrenology as in medicine, illiterate pretenders can impose only on the weak and ignorant, and that no rational man will identify their merits with those of the science which they profess to teach.

PARIS.—We have just received the April number of the Parisian Phrenological Journal, the contents of which are of an interesting nature, and will be fully noticed hereafter. We intended to publish at present a review of some of the recent numbers of the French Journal, but have been compelled to postpone it for want of room. The chief contents of the April number are—A translation, from the German, by Dr Fossati, of Dr Gall's letter, in 1798, to Baron de Retzer, concerning his views on the functions of the brain, and which is curious as being the first account of them published by Gall; Translation of Mr Combe's Outlines of Phrenology; A paper on Idiocy, by Dr Felix Voisin; Discourse pronounced at the Annual Meeting of the Phrenological Society of Paris, 22d August 1834, by Professor Andral, President; Account of the proceedings of the Society during the year 1833-4, by Dr Casimir Broussais, Secretary; and notice respecting the Negro Eustache, by M. Duchesne. The object of Professor Andral, in his Address, is to shew that Phrenology "ought henceforth to form a part of the grave and serious studies of physiology." He states that, though not a single organ in the brain had been determined by Gall, "the foundations of the science would not on that account have existed the less." He regards exceptions to well established principles as apparent only; and quotes with approbation the remark of M. Bouillaud, that, "while every theory which is contradicted by a well observed fact is false, it is not less true that every fact which is in contradiction with a rigorously demonstrated theory, has been ill observed."—"If Phrenology," he

adds, "be true, give yourselves no uneasiness about its future success; for there is no example on record of any truth which, once launched into the world, has failed there to make its way." The following extract from the account of the Society's proceedings by Dr Casimir Broussais, shews that the members take a sound view of their duties—"I affirm and repeat, in the name of my colleagues, that we study Phrenology with the completest independence: we are as fully convinced of the reality of its fundamental principles as of our own existence, because this is to us an observation of every day and every instant; but, far from pretending that the science is complete and perfect, we rely upon its future progress, and do all in our power to contribute to bring about such a result." Dr B. adverts to a number of casts of heads of remarkable persons, which the Society had acquired during the preceding year, most of them through the attention of that indefatigable phrenologist M. Dumboutier.

PHRENOLOGICAL ALLUSIONS IN ANCIENT GREEK WRITERS.—A correspondent has called our attention to the following passages in Homer and Apollonius.

— "αἰσχιστος δὲ ἀνὴρ ὑπὸ Τῶν ἡλθεῖ.
Φαλκὸς ἦν, χαλὸς δ' ἴτερον πῶδα· τῷ δὲ οἱ ὤμων
Κυρτὸν, ἐπὶ στῆθεϊ συνογκυκλῶν· αὐτὰρ ὑπερθεῖ
Φεβὸς ἦν κεφαλῇ, ψαδὴ δ' ἐπινέουσι λάχνη."

— "Him Greece had sent to Troy,
The miscreant who shamed his country most.
He squinted, halted, gibbous was behind
And pinch'd before, and on his tapering head
Grew patches only of the flimsiest down."

Such is the description of the personal appearance of that low-minded vulgar blackguard Thersites, as given by Homer in the second book of the Iliad, verses 216-17-18-19; and by Homer's close English translator, Cowper. The chief phrase, "φεβὸς κεφαλῇ," is translated by Damm, in his *Lexicon Homericum*, into German, *spitzkopf*—Anglicè, *spit-head*, having a head in the form of that of a spilt, tapering to a point.

There is a sort of obscure allusion to the organ of Amativeness in Apollonius' Account of the Expedition of the Argonauts. Medea, deeply enamoured of Jason, lies sleepless and restless on her solitary couch, thinking amorously of him in his absence:—

— "ἰνδοθεῖ δ' αἰεὶ," &c.

See Book iii. verses 761, *et seq.* of Apollonius.

The translation of which may be given as follows:—"The fire which devours her, fastens upon all her nerves, and makes itself felt even at the back of her head, in that place where pains most keenly felt when violent love takes possession of all the senses."

UNITED STATES.—The third and fourth numbers of the *Annals of Phrenology*, published at Boston in November and December 1834, are now before us. No. 3 contains several original articles, particularly an essay "On the study of Human Nature as a branch of Popular Education," and a "Report on Infant Schools." There are also two long papers extracted from our own pages,—1st, On the Character and Cerebral Development of Rammohun Roy; and, 2d, On the Phrenological causes of the different degrees of Liberty enjoyed by different nations. The editors have borrowed still more largely from us in No. 4, where we observe not fewer than five articles quoted from this Journal; among others, Mr Simpson's Phrenological Analysis of Eloquence, and Mr Cox's Essay on the Character and Cerebral Development of Robert Burns. This number contains two original articles, which we have not room to notice at present. The first volume of the *Annals*, extending to 528 well filled 8vo pages, is now complete. With respect to the future, it is mentioned in the December number that "the first number of the second volume will be put to press immediately, and the subsequent numbers will appear regularly every three months. Men of talent have been engaged to contribute to the work, and

no pains or expense will be spared to render it worthy of the cause to which it is devoted." The Lectures of the Boston Phrenological Society, at the Masonic Temple, "continue to excite interest, and to be well attended. There is a lecture every Friday evening at seven o'clock." The Society's collection of casts, skulls, and drawings, is gradually increasing. The subjoined is an extract from the "Notices" in the Annals:—

"The *Second Anniversary of the Boston Phrenological Society* was celebrated at Boylston Hall, December 31. 1834. The following was the order of exercises:—Voluntary on the organ. Prayer. Reading of the Scriptures.

"*Original Ode (by I. Maclellan jun. Esq.) on the Birth-Day of Spunkheim.*
Air—America.

I.

We bear no garlands now,
Twined for the victor's brow,
Nor song of praise!
To Glory's bloody hand.
To War's assembled band,
Scourge of both sea and land,
No hymns we raise.

II.

But o'er the noble head
Of the lamented dead,
Our notes shall burst,
The laurel wreath we bind
In honour of the mind
In that pure frame enshrined,
Now laid in dust!

III.

Land of the golden vine,
Land of the lordly Rhine,
Weep, distant land!
Weep for your son who came
Hither in learning's name,
Bearing her sacred flame
In his pure hand.

IV.

His was the eye to scan
Clearly the mind of man,
Through its dim night,
His the hand to unroll
Boldly the mystic scroll
Of the deep human soul
—Making it bright.

V.

His searching wisdom taught
How the high dome of thought
Pictured the mind,
On that fair chart confest
Traced he each restless guest
Which in the human breast
Lies deep enshrined.

VI.

But as Time's rolling wave
Sweeps o'er the stranger's grave,
Year after year,
Science shall watch his urn,
Pilgrims shall thither turn,
Beauty around shall mourn,
Dropping the tear!

"Address by the Rev. Geo. Bradburn. Hymn, &c. Benediction. Voluntary.

"The Address of Mr Bradburn was on the utility of Phrenology. The subject was ably elucidated by the orator, and much to the edification of the audience. We shall have occasion to notice it hereafter more fully.

"*Officers of the Boston Phrenological Society for 1835.*—Rev. JOHN FIERPORT, *President*; Wm. B. Fowle, *Vice-President*; S. G. Howe, M. D., *Cor. Secretary*; M. S. Perry, M. D., *Rec. Secretary*; Joseph White, *Treasurer*; E. P. Clark, Nahum Capen, J. F. Flago, M. D., John Flint, M. D., *Councillors*; N. B. Shurtleff, M. D., H. T. Tuckerman, *Curators*."

The publication of a series of duodecimo volumes, entitled "The Phrenological Library," is about to be commenced at Boston; the first six volumes to contain an English translation of Dr Gall's work on the Functions of the Brain. Dr Epps' "Horæ Phrenologicæ" has been reprinted in the same town.

Among a variety of articles necessarily postponed till our next Number, are Reviews of *Dr Caldwell's Thoughts on Physical Education*, and of *Dr Brigham's Remarks on the Influence of Mental Cultivation and Excitement upon Health*; the case of G. B. of Belfast, and Mr Hancock's excellent letter on the organs of Wit and Comparison. We have received Mr Rondeau's *Elements of Truth*.

EDINBURGH, 1st June 1835.

THE
PHRENOLOGICAL JOURNAL.

No. XLV.

ARTICLE I.

1. **CHRISTIAN ETHICS; OR MORAL PHILOSOPHY ON THE PRINCIPLES OF DIVINE REVELATION.** By RALPH WARDLAW, D. D. 2d Edition. London: Jackson and Walford. 1834. 8vo.
2. **A GENERAL VIEW OF THE PROGRESS OF ETHICAL PHILOSOPHY, &c.** By Sir JAMES MACKINTOSH. Being Dissertation Second, prefixed to the Seventh Edition of the *Encyclopædia Britannica*.
3. **A FRAGMENT ON MACKINTOSH; BEING STRICTURES ON SOME PASSAGES IN HIS DISSERTATION.** London: Baldwin and Cradock. 1835. 8vo.

WE intend to confine our remarks on these publications chiefly to the views of their authors about the existence and nature of conscience. On the ground of the corruption of human nature by the fall, Dr Wardlaw denies the possibility of establishing, by means of observation, a sound ethical philosophy. "To show you, in part at least," says he, "my reason for enlarging, as I have done, on the hazard arising, in questions of morals, from the theories of human philosophy, I now come at once to the point which I have had principally in view, and to which I alluded in the close of the former lecture. It is this,—That in by much the larger proportion of these theories, there is an entire, or almost entire, overlooking of a fundamental article in the statements of fact and of doctrine contained in divine revelation, relative to the character and condition of man as a subject of God's moral government:—I refer to the *innate depravity of human nature*."—(P. 87.) "I argue," he continues, "at present hypothetically. I assume the fact of man's deprava-

vity—of the natural and inveterate alienation of his heart from God. Now this state of his nature brings with it two distinct sources of error. Man, let it be remembered, is, in our present inquiry, both the *investigator*, and, in part at least, the *subject of investigation*. In each of these views of him, there is a source of error; the first arising from the influence of his depravity on his character as an investigator; and the second from the disposition to make his own nature, without adverting to its fallen state, his standard of moral principles, and his *study* in endeavouring to ascertain them.”—(P. 40.) “Let me illustrate my meaning by a simple comparison. Suppose a chemist were desirous to ascertain the ingredients of water. What estimate should we form of his judgment, if, with this view, he were to subject to his analysis a quantity of what had just passed, in the bed of a sluggish river, through the midst of a large manufacturing city, from whose common sewers, and other outlets of impurity, it had received every possible contamination which, either by simple admixture or by chemical affinity, had become incorporated with the virgin purity of the fountain; and if, proceeding on such analysis, he were to publish to the world his *thesis* on the composition of water? Little less preposterous must be the conduct of those philosophers, who derive their ideas of what constitutes rectitude in morals from human nature *as it is*. They analyze the water of the polluted river; and refuse the guide that would conduct them to the mountain spring of its native purity.”—(P. 44.)

“According to Bishop Butler’s theory, human nature is ‘*adapted to virtue*’ as evidently as ‘*a watch is adapted to measure time*.’ But, suppose the watch, by the perverse interference of some lover of mischief, to have been so thoroughly disorganized,—its moving and its subordinate parts and powers so changed in their collocation and their mutual action, that the result has become a constant tendency to go backward instead of forward, or to go backwards and forwards with irregular, fitful, evershifting alternation,—so as to require a complete remodelling, and especially a readjustment of its great moving power, to render it fit for its original purpose;—would not this be a more appropriate analogy for representing the present character of fallen man? The whole machine is out of order. The mainspring has been broken; and an antagonist power works all the parts of the mechanism. It is far from being with human nature, as Butler, by the similitude of the watch, might lead his reader to suppose. The watch, when duly adjusted, is only, in his phrase, ‘*liable to be out of order*.’ This might suit for an illustration of human nature *at first*, when it received its constitution from its Maker. But it has lost its appropriateness *now*. That nature, alas! is not now a machine that is merely ‘*apt to*

go out of order : it is out of order ; so radically disorganized, that the grand original power which impelled all its movements has been broken and lost, and an unnatural power, the very opposite of it, has taken its place ; so that it cannot be restored to the original harmony of its working, except by the interposition of the Omnipotence that framed it.”—(P. 126.)

Dr Wardlaw’s own doctrine is briefly stated by himself as follows :—“ The sum of all this,” says he, “ is :—that man was originally in full possession of the knowledge of the Divine will as the rule or law of duty, and that a disposition in accordance with this will was (if I may so express myself) inwoven with the very texture of his moral constitution :—that in this his original state, the dictates of conscience might, with unhesitating assurance, have been taken as the test and standard of moral rectitude :—that since, by throwing off his allegiance, man became a sinful creature, the knowledge of his Maker’s will has not been entirely obliterated, but, in consequence of the obliteration of the disposition to do it, has become so sadly defaced and confused in its characters and impressions, that, although it still leaves him, as a subject of moral government, intelligent and accountable, it has been rendered, as a standard of right and wrong, incompetent and unsatisfactory, itself requiring to be rectified :—that the Holy Scriptures, coming from the same Being who was the Author at first of man’s moral nature, are, with respect to the rule of duty, in precise harmony with the dictates of conscience in that nature, in its state of primitive innocence,—the law in the book being the same law as the law then in the heart :—and that the way to bring mankind back to the knowledge of the original law, and to correct the dictates of a depraved and erring conscience, is to put them in possession of this divine document.”—(Pp. 176, 177.)

Dr Wardlaw does not explain a serious difficulty which appears to us as phrenologists to attend this view of the fall. If man “ was originally in full possession of the knowledge of the Divine will,” and if “ a disposition in accordance with this will was inwoven with the very texture of his moral constitution,” how did he *come* to fall ? If there was no imperfection in his constitution, how did it give way at the first strain upon it ? Suppose that an experiment were made to tempt a hare to worry a rat, the tempter could not succeed at all, because in this animal there is no carnivorous instinct. His temptation would really never reach its will. It would never feel the slightest desire to do what he wished it to accomplish. If there had been no tendency in the human mind at first to disobey the Divine law—no principle which, through excessive energy, insufficiency of knowledge, or other cause, might be led astray—man *could not* have fallen. If there was within him a liability, when suf-

sufficiently tempted, to go wrong, he was *not* created perfect. If the temptation, and the power of resistance, were antagonist principles, and if the latter was, in relation to the former, so feeble that it was liable to yield at the first solicitation, it is a contradiction in terms to speak of a being thus constituted, and exposed to a trial which he could not sustain, as perfect. The subject is a dark and difficult one; but if divines will adduce it for the purpose of obstructing and depreciating scientific knowledge, they cannot reasonably object to our endeavouring to defend nature against their aspersions.

Dr Wardlaw contrasts the certainty of Scripture information with the darkness of philosophy. "We should be unfaithful to our God," says he, "and throw a disparaging insult on His name, were we thus to consent that the wisdom of 'the only wise' should make its obeisance to the chair of human science; or were we to admit that He has left His word with less conclusive evidence in its behalf, than that by which the wise men of this world can vindicate the dictates of *their own sagacity*."—(P. 20.)

We are truly grieved to find a man of Dr Wardlaw's character giving solemn utterance to a denunciation so indiscriminating, unfounded, and prejudicial to the progress of rational inquiry and social improvement, as that which we have just quoted. In the mouth of a persecutor of the darker ages, it would have seemed appropriate; in that of an enlightened Christian minister, it is altogether indefensible, and deserving of the severest reprobation. Indeed, we cannot persuade ourselves that, in writing it, Dr Wardlaw saw clearly the meaning which it really conveys.

When Dr Wardlaw speaks of a disparaging insult being offered to the wisdom of "the only wise" in allowing it to make its bow to "the chair of human science," he is guilty of cherishing that most ignorant and disgraceful prejudice, which deems it essential to the honour of the Omnipotent, to separate Him *entirely from the works which He has created*, and which He, at the beginning, pronounced to be "good;" as if it were *now* a reproach to the Artificer that He had ever seen meet to create the world and all that it contains. What, we would ask, is "human science," that it should be thus contemned? If it be any thing, it is simply a knowledge of the works of God, and of the laws by which those works are regulated. And this being the case, where is the "disparaging insult" in believing that the wisdom of "the only wise" may be traced, not in the Scriptures only, but also in the records of human science, and, as there exhibited, be found conducive to the better understanding and more useful application of the "word?"

We cannot, indeed, conceive a more illiberal or hurtful prejudice than that which constantly seeks to elevate a wall of ada-

mant between the Scriptures and what is stigmatised as "*human science*," as if man could arrogate to himself the wonders of creation, and make the world anew, different from the state in which it is left by the Creator. Dr Wardlaw is too intelligent not to admit that *WHAT IS TRUE IS EQUALLY OF GOD, whether it be taken from his written word, or come to us through the observation of his works.* All true science being merely a transcript of God's works and laws, is consequently *divine* in the same sense as creation itself; and surely even Dr Wardlaw would shrink from affirming it to be a disparaging insult on the name of God, to believe that His *works* are as undoubtedly authentic and the laws of creation as obligatory on us as His "*word*." We suspect that, by "*human science*," Dr Wardlaw in reality means *false or untrue science.* He speaks elsewhere of "*science falsely so called*;" and, in this view of the matter, we can go heartily along with him in holding it to be a disparaging insult to the Divine Being to allow His wisdom to make its obeisance to human ignorance or falsehood. But there is no "*chair*" for teaching false science; and if this be really his meaning, it was strongly incumbent on him to express himself more clearly, instead of impeding the advance of God's truth, by raising up feelings of hostility and prejudice where they are already too active.

If the God of truth be the one only and true God, and if the truths of science proceed from the same divine source as the truths of revelation (a position which no sane person can deny), it is sheer absurdity to talk of one class of truths "*making obeisance*" to the other. Where there is but one source, none can be higher; and no one truth can lose its virtue merely on account of its ranking among others equally well known, instead of standing in seeming opposition to them.

Dr Wardlaw, indeed, with strange inconsistency, admits these very principles to be sound, and says, "I would lay it down, with all the certainty of an axiomatic principle, that divine revelation and true philosophy can never be really at variance; that it is only false philosophy that fears revelation, or that revelation needs to fear."—(P. 29.) "The universe," he adds, "is the product of one mind. There can be nothing in it, therefore, which, when rightly understood, will be found contradictory. As far as human research has hitherto extended, wisdom and skill have been apparent in all the departments of nature; the increasing light of science, instead of detecting any failures or defects, having progressively illustrated known, and elicited unknown wonders; and from the uniformity with which every fresh accession to the means of scientific discovery has added to the manifestations of divine intelligence, we reasonably infer, that, could its investigations embrace the whole extent of creation, the result would still be the same. And if we assume infinite intelligence

to belong to Deity, there results a still surer hypothetical certainty, that *all the productions* of that intelligence *must be such as to require knowledge alone on our part to insure the discernment of their excellence.*"—(P. 242.) Here Dr Wardlaw writes like a true philosopher, and really does honour to the Master whom he professes to serve. But under the influence of his theological education, he excludes *human nature* from the catalogue of the Creator's works. He says, "It is my very object to shew that the science of morals has 'no province at all' independently of theology; and that it cannot be *philosophically* discussed except on *theological principles.*" We are surprised that it has not occurred to Dr Wardlaw that human nature, instead of forming an exception to the divine wisdom and goodness manifested in creation, may really never have been "rightly understood." He might as reasonably urge the Fall as an argument against the possibility of studying the science of optics, as against that of cultivating ethical philosophy. Optics is founded on the structure, functions, and relations of the eye, and ethics on the structure, functions, and relations of the mental organs. Against optics he might argue thus: "The eye is no longer such as it proceeded from the hands of the Creator: it is now liable to blindness; or if, in some more favoured individuals, the natural corruption does not proceed so far as to produce this dire effect, yet universal experience proves that human nature now labours under squinting eyes, opaque eyes, long-sighted eyes, and short-sighted eyes,—and that many individuals have only one eye. The external world, also, is no longer what it originally was. There are mists which obscure the rays of light, clouds which intercept them, air and water which refract them; and almost every object in creation reflects them. Look at a straight rod half plunged in water, and you will see it crooked. Can a science founded on such organs, operating in such a medium, and directed to such objects, be admitted into the class of ascertained truths, by which men are to regulate their conduct? Optics, and all its superstructures," he might continue, "astronomy, with all its pompous revelations of countless suns, attended by innumerable worlds rolling through space, the offspring of this science falsely so called, must be laid in the dust, and become fallen monuments of human pride and mental delusion." There is as much truth in an argument like this, as in that urged by Dr Wardlaw against moral philosophy founded on the study of nature. The answer to the objections against optics is, that the constitution, functions, and relations of the eye have been appointed by the Creator; that when we become sufficiently acquainted with these, we discover that there are sound and unsound eyes certainly; but that optics is founded on the properties of the most perfect eyes which can be met with. Again,

there are undoubtedly mists and clouds in the atmosphere, but we ascertain the laws of the incidence of light, by observations made at times when these are absent. Certain media also unquestionably refract the rays of light, but they do so regularly, and their effects can be ascertained and allowed for.

The parallel holds in regard to the mind to a much greater extent than Dr Wardlaw probably is aware of. The Creator has fashioned the whole mental organs, conferred on them their functions, and appointed their relations. We meet with some individuals in whom the organs of the animal propensities are too large, and the moral organs deficient: these are the morally blind. We meet with individuals who, with moderate organs of the propensities, have received large organs of Benevolence and Veneration, but deficient organs of Conscientiousness: these have a moral squint. But we meet also with innumerable examples of persons in whom the organs of the propensities are moderate, and the moral and intellectual organs well developed, and who thereby enjoy the natural elements of a sound moral vision, and need only culture and information to lead them to moral truths as sound, certain, and applicable to practice, as the conclusions of the optician himself. Revelation necessarily supposes in man a capacity of comprehending and profiting by its communications; and Dr Wardlaw's arguments appear to us to strike as directly at the root of man's capacity to understand and interpret Scripture, as at his power to understand and interpret the works and natural institutions of the Creator.

Dr Wardlaw, we have seen, discards natural ethics entirely, and insists that Scripture is our *only* guide in morals. Archbishop Whately, on the other hand, who is not less eminent as a theologian, and certainly more distinguished as a philosopher, than Dr Wardlaw, assures us, that "God has *not* revealed to us a system of morality such as would have been needed for a being who had no other means of distinguishing right and wrong. On the contrary, the inculcation of virtue and reprobation of vice in Scripture, are in such a tone as seem to presuppose a natural power, or a capacity for acquiring the power, to distinguish them. And if a man, denying or renouncing all claims of natural conscience, should practise without scruple every thing he did not find expressly forbidden in Scripture, and think himself not bound to do any thing that is not there expressly enjoined, exclaiming at every turn,

'Is it so nominated in the bond?'

he would be leading a life very unlike what a Christian's should be."

In our humble opinion, it is only profound ignorance of human nature on the one side or the other, that can lead to such contradictory opinions as these. We agree with Archbishop Whately, and are forced to remark, that although Dr Ward-

law's arguments may be safely presented to readers who know nothing philosophically concerning the constitution of the human mind, they make but a sorry appearance in the eyes of a well instructed phrenologist. Without meaning the least disrespect to Scripture, we would crave the attention of Dr Wardlaw to the organs of the different propensities, sentiments, and intellectual faculties, as they exist in the brain; and ask him, Who created these organs? who bestowed on them their functions? and who established the relations which exist between them and external beings and objects? Dr Wardlaw assures us, that "the mainspring (of the human mind) has been broken, and that *an antagonist power* works all the parts of the mechanism;" and also that "the grand original power which impelled all its movements has been broken and lost, and *an unnatural power*, the very opposite of it, has taken its place." We ask, whence came the "unnatural power" here spoken of? Who made it, and who planted it in man? If God—does God set up an unnatural power to war against the natural powers which He himself instituted? We wish that Dr W. had given this "antagonist" and "unnatural" power a name, and told us whether it has an organ, like the other faculties, in the brain. He appears to us to have only two alternatives—either to deny the existence and functions of mental organs altogether, or to admit that they are the workmanship of God. If he choose the former alternative, we are ready to go to proof with him on the subject. He is aware of the existence of Phrenology as a philosophy of mind; and a very little attention to it would have sufficed to satisfy him, that its facts, principles, and results, are capable of being much more directly referred to the Creator's will, and therefore more worthy of confidence, than the crude speculations of philosophers, who have prosecuted the study of moral and intellectual science by methods palpably imperfect and fallacious. If he admit that organs with definite functions and relations exist, it is incumbent on him to explain what the effect of the fall was on them. Does he mean to say that man possesses organs now which have no legitimate sphere of action? This must be said in order to maintain consistently the *natural* corruption of the human mind. Did man, before the fall, possess organs prompting him to kill for sustenance, to oppose aggression, and to resent injuries? Did he possess organs prompting him to practise concealment and to shun danger? Did he possess organs prompting him to acquire and accumulate property? The organs here referred to appear to us to bear the most marked relationship to a world constituted as the present now is. If man possessed them before the fall, it is difficult to conceive what object they could serve in a scene in which there was no death, no conflict, no danger, no want, and no aggression. If they were added to man's nature only *after*

the fall, he is not now the same being as he was before it; he is as different as a tiger is from a sheep.

Farther, was man an organized being before the fall? The records of creation, from the remotest geological periods, shew that in the case of the lower animals death was an accompaniment of organization; and dissolution appears to be a condition of it in man also. If man was an organized being before the fall, and not liable to death, his constitution must have been so different from what it now is, as to be inconceivable by us. If he was not then organized, he is now a different being. In short, in either view, he is not the same being as when he was created. The truth, however, is, that the doctrine of the inherent depravity of human nature is found in Scripture only by *some* denominations of Christians; while to others, not less honest, pious, learned, and intelligent, the Bible appears to teach no such view of the faculties and condition of man. Theologians, termed orthodox, may hereafter discover this too; just as they have discovered that the doctrine of the sun's diurnal motion round the earth is one which the Bible does not teach,—although the church, two centuries ago, declared the Copernican system to be “absurd, philosophically false, and formally heretical, because it is expressly contrary to the Holy Scripture.”

The observations offered in the seventh article of our last number, are calculated to shew what the Bible really teaches regarding human nature. On this topic, however, we forbear to enlarge, through fear of creating uneasiness in the minds of some of our readers; but the imperative obligations of truth forbid us to conceal the bearing of *Phrenology* on the doctrine of the fall. In propounding the results to which observation leads, concerning the mental organs and their functions, we deny that we are “wise men of this world vindicating the dictates of our own sagacity.” We respectfully maintain that we are paying to the Deity a more sincere homage than that offered by Dr Wardlaw. We are venturing, in the face of prejudice and obloquy, to call attention to the Creator's works, and to vindicate His wisdom, as it is written by His own hand in the volume of nature. Dr Wardlaw shuts his eyes to this volume; and, in the knowledge that he is addressing a public who have been trained for centuries to receive his views without question, triumphs in his condemnation of what appear to us to be really divine truths.

The phrenologist, finding it impossible to deny that God created the cerebral organs and instituted their functions, perceiving a wise adaptation between the human faculties and the external world, and discovering a legitimate sphere of action for every faculty, feels himself constrained to believe that man, *such as he now exists, is the workmanship of the Creator.*

But, as already intimated, our chief object, in the present article, is to notice the statements of the authors of the different works named in the title, respecting the nature and origin of conscience.

Sir James Mackintosh, in his Dissertation prefixed to the *Encyclopædia Britannica*, condemns "the erroneous but prevalent notion, that the law of association produces only such a close union of a thought and a feeling, as gives one the power of reviving the other;" the truth being, according to him, "that it forms them into a new compound, in which the properties of the component parts are no longer discoverable, and which may itself become a substantive principle of human nature." He represents conscience as one of these new compounds, and gives an analysis of its elementary parts; but we confess our inability to comprehend his analysis. The fundamental elements, according to him, are "the affections," and the "volitions, voluntary acts, which are the only means of their gratification." "The habitual disposition to perform them," he says, "is felt in ourselves, and observed in others with satisfaction." "In this state we desire to experience these *beneficent volitions*, to cultivate a disposition towards them, and to do every correspondent act. They are, for their own sake, the objects of desire. They thus constitute a large portion of those emotions, desires, and affections, which regard certain dispositions of the will as their sole and ultimate end. These are what are called the moral sense, the moral sentiments, or last, though most simply, by the ancient name of *conscience*."—(P. 407.) This account of conscience is to us quite unintelligible. Sir James farther remarks, that "the formation of conscience from so many elements, and especially the combination of elements so unlike as the private desires and the social affections, early contribute to give it the appearance of that simplicity and independence which in its mature state really distinguish it."—(P. 409.) This sentence is, if possible, still more incomprehensible.

However, Dr Ralph Wardlaw, in his "Christian Ethics," coincides essentially with Sir James Mackintosh in his views of conscience, and resolves it into judgment. "I have often, for my own part," says he, "in thinking of this subject, been at a loss to conceive what *conscience* can include in it, beyond the exercise of the *judgment* in the particular department of morals. Even those who speak of it as if it were something different, or something more, are at the same time accustomed to use language about it, that will hardly apply to it in any other view."—(P. 178.)

The anonymous author of the "Fragment on Mackintosh," mentioned in our title, has dedicated his whole volume to an exposition of Sir James Mackintosh's errors; but, on the sub-

ject of conscience, he is not much more intelligible or sound himself. "When the matter of fact," says he, "obscured by ridiculous language about a conscience having authority, is expressed naturally, there is no difficulty to any body. The *man* decides; *conscience is but a word*. The man decides that certain things are right, other things are wrong. What authority does he want for doing what is right, abstaining from what is wrong? In the very deciding that an act is right, he decides that it ought to be done. • Is not this all that is meant by the command of conscience? The very point decided is the obligation. The talk about the right of command assigned to conscience is but so much jargon. It literally means, that what is judged right to be done, is judged right to be done; which, to be sure, is a conclusion of the class for which Sir James has a predilection."—(P. 108.)

These authors omit all reference to Phrenology, although it is difficult to believe them to have been ignorant of its existence. Sir James Mackintosh, however, makes an observation which, if he had legitimately followed it out, would have led him to very different conclusions." "There must be," says he, "primary pleasures, pains, and even appetites, which arise from no prior state of mind, and which, if explained at all, can be derived only from bodily organization; for, if there were not, there could be no secondary desires. What the number of the underived principles may be, is a question to which the answers of philosophers have been extremely various, and of which the consideration is not necessary to our present purpose. The rules of philosophizing, however, require that causes should not be multiplied without necessity."

With all deference to Sir James's authority, we conceive that "the determination of the number of the underived principles" of the mind, is the first step in all sound mental philosophy; and when he admits that these "can be derived only from bodily organization," it is nonsense to add, that "the rules of philosophizing require that causes should not be multiplied without necessity." Who would think of attempting either to multiply or to diminish senses, feelings, or powers, derived from "bodily organization," unless he could make and unmake the bodily organs themselves, which no sane individual pretends to do?

These authors appear to us not to enjoy a glimpse of what conscience is. According to Phrenology, the intellectual faculties perceive substances and beings that exist, with their phenomena, dependencies, and relations; but they do not feel emotions. The organs of these faculties lie in the anterior lobe of the brain, and their number and functions are pretty clearly ascertained. In the coronal region there are organs which manifest various feelings or emotions, called the moral sentiments,

such as Benevolence, Veneration, and Conscientiousness. The power of any individual to experience each of these emotions bears relation (other conditions being equal) to the size of its own organ. These feelings are entirely distinct from the intellectual faculties, but may act along with them. If, for example, we see a man held down by force in a chair, and another drawing a tooth from his head,—and if we are told that the suffering party is a Jew whom a tyrant is in the act of robbing, and that his teeth are in the course of being pulled out one by one to compel him to disclose and surrender his property;—the intellect perceives the victim and his tormentors, and comprehends their motives and designs, but there its functions stop. The sentiments of benevolence and justice, however, start into action; they pity the sufferer, and condemn the tyrant and his ruffian instruments. The force of the perception is in relation to the size (other conditions being equal) of the intellectual organs; and the intensity of the emotions in relation to the size (*cæteris paribus*) of the moral organs. An idiot, deficient of the former, might not be capable of clearly understanding the object and motives of the operator, and so might fail to perceive the injustice of the proceeding, and to experience the corresponding emotion, even although the organ of Conscientiousness were large. A man of genius, on the other hand, might comprehend the whole transaction very clearly by means of powerful intellectual organs; but, if he were very deficient in the organs of the moral sentiments, and possessed large organs of Acquisitiveness and Destructiveness, he might secretly approve of the proceeding as a clever and convenient way for a sovereign to obtain supplies. Or, if the very same acts were perceived by the intellect, but if the spectator were told that the individual in the chair was a victim not to a tyrant but to toothach, and that the extractor of the teeth was a very humane and skilful dentist who was relieving him from torture, the moral feelings would here also start into activity, but with very different results. Benevolence would feel compassion for the sufferer, and both it and Conscientiousness would be agreeably affected towards the operator; in other words, Benevolence would love him, and Conscientiousness approve of his conduct.

We conceive the fact to be positively ascertained, that there is an organ which produces the feeling of justice and injustice, duty and incumbency; and that the power with which the feeling acts in each individual bears a relation (other conditions being equal) to the size of the organ. Individuals who possess the organ large, instinctively feel the existence, power, and supremacy of conscience. Those in whom it is deficient, seem incapable of comprehending either its nature, its force, or its objects. If such persons saw a patient labouring under disease of the or-

gans of Conscientiousness, and heard the awful yet unfounded self-accusations, amounting to agony and horror, which its deranged and painful action produces, they would perhaps see the folly of attempting to account for such feelings by ascribing them to disordered intellectual perceptions, or erroneous associations. The utter disregard of the statement of Phrenologists, that there is an organ of Conscientiousness, and the persevering efforts to form theories of conscience, without inquiring whether this assertion be true or false, indicates to us that no great development of the organ exists in the brain of the theorist.

In Mr Combe's "System of Phrenology," this subject is discussed more at length. Of all the metaphysicians, Dr Thomas Brown gives the most correct account of conscience.

ARTICLE II.

HINTS ON THE FORMATION AND CONDUCT OF A GENERAL MODEL NORMAL SCHOOL, for training Teachers to supply the Demand of a National System of Popular Education. By Mr SIMPSON.

As the writer has stated, in another place, * what he humbly considers the principles of Normal training, he will confine himself, in the following lines, to a statement, *seriatim*, of a few practical suggestions.

I. As the teachers to be trained are intended for a system of popular education, it will be sufficient that they are qualified to teach pupils from the age of two to sixteen.

II. That educational term will, of course, be divided into two periods, namely, from two to six, or the *infant-school* period—and from six to fourteen or sixteen, the advanced or *juvenile-school* period; and for each of these there ought to be a teacher trained, as schools for each ought to coexist in every parish of the country.

III. At the outset, as the demand for teachers will be immediate and urgent to meet the great multiplication of schools, the teachers, to be admitted for training in the Normal school, must necessarily be of a more mature age, than in future years would be required, or advisable. It is therefore suggested that the *Seminants* (as they are conveniently called in Prussia), should not, at first, be under twenty nor above twenty-five years of age, and should have received, previously, an average education.

IV. A Normal school, whether Infant or Juvenile, should be a seminary for ordinary pupils of the appropriate age for such

* Necessity of Popular Education as a National Object.

schools; who, in so far as *they* are concerned, will receive the tuition of the Normal master, as if that were the sole object. This plan, it is thought, has many advantages over that of training the Seminants themselves as pupils.

V. The Seminants will attend separate prelections, to be delivered by the Normal teacher, on the principles of education, the machinery and art of teaching, and the whole economy of a school. They will, at their own hours, improve themselves by reading the books recommended by the Normal teacher, and be exercised by stated examinations on all the subjects of the lectures; the stimulus to zeal and progress will be the earliness and recommendatory terms of their future diploma of qualification, upon which will depend their settlement as teachers.

VI. As affording the best application of the principles of the prelections, the seminants will attend in school, witness the whole management of the young pupils by the Normal teacher, and by turns be exercised in teaching them, and performing scientific experiments, under his direction.

VII. As the young pupils may be 200, and the seminants double the number, a very simple mechanical arrangement will prevent that confusion and distraction, which a multitude of persons *on the floor* of a school-room, looking on, would necessarily occasion. To obviate this, a Normal school-hall should be adequately large and high, of an oblong form, and seated, like a lecture-theatre, on three sides; leaving the wall at one end free, for diagrams, black board, &c. The seats will rise to within six feet of the ceiling, and the *floor* will be as large as that of an ordinary school-room, and seated as such for the school pupils. On the ascending benches will sit the Seminants, with their note-books in their hands, in silent and fixed attention to all that is proceeding on the floor. None of them will leave his seat to descend to the floor, without being called by the Normal teacher to exercise, or assist in exercising, the school. By this arrangement, confusion will be avoided; and as every, the minutest, part of the actual training will be repeatedly seen and treasured by the Seminants, uniformity, not only in the matter but the method and manner of teaching, will be attained, and carried to the remotest parts of the country.

VIII. In the Normal Infant school, the Seminants will be trained to the system of Wilderspin; and there are some teachers of infant schools known to the writer, who are well qualified to conduct a Normal Infant school, including the separate prelections to, and examination of, the Seminants. For one Normal Infant school—and it should be the leading one,—we may be at perfect ease, as long as the father of the improved system of infant education, Wilderspin himself, is spared to us. Nothing more need be said on this branch of Normal teaching.

IX. For the successive stages of a Normal Juvenile school, a teacher of great knowledge, readiness and skill in communicating his knowledge to others, arrangement and method, imperturbable temper, great vivacity, untiring activity, and firmness of character, will be required. Every thing depends upon the choice of this first and leading public functionary. Unassisted as the Seminant will be, when afterwards in charge of a remote parish juvenile school, he must, during his period of Normal training, have seen the varied and laborious duty done in the utmost perfection of which it is capable. The education, the total education, of the great majority of his parish, will be expected of him; and it must be impressed upon him, that that education is measured now by a much higher standard than it used to be. It is not reading, writing, and cyphering merely; these are its instruments; it is that real practical knowledge which will fit the pupils for usefulness, success, and happiness in life.

X. The Normal teacher will endeavour to obtain his pupils, of six years of age, from the infant schools; and as the *first* school must start with pupils of different ages, the more advanced pupils should be recruited from the best existing schools of the place. When the school is organised, and in full operation, the Seminants will commence their attendance; and it is humbly suggested, that the course which they will witness might be nearly the following:—

First, The Monitorial machinery, which was partially introduced in the Infant school, will be arranged and practised on a larger and still more systematic plan in the Juvenile. No pains should be spared to train the Seminants to a ready, skilful, and methodical use of this important instrument; for without it a large parish school cannot be conducted by one teacher. It follows, that the Seminants must witness the most perfect order, and ready and cheerful obedience, in the juvenile pupils themselves, to be indissolubly associated in their minds with the very idea of a school.

Second, The Seminants will see all the religious and moral feeling and conduct, and all the refinement, and cleanly and orderly habits, of the Infant school, respected, increased, and practised, in the Juvenile; and never for one moment relaxed, either in the intercourse of the teacher with his pupils, or in that of the pupils with each other, during the whole subsistence of the school. These should constitute the very atmosphere of a school, without which it were better to shut its doors.

Third, They will see a marked attention paid by their Normal instructor to the ventilation of the school-hall; so that, on no account, even for a few minutes, its numerous inmates shall breathe bad air; and the privileges and advantages of ventilation, as lessons, will be much dwelt upon. They will

see the temperature of the school-room scrupulously attended to, so that the pupils shall never be chilled by cold. They will witness no constrained postures, either in standing or sitting, no injury to the spine by want of back support in sitting, and no confinement for more than an hour at a time, without exercise in the airing ground, with the benefit of rotatory swings, and other safe gymnastics. The hall, when empty, to be well aired by cross windows. No relaxation in these essentials of physical education should be permitted to be witnessed by the Seminants; who, both in their own separate instruction, and through that given to the pupils of the school, in their presence, should learn and appreciate all its principles.

Fourth. The Seminants will see the lessons on objects, which were to a certain extent taught at the infant school, according to the Pestalozzian plan as realized by Dr Mayo, resumed and carried on, and made the basis of a great deal of incidental training;—for reading, spelling, grammar, and etymology, together with much collateral useful knowledge, may all be incidentally, and most agreeably, learned while the lessons on objects are going forward. Second, if second, to the monitorial, is the INCIDENTAL system of teaching. Its saving of time and labour is incalculable; and, instead of confusing and mutually obstructing, the subjects, taking their places as nature points out, will aid each other's acquisition. By this method, too, the teacher advances a numerous class of pupils at the same stage of training; which is decidedly preferable to teaching minutely divided classes, as it at once saves labour to the teacher, and stimulates the pupils.

Fifth. From the best books of useful knowledge of common things, matters, and affairs in life, and from his own stores, which ought to be encyclopedic, the Normal teacher will impart knowledge, always, if possible, by real illustrations, either original, or in drawings and models, and will interrogate the pupils, and establish a system of mutual interrogation, in this boundless field. Much of this exercise, as already noticed, will be incidental. In such instruction the Normal teacher will refer to the best sources of information for the private studies of the Seminants; and a good book on grammar, parsing, and etymology, will be placed in the hands of the juvenile pupils, besides the books on objects and useful knowledge.

Sixth. Penmanship and arithmetic will be going on at the same time, not only incidentally, but at separate hours for their more accurate exercise.

Seventh. Natural history, as a science, including the elements of geology, may be taught to as large a class as have passed the branches already enumerated; and natural theology will incidentally assist and elevate the pursuit. Going on with natural

history, and aiding it incidentally, will be taught geography, by the globe as well as by maps; and the elements of astronomy, both planetary and sidereal: there is nothing in either which a young person of ten or twelve years of age, of ordinary capacity, may not comprehend, relish, and master.

Eighth, Drawing may be incidentally learned and practised, for all the pupils should draw as well as write. Whole classes may be drawing, writing, calculating, &c., under the master's tuition, when he is at the same time superintending other exercises. Monitors will do much here. Simultaneous superintendence of various exercises is an educational accomplishment of great value; and the Seminants cannot be too much impressed with its importance, or too much exercised in it.

Ninth, A general outline of Civil History, and, incidentally, the civil economy of our own country, with a view of our rights and duties as citizens; and farther, incidentally, a notion of ranks in society and their foundation, and of the nature of trades and professions, labour, wages, markets, &c.

Tenth, The elements of Chemistry; a lecture, with experiments and illustrations, once a-week; with examinations on, allusions to, and applications of, that science, upon all suitable occasions.

Eleventh, The same with physics and mechanics.

Twelfth, Some practical knowledge of MAN as a physical, moral, and intellectual being. The structure and functions of his body, the conditions of his health, and the faculties and operations of his mind; with the relations of both body and mind to external objects, and the duties thence arising, as a system of natural ethics.

Lastly, An outline of English literature, some practice in composition, and a knowledge of the names and works of British authors, both prose writers and poets.

Languages, other than the vernacular, can form no part of a popular course for a whole school. These, as well the dead as living languages, must be learned by those who choose or need them, by separate or subsequent study. I should recommend *subsequent* study, as found by experience to do more in a year or two, than earlier tuition in languages achieves in five or six.

Nothing has been said of *revealed* religion, from the extreme delicacy and difficulty of prescribing for the treatment of that sacred subject in a manner that shall bring together all sects on a common ground, and from the conviction that a plan for its communication does not properly fall within a statement of the mere organization of a Normal school. The Wilderspin plan of Infant-training includes Scripture knowledge, and a farther prosecution of this in the Juvenile school ought

not to be objected to by any sect. One point should never be yielded—no Normal school ought to be exclusively in the hands of any sect, whether dominant or dissenting.

If it should startle the reader to be told, that all the studies above mentioned are necessary, in an average education bestowed from six to sixteen, and if he should doubt the practicability of their realization, either by the teacher, on the one hand, or the pupils on the other, the writer has great pleasure in stating, that the whole, or nearly the whole, is realized, and realized by *one* teacher, in several seminaries known to him. Much of it, though not yet all, is done in the English department of Mr Cunningham's academy in Edinburgh, and in other institutions both in England and Scotland; but certainly nowhere so completely and satisfactorily, both in matter and method of teaching, as in the English department of the self-reformed High School of Glasgow. The writer calls it self-reformed, for it is the solitary instance, known to him at least, of any institution, literary or political, being reformed *from within*. Mr Dorsey, a gentleman accomplished in an extraordinary degree in literature and science, and unrivalled in his mode of communication, has the merit of conducting, and indeed of having created, the English department in that school; which, embracing, as it does, all that is above detailed, constitutes a complete education, short of the dead and living foreign languages, and of the higher pursuits of college.*

Last of all, the writer begs humbly to suggest, that it would be expedient for the Government to begin with *one* Normal school, which even the normal teachers in others to be subsequently established should, for a certain time, attend along with the ordinary seminants. **UNIFORMITY**, upon the best model which can be established, is too important, too vital, to the whole system of popular education, to require to be more than hinted at. Give but undivided attention, at first, to one great and, as nearly as possible, perfect Normal school, and others, even improved by its experience, will be matter of easy subsequent organization.

ARTICLE III.

OBSERVATIONS ON THE MUTUAL INFLUENCE OF THE MENTAL FACULTIES. AND, IN PARTICULAR, ON THE MODES AND LAWS OF THE ACTIVITY OF DESTRUCTIVENESS. By Mr ROBERT COX.

THE proneness of any cerebral organ to act, and the intensity of its action, are influenced by a variety of different circum-

* The writer lately went to Glasgow for the purpose of witnessing Mr Dorsey's method in actual operation in his own hands; and found it to justify the most favourable reports he had heard of it.

stances. These are, *first*, the extent of its development; *second*, its quality, temperament, or internal organic constitution; *third*, the external causes of excitement to which it is exposed, and the exercise or training which it has undergone; *fourth*, the quantity, quality, and force and quickness of circulation, of the blood by which it is stimulated; and, *fifth*, the influence exerted upon it by other portions of the brain and nervous system. Of all these particulars, the development of the organ is that in regard to which there is generally least difficulty in the way of the practical phrenologist;—the means of judging of the quality of the brain have been investigated with considerable, though not yet perfect, success;—the effects of training, external circumstances, and the condition of the blood, have been largely elucidated;—but with regard to the mutual influence of the organs, an ample field appears to remain unexplored. There are different modes in which one cerebral organ may be said to influence another. First, it may restrain us from acting under the other's impulse, without in any degree lessening the force of that impulse itself; as when a person who ardently desires to strike his neighbour, is prevented by Cautiousness from gratifying this inclination. Or, in the second place, it may direct the other to seek gratification in a particular line of conduct; as when an avaricious man is led by Conscientiousness to amass wealth by honest industry rather than by theft. In such cases, however, it is only the *result* of the activity that is modified, not the activity itself; so that, strictly speaking, the mutual influence of the organs is the production, increase, diminution, or extinction, of the activity of one organ, consequent upon certain states of other organs. As already hinted, this department of Phrenology, though a most interesting field of inquiry, has hitherto been greatly overlooked. Dr Spurzheim adverts to it in a brief and somewhat unsatisfactory manner in his work on Education, a chapter of which is devoted to "the mutual influence of the faculties as a means of excitement;" and the subject is touched upon in a cursory way also by Mr Combe, in his analysis of Association in the "System of Phrenology." It is intricate and bewildering in no ordinary degree, but, being also of very great importance, obviously deserves to be minutely and carefully investigated. I have of late bestowed considerable attention upon this department of the physiology of the brain, and am convinced that phrenologists may labour in it with every encouragement to hope for useful and valuable discoveries. Such data as I have been able to collect, appear to shew that the mutual influence of the organs is regulated by general laws—which, however, are, for special purposes, subject to modification by particular laws, regulating only certain organs. My

speculations concerning the former class of laws here alluded to, although they have made some progress, are not yet sufficiently mature for publication; but in regard to, at least, one department of the *particular laws*, precise and definite conclusions are believed to have been arrived at. These I shall endeavour to expound in the following essay; which, it may be stated, is meant to serve, at the same time, as a dissertation on the part performed by Destructiveness in the animal economy.

Almost every form of activity of the mental faculties is comprehended within one of two great classes of manifestations—that in which the activity or excitement is attended with *pleasure*, and that in which it gives rise to *disagreeable sensations or pain*. When the sense of *Taste*, for example, is stimulated by honey applied to the tongue, the action of the faculty, so introduced, is agreeable; while, on the other hand, the sensation which arises in consequence of a drug being taken into the mouth, is nauseous and unpleasant. The sense of *Feeling*, in like manner, is pleased by any gentle tickling, and by the rubbing of smooth bodies on the skin; but painfully affected when a horsewhip or a branding-iron is applied. Many sounds are soothing and delightful to the sense of *Hearing*; while others, as the creaking of a file, cause every nerve in sensitive persons to thrill with pain. The fragrance of the rose or the violet gratifies *Smell*; but assafoetida and sulphuretted hydrogen are in general felt to be intolerably offensive. *Acquisitiveness* rejoices in the contemplation of rapidly increasing possessions, but suffers pain when the pocket is disburdened of a well-filled purse. *Self-Esteem* is fond of obedience and deference on the part of others; but galled when its possessor is domineered over, contemned, insulted, or reduced to slavery. To *Love of Approbation*, nothing can be more delightful than applause, admiration, and fame; but he in whom it predominates is driven to desperation by infamy and reproach. Parents with strong *Philoprogenitiveness* are gratified by the existence and society of their offspring; but the death of a beloved child renders them for a time inconsolable. *Adhesiveness* rejoices in the affection of a trusty and sympathizing friend; separation from whom, however, is productive of the acutest pain. *Benevolence* is gratified by witnessing the comfort and happiness of sentient beings, and afflicted by the spectacle of misery and pain. *Cautiousness* experiences satisfaction in the absence of danger,—as when a shipwrecked sailor finds himself secure upon the beach, or when a battle is witnessed from the fortifications of an impregnable stronghold; but the activity of the faculty is disagreeable when its possessor himself is in circumstances of peril and gloom.

Beauty delights in the elegant and beautiful, but loathes what is mean, squalid, and unrefined. *Tune* is pleased by the harmony and melody of music, but finds in discord a source of grievous annoyance. *Order* delights in the proper arrangement, the neatness, and the cleanliness, of surrounding objects; but is ill at ease in the midst of disorder and dirt.

It is farther to be remarked, that when a faculty is *disappointed by a wished for gratification*, its activity becomes painful or disagreeable: thus Acquisitiveness regrets the issue of an unprofitable speculation, even although no positive loss be sustained. Another important circumstance is, that the *unsatisfied cravings* of every faculty are accompanied with misery or uneasiness; as when one who pants for reputation finds himself passing through "the cool sequestered vale of life" unnoticed and unknown. The *forced activity*, moreover, of every faculty is disagreeable; and, lastly, when a faculty is made to *work too much or in too monotonous a way*, uneasy sensations are the never-failing result. Muscular or mental fatigue, for instance, and muscular exercise against one's inclination, are by no means pleasant; *Tune* is disgusted by superabundance or too frequent repetition of music; and the sense of taste is palled by protracted eating of even the daintiest food.

Happiness, therefore, as is abundantly obvious from the preceding remarks, consists in nothing else but the *satisfaction or agreeable activity* of our several faculties; while misery is simply their *disagreeable excitement*: and hence, with a view to the prevention and diminution of misery, it is highly important to ward off or remove every cause productive of an unpleasant affection of any of our organs. We are surrounded by fellow-mortals, each endeavouring to secure for himself the greatest attainable amount of gratification, and very frequently indifferent whether or not, in the eager pursuit of his object, he painfully excite the faculties of other members of the community. Persons in whom Acquisitiveness and Self-Esteem predominate over the moral faculties of the mind, have a strong desire to appropriate to themselves the wealth pertaining to their neighbours; inordinate Self-Esteem leads the unprincipled to tyrannize over their weaker brethren; while Destructiveness prompts another class to excite painful feelings, corporeal or mental, in those against whom they have, or even have not, conceived a dislike. The world, moreover, is in many places infested by animals which devour, disfigure, or destroy the property of man, inflict pain upon his body, and are sometimes both able and willing to tear him to pieces. Rats, mice, foxes, and wolves, in civilized countries, and bears and tigers in the desert,—with many analogous tribes which it is needless to enumerate,—would, if left undisturbed, speedily render the world

a scene of incessant molestation and alarm, and totally unfit to be the residence of the human race.

The disagreeable excitement of our faculties being thus, in many instances, brought about by the conduct of our fellow-creatures, it is important that man, as well as the lower animals, (whose condition in this respect resembles his,) should be provided with the means of warding off the causes of pain,—of extinguishing them when their influence actually reaches him,—and of thus either avoiding altogether the unhappiness which it is their nature to produce, or at least materially abridging the period of its endurance.

There are two modes in which the disagreeable effects of such causes may be escaped from:—Either, *first*, we may allow them to exist unchecked, but in some manner shield ourselves from their influence; or, *secondly*, we may put counteracting causes into operation—motives may be presented to the minds of surrounding beings, which shall induce them to refrain or desist from gratifying their desires at our expense. The strongest motive of this sort is obtained by disagreeably exciting their own faculties—by paining, for instance, their sense of feeling, or Acquisitiveness, or Love of Approbation; for nothing tends so much to prevent men from gratifying their desires, as the endurance of, or knowledge that they must subsequently endure, an amount of suffering equal to that which they occasion in others. Finally, should no available motive have power to stay or avert the aggressor, he may be rendered incapable of doing mischief by disabling his person or depriving him of life.

To the first of these modes of warding off or abridging the duration of pain, we are instinctively urged by the sentiment of *Cautiousness*, and to the second by the propensity of *Destructiveness*. Some of the lower animals, such as the sheep and the hare, are almost destitute both of Destructiveness* and of the instruments by means of which carnivorous animals carry its dictates into effect; while Cautiousness, on the contrary, is in them exceedingly powerful,—keeps them for the most part out of

* I say *almost* destitute; for although it is commonly affirmed that herbivorous animals are not endowed with Destructiveness at all, there seems good reason for doubting the truth of this opinion. A tame ram which I once possessed became very mischievous. He repeatedly broke to pieces the door of his hut, and the trough in which his food was placed. During the day, he used to lie very frequently outside of the door of the house where I lived, and, when disturbed by any one coming out, revenged himself by following close behind, and butting the person violently, so as, in some instances, to knock him down. He was, moreover, a terror to all the children in the neighbourhood, who, if they encroached upon his domain, were sure of being attacked and maltreated. At length his pranks became intolerable, and he was put to death.—With regard to hares, Dr Gall himself (tome iv. p. 7) mentions that they fight so furiously with each other, that occasionally their skins are torn, and their persons mutilated.

harm's way, and leads them, when actually invaded, to provide for safety by flight. Man, in common with many other animals, is endowed with a considerable share of both faculties:—

This double lot
Of evil in the inheritance of man,
Required for his protection no slight force,
No careless watch; and therefore was his breast
Fenced round with passions, quick to be alarmed,
Or stubborn to oppose—with fear more swift
Than beacons catching flame from hill to hill,
Where armies land—with anger uncontrolled
As the young lion bounding on his prey....
These the part
Perform of eager monitors, and goad
The soul, more sharply than with points of steel,
His enemies to shun, or to resist.*

By 'Cautiousness, we are impelled to put locks upon our doors, ships of war around our coasts, and watchmen upon our streets; to take, in short, a thousand precautions against danger and misfortune. It is Destructiveness, however, which plays the more important part in preventing the mischievous acts of our fellow-creatures. The sphere of activity of this propensity is, I conceive, much more extensive than that indicated by the name *Destructiveness*, applied by Dr Spurzheim. From it originate not merely an inclination to destroy animate and inanimate objects, but also the desire to inflict suffering or uneasiness in general upon sentient beings; in other words, to produce in them the disagreeable excitement of one or several of the faculties. Dr Spurzheim, therefore, I humbly suggest, has erred in comprehending the whole functions of the organ within the definition, "Propensity to destroy in general, without distinction of object, or manner of destroying,"—and in enumerating, as the persons in whom "its manifestations are perceived," only "those who like to pinch, scratch, bite, break, tear, cut, stab, strangle, demolish, devastate, burn, drown, kill, poison, murder, or assassinate."† It is impossible, perhaps, to find a *single word* more suitable than *Destructiveness* to express the function of this organ; but the phrase *Propensity to Injure* appears to comprehend every mode of its activity, legitimate manifestations as well as abuses. Literally, the word *injury* (derived from the negative *in*, and *jus, juris*, right) signifies the invasion of another's right; but I here employ it in its popular sense, without reference to the justice or injustice of any particular infliction.‡ Now, it seems

* Akenside's Pleasures of Imagination, B. II. v. 570-584.

† Phrenology, 3d edit. p. 163.

‡ Let me not be misapprehended. Injury does not necessarily imply malice or mischief. There are occasions when it is beneficial to injure; though doubtless the propensity is manifested less frequently in its uses than in its abuses. We may destroy, kill, or chastise, for good purposes as well as bad; nay, we are compelled to do so; and the faculty which prompts to such conduct needs only to be regulated by morality and reason. Destruction is *extreme*

to me to be a law of the human constitution; that, when any of our faculties is pained or disagreeably excited, this propensity instantly comes into play; that is to say, there is immediately excited in the mind of the sufferer an *inclination to injure*—having for its object the infliction of the pain, if one exist, but not unfrequently vented, where the feeling is uncontrolled by the moral sentiments and intellectual powers, upon neutral individuals, or even inanimate objects. In every heart

Are sown the sparks that kindle fiery war;
Occasion needs, but fan them, and they blaze." *Dr. Thomas Brown*

Such a propensity is altogether indispensable to man before the institution of regular and powerful governments; but at whatever point in the social scale we regard him, its utility is abundantly obvious. "Nature," says Dr Thomas Brown, "has not formed man for *one* stage of society only; she has formed him for all its stages;—from the rude and gloomy fellowships of the cave and the forest, to the tranquillity and refinement of the most splendid city. It was necessary, therefore, that he should be provided with faculties and passions suitable to the necessities of *every* stage;—that in periods when there was no protection from without, that could save him from aggressions, there might be at least some protection *within*,—some principle which might give him additional vigour when assailed, and which, from the certainty of this additional vigour of resistance, might render attack formidable to the assailant, and thus save, at once from guilt and from the consequences of guilt, the individual who otherwise might have dared to be unjust, and the individual who would have suffered from the unjust invasion."

"What human wants required, that all-foreseeing Power, who is the guardian of our infirmities, has supplied to human weakness. There is a principle in our mind which is to us like a constant protector,—which may slumber, indeed, but which slumbers only at seasons when its vigilance would be useless,—which awakes, therefore, at the first appearance of unjust intention, and which becomes *more* watchful and *more* vigorous, in proportion to the violence of the attack which it has to dread. What should we think of the providence of nature, if, when aggression was threatened against the weak and unarmed, at a distance from the aid of others, there were, instantly and uniformly, by the intervention of some wonder-work-

injury; to kill is to *injure mortally*; slander and reproach are *verbal injuries*; chastisement is *injurious* to bodily comfort; we *injure* a statue by breaking off its nose. As, however, the word *injure* is popularly understood in a bad sense, I do not wish that it should supplant *Destructiveness*. The name is not of vital importance, provided the nature of the faculty be understood.

* Cowper's Task, B. v.

ing power to rush into the hand of the defenceless sword of other weapon of defence. And yet this would be but a feeble maintenance, if compared with that which we receive from those simple emotions which Heaven has caused to rush us in, were it into our mind, for repelling every attack. But this transient effect of anger,* continues Dr. Brown, adding compared with its permanent effects. It is the long-remaining resentment that outlasts, not the momentary violence of emotion only, but all the evil consequences of the injustice itself, which renders the anger even of the weakest formidable; because it enables them to avail themselves, even at the most distant period, of aid before which all the strength of the strongest mind must shrink to nothing. There is a community, to the whole force of which the injured may appeal; and there is an emotion in his breast which will never leave him till that appeal is made. According to the predominance of any organ is the brain's capability to be active, and, as a necessary consequence, its susceptibility of pleasurable and painful excitement. Where acquisitiveness is very strong, greater delight is experienced in gaining money, and more acute pain in losing it, than where the propensity is weak. A person in whom Love of Approbation is a ruling passion, is elated by applause, and plunged into the depths of misery by disgrace; while he in whom this sentiment has hardly an existence, is neither delighted by praise, nor pained by disapprobation. Now, the height to which the Destructiveness of any individual is inflamed, so far as the excitement is not the result of its own inherent and independent condition, bears a direct proportion to the intensity of the uneasiness felt by the wounded faculties. A very apt illustration of this occurs in Shakespeare's tragedy of *King Richard III.* :—

Queen. O thou, well-skilled in curses, stay a while,
And teach me how to curse mine enemies.
Q. Marg. Forbear to sleep the night, and fast the day;
Compare dead happiness with living woe;
Think that thy babes were sweeter than they were,
And he that slew them fouler than he is;
Betting thy loss, make the bad causes worse;
Revolving this will teach thee how to curse.
Queen. My words are dull; O! quicken them with thine.
Q. Marg. Thy words will make them sharp, and pierce like mine.
Act IV. Sc. 4.

The object of cursing, I need hardly observe, is to express malevolent wishes in regard to the person against whom it is directed. The witch's son, Caliban, for instance, (whom Shak-

* Brown's Lectures on the Philosophy of the Human Mind, vol. iii. p. 323-5

speech represents as a perfect incarnation of Destructiveness, thus salutes Prospero and his daughter in *The Tempest*,^{*}

"As wicked dew as e'er my mother brushed
With raven's feather from unwholesome fen,
Drop on you both! a south-west blow on you,
And blister you all o'er!"
Act. i. Sc. 4.

From the principle just stated it follows, that the circumstances which tend most strongly to excite anger, vary in different persons, according to the faculties which predominate and are most susceptible of uneasiness in each particular case. "The covetous man," says Plutarch; "is most proper to be angry with his steward, the glutton with his cook, the jealous man with his wife, the vain-glorious person with him that speaks ill of him; but of all men, there are none so exceedingly disposed to be angry, as those who are ambitious of honour, and affect to carry on a faction in a city—which, according to Pindar, is but a splendid vexation."[†] When the temperament is very excitable, this effect is still more decided; for, in the words of Lord Bacon, "no man is angry that feels not himself hurt; and, therefore, tender and delicate persons must needs be oft angry, they have so many things to trouble them, which more robust natures have little sense of." Hence it is, that men of genius, especially poets, musicians, and artists,—among whom it is rare to find a temperament that is not highly vivacious and excitable,—are universally recognised as an *irritable genus*. "I am very sorry to be obliged to own," says Chesterfield in *The World*, "that there is not a more irritable part of the species than my brother authors. Criticism, censure, or even the slightest disapprobation of their immortal works, excites their most furious indignation."

It is an additional result of the same principle, that resentment ought to be most frequently and furiously kindled, by wounds inflicted on those faculties which have the largest organs in the brain, and thence most powerfully actuate mankind. Now, this appears from observation to be in reality the case; for pain of the propensities and lower sentiments, which have larger organs than the intellectual powers, and are naturally more energetic and susceptible of uneasiness than they, not only excite Destructiveness with greater frequency, but also produce greater violence or intensity of its action. The faculties which, in the present state of society, are the most energetic and influential, and at the same time most liable to be wounded and balked of their enjoyment, are Acquisitiveness, Self-Esteem, and Love of Approbation; to which may be added the sense of feeling, a faculty very subject to be disagreeably affected in consequence of the activity of Destructiveness in our neighbours, and one whose

* Plutarch's *Morals*, English Transl. London, 1718, vol. i. p. 44.

† Essay on Anger.

pains are the most intolerable of all human sufferings. The occasions, therefore, on which the propensity to refuse is most commonly roused, are when one or more of the faculties just named are in a state of disagreeable excitement; and, in like manner, the revenge, when inflicted, is generally some disagreeable application to these same faculties—as whipping, scolding, speaking roughly or sarcastically,* suing for damages, extorting an humble apology, or putting the offender to shame. But, as already hinted, should any faculty whatever be powerful and active and should its possessor be in circumstances which expose it to painful activity, it will prove a frequent and violent exciter of Destructiveness. Of course, the greater the number of faculties disagreeably affected at a particular time, and the greater the inherent energy and irritability of Destructiveness itself, the more intense, *ceteris paribus*, will be the action of this propensity.

Let us now survey the activity of Destructiveness when roused by uneasy sensations of the other faculties respectively; and the various passions which arise from the combination of these different uneasy sensations with the emotion of Destructiveness itself.

Violent bodily pain has the effect of instantly kindling Destructiveness into fury. Should a person with a weapon in his hand, and a considerable development of this organ, be suddenly and severely struck, the life of the aggressor would be in very imminent danger. In this case, Destructiveness would be called into play by the disagreeable activity of the sense of PAIN.

Suppose, in the next place, a North American Indian to have a friend or relation who is waylaid and murdered by some one belonging to a hostile tribe. ADHESIVENESS, disagreeably affected, rouses his Destructiveness; itself very energetic; and no pains are spared to make the enemy feel the effects of his wrath. "I have known the Indians," says Adair, "to go a thousand miles for the purpose of revenge, in pathless woods, over hills and mountains, through huge cane swamps, exposed to the extremities of

* It is well observed by Lord Kames, that "roughness and harshness of manners are generally connected with cruelty;" a remark which he illustrates by referring to the bitter upbraidings and revilings which Homer represents the Grecian chiefs as bestowing so liberally upon each other: And he asks, "Whence the rough and harsh manners of our West India planters, but from the unrestrained licence of venting ill-humour upon their Negro slaves?" (*Sketches*, B. I. Sk. 5.)—Mr Combe states, in his *System of Phrenology*, 3d edit., p. 172, that "Destructiveness gives edge to sarcasm, satire, and invective." He might have added, with truth, that it *directly prompts* to the employment of these weapons of molestation. Cobbett used to indulge his Destructiveness in this way; his controversial productions—to use the forcible language of a writer in one of the public journals—being characterized by "a mingled stream of torturing sarcasm, contemptuous jocularity, and fierce and slaughtering invective."

heat and cold, the vicissitudes of the seasons, to hunger and thirst. Such is their overboiling revengeful temper, that they utterly convert all those things as imaginary trifles, if they are so happy as to get the scalp of the murderer or enemy, to satisfy the craving ghosts of their deceased relations.* In small communities, as Dr Robertson observes, every man is touched with the injury or affront offered to the body of which he is a member, as if it were a personal attack upon his own honour or safety;† and in this way Self-Esteem also receives offence. The whole tribe, therefore, takes a part in the quarrel, and its warriors issue forth against the community to which the offender belongs. The war-song is very characteristic:—"I go to revenge the death of my brothers; I shall kill; I shall exterminate; I shall burn my enemies; I shall bring away slaves; I shall devour their heart, dry their flesh, drink their blood; I shall tear off their scalps, and make cups of their skulls."‡ In more civilized life, Destructiveness burns with less fury, but still its excitement by wounded Adhesiveness is sufficiently obvious. The exclamation of Isabella, in *Measure for Measure*, when informed that Angelo has put her brother to death, is perfectly in accordance with nature:—

"Oh I will to him, and pluck out his eyes!"

Act iv. Sc. 10.

Let another case be taken. Suppose an Arab travelling with his camels and merchandise in the desert. He is met by another Arab, who attempts to seize his property. ACQUISITIVENESS and CAUTIOUSNESS are painfully affected, and, by rousing Destructiveness, cause him to wound the aggressor. He is, however, eventually overcome, and deprived of his goods. The pain of Acquisitiveness, and activity of the propensity to injure, continue to subsist: he harbours resentment; and, when an opportunity occurs, he inflicts chastisement on the perpetrator of the wrong.

But of all the causes which excite Destructiveness, the disagreeable activity of SELF-ESTEEM is the most frequent and powerful; and indeed there are few occasions on which it does not partake in the suffering produced by offence of the other faculties. For "contempt is that which putteth an edge upon anger, as much or more than the hurt itself; and therefore, when men are ingenious in picking out circumstances of contempt, they do kindle their anger much."§ Self-Esteem, when ill-regulated, makes individuals prefer themselves to every other person, and gives them a tendency to engross as much as possible the sources of happiness for their own peculiar advantage. Such men are therefore offended when they see other people either enjoying gratifications in which they have not the good fortune to partake—the mode of activity of Self-Esteem being in this case deno-

* History of the American Indians. p. 150.

† Bossu's Travels through Louisiana, i. 102.

† History of America, B. iv.

§ Bacon's Essay on Anger.

minated envy, or grasping at what they themselves are desirous to obtain, whereby the emotion of *jealousy* is produced. The occasions which give birth to envy and jealousy, vary according to the faculties which happen to be, along with Self-Esteem, energetic. Thus, an unmarried lady, possessing large organs of the domestic affections, combined with a great development of Self-Esteem, will be exceedingly apt to *envy* such of her acquaintances as are happily married, and surrounded by a promising and healthy family; while she will harbour *jealousy* towards any one who endeavours to secure the affections of the man whose love she desires for herself. A self-esteeming and acquisitive individual competing for a lucrative office, is *jealous* of his rival; and, after failing in the pursuit, regards him with *envy*. This pain of Self-Esteem renders him maliciously disposed towards the fortunate candidate; he bears a grudge against him, rejoices in his misfortunes, and lets slip no opportunity of blasting his reputation. In the case here supposed, there is added to envy the emotion of *hatred*, which is a compound of the painful emotion of Self-Esteem, or of some other faculty, with the propensity to injure or destroy.—

“Hates any man the thing he would not kill?”†

In cases where Self-Esteem is so vigorous as to give rise to ambition or lust of power, but where the attempts of the aspirant to gratify his desire are frustrated by a more popular antagonist, to whose authority he is compelled to submit, there is no great probability of the victor being allowed to remain unmolested. Cassius is represented to have been a man of this sort:—

“I cannot tell what you and other men
Think of this life; but, for my single self,
I had as lief not be, as live to be
In awe of such a thing as I myself.”‡

And Caesar's remark upon him is sufficiently pointed:—

“Such men as he be never at heart's ease
Whilst they behold a greater than themselves;
And therefore are they very dangerous.”§

Satan expresses the same feeling in *Paradise Lost*—

“Better to reign in hell than serve in heaven;”

and nothing can be more bitter and malicious than the tone in

* Cautiousness, also, appears to be an element in jealousy; and if suspicion be one of its ingredients, Secretiveness likewise comes into play.

† Shylock, in *The Merchant of Venice*, Act iv. Sc. 1.—It is proper to state, that in this and some other illustrations given in the text, Benevolence and Conscientiousness are assumed to be moderate, and the organ of Destructiveness to be large. Where great morality exists, there is a powerful check upon the execution of the suggestions of Destructiveness; whose activity, moreover, it tends to allay.

‡ Julius Caesar, Act I. Sc. 3.

§ Id., Act I. Sc. 4.

which Milton represents him as habitually speaking of the Deity. There are men so base and selfish, that the enjoyment of happiness by others is with them a sufficient ground for hatred; and even the sense of inferiority engendered by the contemplation of excellence, disposes grovelling minds to detract from the reputation of those whom they dare not hope to equal.

No might nor greatness in mortality
Can censure 'scape; back-wounding calumny
The whitest virtue strikes.*

Few circumstances are so much calculated as disobedience to wound a preponderating Self-Esteem; and the proud man's Destructiveness, when so inflamed, is very apt to inflict suffering on the culprit. Persons in whom Destructiveness is powerful, generally find more ready obedience than that which is accorded to those who have it weak; for the receiver of the command, disliking to be the object of this propensity, takes care to avoid giving occasion for its exercise. It may be farther observed, that persecution and ill-will on account of difference of opinion, religious or political, derives its origin principally from Self-Esteem; which, offended by the presumption of others in holding tenets at variance with those of its possessor, excites Destructiveness to chastise them by vituperation, slander, penalties, imprisonment, or death. In the case of religious persecution, offended Veneration is also in the field; but, in general, Self-Esteem appears to be the chief instigator of this disgraceful proceeding.

The weapons by which LOVE OF APPROBATION is vulnerable, are slander, ridicule, and the expression of displeasure; and it is hardly necessary to say that these have a strong tendency to excite a desire to injure the person from whom they proceed. Disappointment of this feeling has a similar effect. A man who is quashed where he intends to make a splendid figure, seldom fails to bear a grudge against the person by whom he is annihilated. When both Self-Esteem and Love of Approbation are powerful—as they were in Bonaparte, for example—there is a desire not merely to be applauded and admired, but to be the *grand and prominent object* of applause and admiration—to walk, in short, “the sole hero upon the stage.”† Such a

* *Measure for Measure*, Act III, Sc. 6.

† See Channing's splendid Analysis of the Character of Napoleon Bonaparte, 3d London edition, p. 31. This trait in Bonaparte's disposition may be summed up very briefly and forcibly in the words of Young:—

“Fain would he make the world his pedestal;
Mankind the gazers, the sole figure, he.”

Night Thoughts, B. viii. v. 492-3.

man is therefore jealous of all whom he suspects of aiming at a share of the eel, and envies and hates them when they get more than he. Robert Burns used to be grievously offended and irritated, when not made the lion of the company in which he was present. The noted case of David and Saul furnishes another good illustration. When the virgins, in celebrating their exploits, proclaimed that "Saul had slain his thousands, and David his ten thousands," the king, we are told, "was very wroth, and the saying displeased him"; and Saul eyed David from that day and forward.* An army which has been mortified and disgraced by defeat at the hands of an enemy, before regarded with contempt, is apt to be extremely ferocious when at length a victory is gained. The conduct of the Duke of Cumberland's troops in the Highlands of Scotland, after the battle of Culloden, illustrates this remark. General Hawley, in particular, whose arrogance seems to have exceeded even his folly, was "one of the most remorseless of all the commanding officers; apparently thinking no extent of cruelty a sufficient compensation for his loss of honour at Falkirk."†

CAUTIOUSNESS is painfully excited by the presence or apprehension of danger; in which case some other faculty, such as Acquisitiveness or the Love of Life, uniformly experiences disagreeable sensations along with it. This unpleasant excitement, by rousing Destructiveness, causes the emotion spoken of by Dr Thomas Brown in the passage before quoted, "to rush, as it were, into our mind, for repelling every attack."

"I prythee take thy fingers from my throat—
For though I am not splenetic and rash,
Yet have I in me something dangerous,
Which let thy wisdom fear."‡

And, as this emotion might be too late if it came only after a blow had been received, the Creator has so arranged that the natural language of the intending aggressor generally gives his victim unequivocal warning of his intention—thus exciting Cautiousness, and through it Destructiveness, in time to repel the assault. Even where there is no aggression, Destructiveness is excited by fear, though in a less vivid degree; for people in a state of trepidation are apt to curse, and otherwise behave in a manner symptomatic of the action of this propensity. Apprehension of danger is notoriously productive of a cruel disposition, even among persons who, when free from it, are altogether incapable of barbarous conduct. "He that is feared is hated," says the old Roman poet Ennius; "and they that hate a man wish him dead."

* See p. 65. of this volume.

† 1 Sam. xviii. 7, 8, 9.

‡ Chambers's History of the Rebellion in Scotland in 1745, vol. ii. p. 138.

§ Hamlet, Act V. Sc. 2.

"Quem metuunt, oderunt; quem quisque odit, perissee expetit."* And it is well observed by a sagacious writer already cited, that "we are never so apt to commit an act of inhumanity as during the surprise and agitation which follow personal danger."† Sir Walter Scott mentions of Charles II., that "he was good-natured in general; but any apprehension of his own safety easily induced him to be severe, and even cruel."‡ There is little room for doubt, that the horrible atrocities committed in the seventeenth century against supposed witches, are in a great measure traceable to the painful excitement of Cautiousness. The persecutions in New England particularly illustrate this observation.§ Hence also the ferocity which pervades the public mind in times of proscriptive violence.

The warmth which most individuals are prone to exhibit when arguing against a formidable opponent, and without confidence in the goodness of their own cause, may be accounted for in the same way. Mr Edgeworth has very well stated the fact in the following sentence:—"People are often violent in argument, and angry from a secret fear of the strength of their opponents: where a person has a full sense of being in the right, and of having the best of an argument, it is easy to preserve calmness and temper."|| On a similar principle it seems possible to explain, in some cases at least, the peculiar acrimony of feeling with which intimate friends usually regard each other after having quarrelled. Each has been intrusted with a knowledge of foibles and other private concerns, the trumpeting of which to the world might lead to disagreeable and prejudicial results. Each of them, knowing how much the other has thus in his power, is haunted by a lurking apprehension that the knowledge will be spitefully made use of; and, in the production of mutual hatred, this disagreeable excitement of Cautiousness must considerably reinforce the other offences which a quarrel implies. It may be added, that friends are apt to regard the conduct which leads to a rupture, as more unpardonable than the same conduct proceeding from a stranger.

Perhaps it will be objected, that *extreme* terror absorbs the whole mind, so that Destructiveness, instead of being roused, is for a time as it were utterly annihilated. This phenomenon, however, takes place under the operation of one of the general laws alluded to in the commencement of the present essay, and it will be noticed at greater length on some future occasion.

* Ennius, quoted by Cicero, *De Officiis*, lib. ii.

† Chambers's History of the Rebellion, &c. ii. 229.

‡ Tales of a Grandfather, 2d series, ii. 170.

§ See Sir W. Scott's Letters on Demonology and Witchcraft, p. 274.

|| Essays on Professional Education, by R. L. Edgeworth, Esq. 4to. p. 89.

When self-possession is recovered, the activity of Destructiveness speedily appears.

It is curious, and to some may appear paradoxical, that even BENEVOLENCE can act as a direct stimulus to Destructiveness. Its disagreeable excitement occurs when we witness the infliction of pain, and is called *pity* or *compassion*. The benevolent man whose Destructiveness is powerful, has in such cases a vivid inclination to bestow summary chastisement on the inflicter. This is well exemplified by the incident which gave occasion to the maledictory poem of Burns, written on seeing a wounded hare pass by, and in which are embodied, in nearly equal proportions, compassion for the hare and curses on the man who had wounded it. "So enraged" was the poet, that he threatened to throw the sportsman into a neighbouring river.* In like manner, when a crime of great atrocity is perpetrated against any individual, the anger is not confined to the sufferer alone. "There rises," says Dr Brown, "in the mind of others, an emotion, not so vivid perhaps, but of the same kind, involving the same instant dislike of the injurer, and followed by the same eager desire of punishment for the atrocious offence.... In periods of revolutionary tumult, when the passions of a mob, and even, in many instances, their most virtuous passions, are the dreadful instruments of which the crafty avail themselves, how powerfully is this influence of indignation exemplified in the impetuosity of their vengeance! Indignation is then truly anger. The demagogue has only to circulate some tale of oppression; and each rushes almost instantly to the punishment of a crime, in which, though the injury had actually been committed, he had no personal interest, but which is felt by each as a crime against himself."†

A curious example of this effect of Benevolence in rousing Destructiveness, is furnished by the history of Montbar, a Frenchman, who was so furiously exasperated by reading, in early life, accounts of the cruelties of the Spaniards in America, that he joined the bucanéers, a body of pirates long the scourge of navigators in the West Indies. So much and so frequently did this man gail the Spaniards, during the whole of his life, that he acquired from them the name of *the Exterminator*. Of course, the independent energy of his Destructiveness itself must have been very great.

* See p. 68 of this volume.

† Lectures, vol. iii. p. 326-7.—A beautiful passage, following that above transcribed, is very reluctantly omitted for want of room. I may, however, quote a few words from an article in the first volume of the Edinburgh Review, evidently the production of Dr Brown:—"There is a virtuous *wrath*—we could almost say a virtuous *malice* and *revenge*—which, we trust, will ever be excited by the tale of successful oppression."—P. 481.

‡ Encyc. Brit., Art. Buccanée, vol. v. p. 623, 7th edit.

The offence which impiety, real or imagined, gives to VENERATION, is not slow in calling Destructiveness into exercise. This has already been hinted at in reference to theological persecution; and I may now, it is hoped without impropriety, allude to a well-known act of One who, being "made like unto his brethren," drove out of the Temple at Jerusalem, with "a scourge of small cords," those who profaned it by selling oxen, sheep, and doves; and "poured out the changers' money, and overthrew the tables."* The Crusades will readily occur to the reader as exhibiting a fearful ebullition of Destructiveness excited through the medium of Veneration.

CONSCIENTIOUSNESS, when offended by an act of gross injustice and ingratitude, by the punishment of a guiltless individual, or, what is still more intolerable, by a groundless suspicion or accusation brought against one's self, often kindles Destructiveness into fierce indignation. An honest man who witnesses oppression, is strongly inclined to "break the jaws of the wicked, and pluck the spoil out of his teeth."† Such is the feeling, also, with which liberal men regard the enemies of truth and free inquiry, and all who trample on the rights and liberties of mankind. The world has seldom witnessed a philosopher whose temper was more sweet than that of the Honourable Robert Boyle; but even this mild and amiable man, by reason of his having "a most particular aversion to all severities and persecutions for conscience sake," was capable of manifesting no slight activity of Destructiveness. "I have seldom observed him," says Dr Burnet, "to speak with more heat and indignation than when that came in his way."‡

When an object offensive to IDEALITY presents itself, Destructiveness appears to be excited in the usual manner. On what other principle can we account for the instinctive propensity which arises to kill a loathsome reptile the moment it catches our eye, even when we know it to be perfectly harmless? "Kill the ugly brute," is an instantaneous exclamation among the vulgar; the ugliness being obviously the leading reason for putting the animal to death. Or in what other way is it possible to explain why, in the generality of mixed parties, a beautiful woman receives far more kindness and attention than she whose looks are of a homely description; and why, for the most part, a pretty child is treated with greater indulgence by its parents than an ugly one? It may be suggested as an inquiry perhaps not unworthy of the attention of naturalists, whether those animals which are most dangerous or annoying to man, and which at the same time it is difficult both to avoid and to escape from—or which, if not instantly attacked, would

* John ii. 14-16.

† Job xxix. 17.

‡ Quoted in Life of Boyle, Constable's Miscellany, vol. vii. p. 90.

make their escape in the twinkling of an eye,—are more loathsome and ugly in their appearance than harmless creatures, so that, whenever they are seen, there arises in the spectator an immediate inclination to destroy them, much stronger than that which would be excited by Caution alone.

It is not often that the INTELLECTUAL FACULTIES experience disagreeable excitement. They are naturally weaker than the feelings, and, standing less in relation to living beings, are less liable to be galled by the conduct of the latter. It is chiefly in being balked of desired enjoyment that the intellect suffers. When LOCALITY, for instance, is powerful, and its possessor in consequence desires to travel, he is unhappy if continually detained at home. He who has a taste for sculpture and painting is annoyed by inability to find admittance into a gallery where pictures and statues are exhibited. When TUNE is large, a desire to attend musical concerts is felt; and if it be impossible to do so, the person feels regret. EVENTUALITY, in like manner, is disagreeably affected by the denial or removal of its gratification. "The pain which attends ungratified curiosity is most strikingly proved by those tales which are often intentionally suspended at some most interesting moment, and printed as fragments. We feel, in such a case, a vexation that almost amounts to anger, as if the writer of the fragment were wilfully and wantonly inflicting on us pain; and there are many little injuries which we could perhaps much more readily forgive. To be forced to read a succession of such fragments, would be truly, to any mind which can take an interest in the adventures of others, a species of torture,—and of torture that to such a mind would be far from being the slightest which could be devised."* Perhaps the faculty of TUNE is more exposed to annoyance from our fellow-men than any other intellectual power. Those in whom it predominates are acutely pained by discordant and unmelodious notes; and Hogarth's picture of the Enraged Musician is an enduring testimony that anger may be kindled by these.

One grand legitimate object of Destructiveness, then, appears to be the *warding off or removal of uneasiness* from its possessor; an end which is accomplished by its inspiring with fear those who long to gratify their selfish faculties at his expense, and repelling or disabling such of them as are not to be so deterred. It is very important to remark, however, that *even where the pain is attributable to ourselves alone, or to unavoidable accident, the general rule continues to hold; and the activity of Destructive-*

* Brown's Lectures, lii. 437.

are, though generally less violent, equally certain. In a word, the existence of an aggressor is not indispensable to the existence of Destructiveness. Bodily pain, occasioned by the thurst of the temper, immediately soars the temper, and, where the intellect is weak, leads to absurd and violent conduct. Thus the North American Indians, if hurt accidentally by a stone, often seize it in a transport of anger, and use it to wreak their vengeance upon it. Children, in like manner, if they foolishly stumble over a stool, are prone to kick it to pieces in their wrath. "I saw him," says Valeria, speaking of the child of Coriolanus, "run after a gilded butterfly; and when he caught it he let it go again; and after it again; and over and over he comes, and up again; and caught it again; or whether his fall enraged him, or how 'twas, he did so set his teeth, and did tear it. Oh, I warrant how he mammed it!"† Every one must have remarked that during the continuance of uneasy sensations, occasioned by indigestion, superfluity of bile, costiveness, and other disorders, the temper is unusually irritable, and the character, indeed, so materially changed; that by this and similar facts some have been induced to question whether the tempers of men are really determined by nature. Pope, for instance, is greatly perplexed by finding "the same man utterly different in different places and seasons."‡

"See the same man, in vigour, in the gout;
Alone, in company; in place, or out."§

It is a remark of Voltaire, that "costiveness has too often been the original cause of the most sanguinary and dreadful scenes;" a position which he illustrates by affirming, that Oliver Cromwell suffered under this disorder for upwards of a week, before he signed the death-warrant of Charles I., and that the "costive and unhappy temperament" of Charles IX. of France "was one of the principal causes of the massacre of St Bartholomew." Into the accuracy of these statements it is needless to inquire: they are here given merely as illustrations of a fact which very few will dispute. It may be further observed, that during the prevalence of the east wind in Britain, and of gloomy and tempestuous weather in general, a feeling of uneasiness rarely fails to pervade the system; and the temper is certainly at such periods unusually snappish. That this is the case also among people enduring the discomfort of hunger every one must be aware. A party kept waiting for a long time in a drawing-room before dinner, is seldom in the sweetest of moods. The same is true of persons grievously fatigued by muscular exertion; and, lastly, the reader

* Robertson's History of America, B. iv.

† Tragedy of Coriolanus, Act i. Sc. 6.

‡ Pope's Moral Essays, Ep. i., argument.

§ Id., v. 71, 72.

will have no difficulty in explaining, by means of the principle under consideration, why his female friends (who are constitutionally subject to periodical uneasy sensations over the whole frame) display at certain times a degree of ill-nature, perhaps even fury, very different from their habitual temper of mind.*

¶ Grief in consequence of the death of relations or friends, has a like tendency to stimulate Destructiveness. That this fact has not escaped the penetration of Shakspeare, is evident from the dialogue of Brutus and Cassius after their quarrel—

Br. I did not think you could have been so angry.

Cas. O Cassius, I am not of many griefs.

Cas. Of your philosophy you make no use.

Br. No man bears sorrow better. *Portia's dead.*

Cas. Ha! Portia!—

Br. She is dead.

Cas. How 'scaped I killing when I crossed you so?

O insupportable and touching loss!†

This seems to be the origin of the custom so prevalent among savage tribes, of tearing the hair and disfiguring the countenance in the agony of grief at the death of a friend. It is mentioned by Bruce, that the women of Abyssinia, upon the death of a near relation, cut the skin of their temples with the nail of the little finger, which is left long on purpose; and that thus every female countenance in the country is disfigured with scars. The Charrua Indians of Uruguay are accustomed to testify their grief on such occasions by cutting off one of the bones of a finger, and making incisions in their flesh.‡ The New Zealanders in like manner lacerate the face, arms, and other parts of the body;§ and it is not uncommon for them even to commit suicide on the death of a brother, a husband, or a wife.¶ The Jews appear to have been at one time addicted to similar practices; for we find in Scripture the express commandment, "Ye shall not make any cuttings in your flesh for the dead, nor print

* Males also seem to have, at the same time, monthly visitations of uneasiness, melancholy, and irritability, for which no cause has as yet been discovered. See, on this curious and important subject, Gall *Sur les Fonctions du Cerveau*, iii. 352-364; and Spurzheim on *Insanity*, sect. v., on Fits of Madness. Speaking of the domestic jars which often occur at those periods, Dr Gall observes, that "it is necessary to be a philosopher, or to know thoroughly the organic cause of the extraordinary conduct, and to anticipate its speedy termination, in order to endure it with charitable patience." P. 362. It is "surtout à l'époque des évacuations périodiques" that paroxysms of destructive insanity and disposition to suicide appear.—See Gall, i. 398-400; iv. 110, 353, 368; also Forster's *Observations on the Casual and Periodical Influence of particular states of the Atmosphere on Human Health and Diseases*, particularly *Insanity*. London, 1817. Sett. ix.

† Julius Caesar, Act iv. Sc. 4.

‡ Notice sur les Indiens Charruas, p. 8.

§ Library of Entertaining Knowledge; *The New Zealanders*, pp. 193, 209.

¶ Id., pp. 292, 297, 388.

any marks upon you.* To the same principle must be ascribed the old Jewish custom of rending the garments whenever the feelings were disagreeably excited.

† Achilles is represented by Homer as in danger of committing suicide in the excess of his grief for the death of Patroclus:—

Then clouds of sorrow fell on Peleus' son,
And, grasping with both hands the ashes, down
He poured them on his head, his graceful brows
Dishonouring, and thick the sooty shower
Descending settled on his fragrant vest.
Then, stretched in ashes, at the vast extent
Of his whole length he lay, disordering wild
With his own hands, and rending off his hair....
On the other side, Antilochus, dissolved
In tears, held fast Achilles' hands, and groaned
Continually from his heart, through fear
Lest Peleus' son should perish self-destroyed." ‡

Many other instances might be adduced, to shew that Destructiveness is excited by painful sensations in general, even where no aggressor exists; but it is unnecessary to multiply examples. None will dispute that the merchant whose warehouse is consumed by lightning,—the traveller who loses his purse,—and the wight who, on arriving breathless and exhausted at a coach-office, beholds the vehicle in which he is anxious to seat himself wheeling round a distant corner,—are all rendered prone to destructive conduct, and hardly refrain from speaking harshly to those around them. Children, when wounded by a fall, are apt to stamp their feet on the ground with rage, to kick about the smaller articles of furniture, and to commit havoc among the brittle ware; while passionate adults, when any annoyance occurs, give vent to a copious volley of imprecations.

As formerly observed, the legitimate object against which Destructiveness ought to be exclusively indulged when roused by uneasiness or pain, is the individual by whom that uneasiness is caused. In such cases, we may sometimes *injure* without infringing in the slightest degree the dictates of morality and reason. "If the *benevolent* affections," says the penetrating metaphysician already more than once cited, "be so important as sources of happiness, the malevolent affections are not less important parts of our mental constitution, as the *defence* of happiness against the injustice which otherwise would every moment be invading it;—the emotions of the individual injured being to

* Levit. xix. 28.

† Iliad, B. xviii. I have preferred Cowper's translation as more faithful, though somewhat less elegant, than that of Pope. The concluding verse in the original passage is—

Δαίδη γὰρ μὴ λαμὼν ἀποτμήξει σιδήρεϊ.—v. 34.

Literally, "For he was afraid that Achilles would cut his throat."

the injurer a certainty that his crime will not be without one interested in avenging it; and the united emotions of mankind, as concurring with this individual interest of retribution, being almost the certainty of vengeance itself. If vice can perform those ravages in the moral world which we see at present, what would have been the desolation if there had been no motives of terror to restrain the guilty arm,—if frauds and oppressions, which now work in secret, could have come boldly forth into the great community of mankind, secure of approbation in every eye, or at least of no look of abhorrence, or shuddering at their very approach? It is because man is rendered capable of hatred, that crimes which escape the law and the judge, have their punishment in the terror of the guilty.* In a word, so long as the saying shall continue true—"Mali inter malos vivimus," the propensity to injure will be indispensable to our welfare; and it is interesting to remark, that, as most of the pains occasioned to us by our neighbours are the produce of exuberant Destructiveness in the inflictors,—if the organ shall, in the progress of civilization, become so quiescent in the human race, that we shall cease to torment and destroy each other, this very quiescence must at the same time weaken the principle of resentment, which will thus become more and more feeble in proportion as its services are less required.

It unfortunately happens, however, that, in the existing state of human affairs, Destructiveness seldom confines its operations to the offending object exclusively. When pain is occasioned by circumstances referrible either to the sufferer alone or to some particular aggressor, parties entirely innocent are often made to feel the consequences of that displeasure, which, if directed by reason and morality, would either be wholly curbed, or fall exclusively on the party offending. The excitement of Destructiveness, however, being less furious in these instances than when it is directed against the author of pain, the disposition manifested is frequently of no higher intensity than what is familiarly known as *peevishness* or *fretfulness*—a tendency to growl, and snarl, and act with unmerited harshness towards all who are unfortunate enough to be in the way. Such a misdirection of displeasure is extremely unamiable, and obviously at variance with reason and common sense.

Before concluding this branch of the subject, it is proper to remark, that Combativeness, or Opposiveness, is roused by the same circumstances which excite the propensity to injure. These two faculties, indeed, as I observed on a former occasion,† seldom fail to act in concert; and it is impossible to doubt the general truth of Dr Brown's assertion, that "when anger arises

* Brown's Lectures, vol. iii. p. 274. See also pp. 249, 546.

† Essay on Combativeness, p. 160 of this volume.

fear is gone—there is no coward, for all are brave.* There is certainly in every case an *increase* of courage, though not always so great as to elevate it to the rank of positive bravery.

I have still some additional remarks to offer on the uses and modes of activity of Destructiveness; but, as the present article is already too long, it is necessary to postpone these till next number.

ARTICLE IV.

REMARKS ON THE INFLUENCE OF MENTAL CULTIVATION AND MENTAL EXCITEMENT UPON HEALTH. By AMASA BRIGHAM, M.D. Boston, U. S.: Marsh, Capen, and Lyon, 1853. Second edition, 12mo, pp. 130.

DR BRIGHAM is an unpretending writer, but his little volume proves that he possesses a rare combination of accurate and extensive knowledge with calm and practical sense. He has chosen a subject the importance of which it would be difficult to over-estimate, and has handled it with remarkable perspicuity, precision, and judgment. His mind is a logical one: he deals in *principles*; and with these the numerous details which he introduces are at all times intimately linked. His views are obviously the result of mature and anxious reflection, and are never propounded without an ample display of evidence in their support. Although he does not avow himself a phrenologist, modestly alleging that he is not yet entitled by qualification to do so, he nevertheless speaks of the subject and its advocates in such terms of friendliness, and even eulogy, so entirely prefers its mental philosophy to all others bearing the name, as explanatory of the phenomena of human nature, and avails himself of that explanatory power so largely, indeed so exclusively, throughout his volume, that we hesitate not to claim him as a *real*, though not an avowed phrenologist; a much better ally in its cause than an avowed phrenologist who is not a real one.

The inductive motive of the publication of the volume, as the author says in his preface, "is to awaken public attention to the importance of making some modification in the method of educating children which now prevails in the United States of America. It is intended to shew the necessity of giving more attention to the health and growth of the body, and less to the cultivation of the mind, especially in early life, than is now given; to teach that man, at every period of his existence, should be considered both as a spiritual and material being—as influ-

* Lectures, iii. p. 324.

ences both by physical and moral causes—and that therefore all plans for his improvement should be formed, not from a partial view of his nature, but from a knowledge of his moral, intellectual, and physical powers, and of their development.* Physical education, he truly says, is too little attended to, and the connexion between health of body and health of mind too much overlooked. “Philosophy,” exclaimed Dupaty, on seeing the magnificent anatomical museum at Florence, “Philosophy has been in the wrong not to descend more deeply into physical man; there it is that the moral man lies concealed.” The study of anatomy and physiology is, of course, strenuously recommended by the author, as that on which all plans of education ought to be founded. Dr. Brigham proceeds, first, to consider “that part or organ of the human system which is called into action by mental labour; and then to trace the effect which this labour has upon that part of the system, and upon other organs of the body, at different periods of life.”

“In section first, he demonstrates that ‘the brain is the material organ by which the mental faculties are manifested.’” The reader will be at no loss to refer the following words of the author to the right state of his opinions: “That the brain is the ‘material organ of all the mental faculties, scarcely, at this period of science, requires to be proved.’” To ‘discipline the mind,’ means, therefore, to call into regular and repeated action *certain portions* of the brain, and to enable them to manifest easily and powerfully certain mental operations: this process is like that of exercising other organs of the body, thus giving them increased facility in the performance of their respective functions. There is much proof that the brain consists of a *congeries of organs*, each of which, in a healthy state, manifests a particular faculty of the mind, and that the power of each faculty chiefly depends on the size of its appropriate organ. I allude to these facts, however, only for the purpose of directing the inquiries of others to them. My present aim is simply to shew that the brain, considered as a whole, is the instrument by which the mind operates; and I hope to impress this fact deeply upon the minds of all those who are engaged in the education of youth.”—(P. 18, 19.)

The author details the usual evidence, drawn from injury to the brain and from insanity; referring to various writers who adduce an immense preponderance of cases in which, in the insane, the brain has been found more or less organically deranged. “It is curious,” he says, “to notice that often an injury of the brain impairs only that part of the mental faculties (memory). Such instances give great support to the phrenological views of

* Elements of Pathology, by Caleb Hillier Parry.

Gall and Spurzheim, who contend for a plurality of organs of the brain, and a separate and peculiar function to each organ?" (P. 25.)

The general proposition which the author wishes to establish is, that whatever excites the mind, excites and stimulates the brain. "This we know from experience in a severe headache. We perceive the pain to be increased by intense study or thinking, and that mental application determines more blood to the head. So true is it that mental excitement produces an increased flow of blood to the head, that surgeons are very careful to preserve a quiet state of mind in those whose heads are wounded."—(P. 29.)

The author concludes the first section with these words:—"While people are exceedingly fearful of enfeebling and destroying digestion, by exciting and overtasking the stomach, they do not appear to think they may enfeeble or derange the operation of the mind, by exciting the brain by tasking it when it is tender and imperfectly developed, as it is in childhood."—(P. 33.)

The subject of the second section is, "The condition of the brain in infancy; the effect on the mind of excitement and enlargement of the brain by disease;" and the proposition that "mental precocity is usually a symptom of disease." We are inclined to extract here a little more at length from Dr Brigham's work:—

"Since at first no organ is fully developed and prepared for the powerful execution of its appropriate function, let us inquire at what time of life nature has prepared the brain for the performance of the important office of manifesting the mind.

"Let us begin with the infant, and ascertain what is the condition of its brain in early life.

"The brain of a new-born infant weighs about ten ounces;* that of an adult, generally, three pounds and a half, apothecaries' weight, frequently a little less.—But if the mind of an adult has been long devoted to thought, if he has been engaged in constant study, his brain is usually increased beyond this weight. The brain of Byron, for instance, is said to have weighed four pounds and a half; and that of the illustrious Cuvier, four pounds thirteen ounces and a half. The size of this organ increases from the time of birth till manhood, remains stationary from this period until old age, and then diminishes in bulk and weight†. The relative size of its different portions constantly varies during several of the first years of life, and it is not until about the seventh year that all its parts are formed‡. During

* Meckel's Anatomy, vol. ii.

† Andral's Pathological Anatomy, vol. ii.

‡ Meckel.

childhood it is very soft, and even almost liquid under the finger, and its different parts cannot be clearly distinguished.* Still at this time it is supplied with more blood, in proportion to its size, than at any subsequent period. It then grows most rapidly, and more rapidly than any other organ: its weight is nearly doubled at the end of the first six months; and hence the nervous system, being connected with the brain, is early developed, and becomes the predominating system in youth. At this period of life, however, which is devoted to the increase of the body, it is necessary that the nervous system should predominate; for this system is the source of all vital movement, and presides over and gives energy to those actions which tend to the growth of the organization. Besides, 'Infancy,' says Bichat, 'is the age of sensation. As every thing is new to the infant, every thing attracts its eyes, ears, nostrils, &c. That which to us is an object of indifference, is to it a source of pleasure.' It was then necessary that the nervous cerebral system should be adapted by its early development to the degree of action which it is then to have.†

¶ "But this great and early development, though necessary for the above purposes, very much increases the liability to disease: it gives a tendency to convulsions, and to inflammation and dropsy of the brain, and to other diseases of the nervous system, which are most common and fatal in childhood.

"It is, therefore, deeply important that the natural action of the nervous system should not be much increased, either by too much exercise of the mind, or by too strong excitement of the feelings, lest at the same time the liability of children to nervous diseases be increased, and such a predominance given to this system as to make it always easily excited, and disposed to sympathize with disorder in any part of the body; thus generating a predisposition to hypochondriasis and numerous afflictive nervous affections.

¶ Mental excitement, as has been shewn, increases the flow of blood to the head, and augments the size and power of the brain, just as exercise of the limbs enlarges and strengthens the muscles of the limbs exercised. The wonderful powers of mind which an infant or child sometimes manifests, and by which he surpasses ordinary children, do not arise from better capacity in the mind itself of the child, but, in fact, from a greater enlargement than usual of some portion or the whole of the brain, by which the mind is sooner enabled to manifest its powers. This enlargement takes place whether the mental precocity arises from too early and frequent exercise of the mind, or from disease, and it must arise in one of these two ways. But, in my opinion,

* Bichat's General Anatomy, vol. I.

† Ibid.

mental precocity is generally a symptom of disease; and hence those who exhibit it very frequently die young. [This fact ought to be specially remembered by parents; some of whom regard precocity, unless accompanied by visible disease, as a most gratifying indication, and, on account of it, task the memory and intellect of the child. Sometimes, however, it is accompanied by visible deformity of the head, and then the fears of parents are greatly awakened. Take, for instance, the disease known by the name of rickets. Every person understands that this is a disease of childhood, and, according to the best medical authorities, it arises from the irritation or inflammation of some organ, and frequently of the brain. Its most characteristic symptoms when it affects the brain, are an enlargement of the head, and premature development of the intellectual faculties. On examining the heads of those who have died of this disease, the brain is found very voluminous, but ordinarily healthy. Mackel observes that its mass is increased in rickets; an effect gradually produced, without disorganization of the brain; by increased action in its bloodvessels, and the consequent transmission to it of more blood than usual. Being thus augmented in size, increased mental power is the consequence of this augmentation. 'One of the most remarkable phenomena in the second stage of rickets,' says M. Monfalcon, 'is the precocious development, and the energy of the intellectual faculties. Ricketty children have minds active and penetrating; their wit is astonishing; they are susceptible of lively passions, and have perspicacity which does not belong to their age. Their brains enlarge in the same manner as the cranium does.' He adds, 'This wonderful imagination, this judgment, this premature mental power which rickets occasion, has but a short duration. The intellectual faculties are soon exhausted by the precocity and energy of this development.'*

"I do not say or believe that cautious tasking of the minds of young children will frequently cause this disease; but I believe there is great danger that it will produce the same unnatural growth of the brain, and this will give rise to an exhibition of superior mental power, and be followed, as in the case of rickets, by permanent weakness, or loss of mental energy." (P. 34-38.)

Several interesting cases follow, for which we must refer to the volume. Of one case of infantine precocity the author says: "The following, in my opinion, is the true explanation of the surprising mental powers exhibited by this boy. Disease, or some other cause irritated his brain; this irritation attracted more than an ordinary quantity of blood to the head, and thus

* Dictionnaire des Sciences Médicales, vol. xlv.

excited, and unnaturally or prematurely developed; certain portions of the brain; and just in proportion as these were developed, his mental powers were increased."—(P. 44.)

The second section is wound up by the following words, part printed in italics: "From what has been said hitherto, we gather the following facts, which should be made the basis of all instruction; facts which I wish often to repeat. *The brain is the material organ by which all the mental faculties are manifested; it is exceedingly delicate, and but partially developed in childhood; over-excitement of it when in this state is extremely hazardous.*"—(P. 50.)

Dr Brigham's third section is devoted to the "Consequences which have resulted from inattention to the connexion between the mind and the body," and to the proposition that "the best minds are not produced by early mental culture." He strongly recommends to teachers of youth to acquaint themselves with human anatomy and physiology, especially of the brain, before they proceed to cultivate and discipline the mind. He objects to the excessive abundance of "books for children," some of them for children of from two to three years of age; and holds that time is idly spent and mind injured in poring over such books. This, he says, is the result of making prodigies of children. The following is an example of the kind of infant education which the author deprecates. "That children *do* have their mental powers prematurely tasked, is a fact which I know from personal observation. I have seen a course like the following pursued in many families in various parts of the country, and I know that this course is approved of by many excellent persons. Children of both sexes are required, or induced, to commit to memory many verses, texts of Scripture, stories, &c., before they are three years of age. They commence attending school, for six hours each day, before the age of four, and often before the age of three; where they are instructed, during three years, in reading, geography, astronomy, history, arithmetic, geometry, chemistry, botany, natural history, &c. &c. They also commit to memory, while at school, many hymns, portions of the Scriptures, catechisms, &c. During the same period they attend every Sunday a Sabbath-school, and there recite long lessons: some are required to attend upon divine service at the church twice each Sunday, and to give some account of the sermon. In addition to these labours, many children have numerous books, journals, or magazines to read, which are designed for youth. I have known some required to give strict attention to the chapter read in the family in the morning, and to give an account of it; and have been astonished and *alarmed* at the wonderful power of memory exhibited on such occasions by children when but five or six years of age. I have known other children, in

addition to most of the above performances, induced to learn additional hymns, chapters of Scripture, or to read certain books, by the promise of presents from their parents or friends.

"The foregoing account fails to describe the amount of mental labour required of many children, in intelligent and respectable families."—(P. 58, 59.)

The fourth section adduces the "opinions of celebrated physicians respecting early mental cultivation;" such as Tissot, Hufeland, Spurzheim,* Sinibaldi, Friedlander, Ratie, Julien, and others, who join in reprobating early mental labour.

We must content ourselves with referring to the fifth section, on the "Influence of mental cultivation and excitement in producing insanity, nervous affections, and diseases of the heart."

The sixth section is entitled "Remarks upon Moral Education—Influence of example;" and here, for a reason that will afterwards be apparent, we think it important to quote the author's words. "The remarks which I have made respecting the danger of too early cultivating the intellectual faculties, do not fully apply to the development of the *moral* qualities; though in regard to them some caution is necessary; for danger is to be apprehended from strongly exciting the feelings of children and awakening their passions. In endeavouring to call forth and cultivate those moral qualities which are good, and to suppress the bad, we should constantly keep in mind that the brain is not only the seat of the intellectual faculties, but is also the agent by which the passions, the affections, and all the moral qualities,

* We have much pleasure in quoting the following note by Dr Brigham, devoted to that great man:—"The above quotation is taken from the French edition of Dr Spurzheim's valuable *Essay upon the Elementary Principles of Education*. A later edition in English, with additions, has been published, which I have not seen: The learned and estimable author of the above is now in this country, and proposes to lecture upon the interesting science of Phrenology; a science to which he has given a philosophical character, and which, by his labours, he has advanced to its present high standing. I cannot but believe that his visit to this country will be productive of great good, by directing the attention of the public to the immense importance of physical education; a branch of education, the almost entire neglect of which, in this country, threatens dangerous and lasting consequences. As to the correctness of the phrenological system, I am not qualified to determine; but so far as I have had an opportunity of observing, I think it explains the phenomena of the morbid action of the brain far better than any other.

"I leave this note as it was in the first edition, though the work referred to has been reprinted in this country. I still hope, that, although its illustrious author lived but a few months after his arrival in this country, his visit will be of great service to it, and that he will ere long be accounted a great benefactor.

"In a letter which I received from him but a few days before the illness which terminated his life, he remarks upon the uncommon mental activity of the people of this country, and expresses his belief that the science which he taught would do great good here, and would 'contribute to a reform in education.' I trust that he has awakened a spirit of inquiry on this subject, that will not subside until the benefits he predicted are realized."—(Pp. 66, 67.)

are manifested. . . . That this is true, is shown in the same way as I have proved that the brain is the material organ of the mind. Insanity alone furnishes abundant proof. . . . This disease, of the brain as often deranges the moral as the intellectual faculties." — (P. 87.) Again: "The great object, therefore, in moral education should be, to call into repeated action those organs that manifest the good qualities, and increase their activity and power. For this purpose, it is necessary to study the characters of children when quite young; and when certain moral qualities appear to predominate, that are likely to produce bad traits of character, great efforts should be made to develope and call into activity opposite qualities: when a child appears exceedingly selfish, he should be taught and accustomed to practise benevolence. In this manner it is as certain that the moral qualities which are most desirable may be cultivated and made predominant, as that the memory may be increased by exercise." — (P. 88.)

We regret we have not space to analyze the seventh and eighth sections, entitled "The cultivation of the mind at a proper time of life not injurious but beneficial to health;" and "Influence of mental cultivation in producing dyspepsia in literary men; irritation of the brain the most frequent cause of this disease." In both sections the reader will find some most valuable practical truths. Among the reasons which, independently of his own experience, have led Dr Brigham to the opinion, that, in many cases, dyspepsia or indigestion is primarily a disease of the brain and nervous system, are the following:—

"*First*, A blow or other injury of the head, or a tumor in the brain, frequently produces sickness, irritation of the stomach, and all the symptoms of dyspepsia.

"*Second*, Dyspepsia may be produced by mental affections," says Dr Parry; and in this opinion he is supported by numerous observers. Who is there that has not felt the influence of bad news, or mental agitation, in destroying the appetite and deranging digestion, and thus producing dyspepsia for a short time?

"*Third*, Insanity, or disease of the brain, is usually preceded by the symptoms of dyspepsia, and recovery from mental derangement is often marked by a return of these symptoms."

"*Fourth*, Examination of the bodies of those who have died after long continued dyspeptic symptoms, confirms the opinion I have advanced, that dyspepsia is often a disease of the head, and not of the stomach."

"*Fifth*, The fact that dyspepsia is frequently cured by permitting the overtaxed and tired brain to rest, or by changing the mental labour or excitement, is evidence that it is a primary disease of the head, and not of the stomach."

"*Sixth*, The fact that dyspepsia is a disease chiefly confined to the studious, to those whose minds are much exercised and excited, and to those who, by too early mental education, have had a predominance given to the nervous system, is evidence that the brain is the primary organ affected."

"*Finally*, If dyspepsia is a disease of the stomach, why is it not more frequently cured by attention to diet than it is?"—(Pp. 103, 106, 112, 114, 119.)

These propositions are defended and illustrated at considerable length, and the whole section is worthy of being attentively studied both by physicians and patients. A table is appended, exhibiting the age attained by some of the most distinguished literary men in ancient and modern times, from 50 years to 109.

We have been thus particular, even to detail, on Dr Brigham's views of early mental culture, that we may apply them to the question now so deeply interesting the country and the legislature, that of infant school education. Mr Cobbett, in one of his *Registers*, published shortly before his death, applied Dr Brigham's facts and reasonings indiscriminately to the condemnation of these institutions; against which, had he lived, he meant to raise his voice in Parliament. He announced, moreover, his intention of printing a cheap edition of Dr Brigham's work, obviously with the view of making it the popular basis for his warfare against the system. We do not regret that he did not wage the war, but we should have thanked him for a cheap edition of the volume; for we feel that more temperate reasoners,—among whom, we are confident, we may rank Dr Brigham himself,—can make use of that work, not for the destruction, but for the defence and benefit, of infant schools. Mr Cobbett's intention regarding it is about to be fulfilled by his son.

In all that *we* have written on the subject of Infant Schools,* we have broadly and anxiously stated, that moral training, and that guarded precisely as it is by Dr Brigham in his fifth section,—so as to exercise the superior moral sentiments, which in general, when left to themselves, act too feebly to be in the smallest danger of over-excitement, and to regulate and moderate the selfish passions and animal propensities,—is the *primary* end of an infant school; and that intellectual training should be a *secondary* and accessory object only. As a secondary object, we have strongly urged that it should never approach to *labour*, that it should never overtask the infants, and that the utmost they attain should be acquired incidentally, almost unconsciously, and in the very manner in which the infant would instruct himself, by the exercise of his senses and

* Vol. vi. p. 418, and vol. vii. p. 108. See also Simpson's "Necessity of Popular Education," p. 133.

observing powers, if left alone; only that his attention should be better directed, and the faculties which Nature, as Dr Brigham rightly affirms, has, in the stage of infancy, appetized for that knowledge of external objects which infancy is the period to attain, should receive their legitimate food better prepared and more usefully administered. We have ever been enemies to long lessons, tasks, and laborious repetitions. When teachers of infant schools have forgotten, as they are perhaps apt to do, that the intellectual training is only secondary, have allotted to it the principal place and the larger share of time, and, yielding to the ignorant prejudices of parents, who wish "learning" for their money, have crammed their infant pupils for the supposed credit of their own teaching, we have held that they were departing from the essential principle of legitimate infant training. Nothing would tend more effectually to bring them back within the proper bounds of that intellectual training which should be harmless and even beneficial, than just such a work as Dr Brigham's; and we, therefore, earnestly recommend it to the perusal and reperusal of every infant school teacher. One obvious improvement it would be well if the directors of infant schools would most especially enforce—a *great deal more time ought to be spent in the play-ground, or at least at play, than is now almost anywhere allowed.* The usual alternation is an hour at lessons, and a quarter of an hour in the play-ground. We would have this proportion well nigh reversed; *we should wish to see the infants, at the very least, one-half their school day in the play-ground.* There can else be no time, no opportunity, for moral exercise in reasonably continued intercourse. The teacher's handbell is rung for a return to lessons before they have had time to commix, and even before they have reaped the benefit of air and muscular exercise; while he himself, engrossed, as he is, with the intellectual department, is led to pay scarcely any attention to the play-ground intercourse—the true infant school—and the moral discipline which may there be realized.

It does not appear that Dr Brigham has ever seen an infant school on the system of Wilderspin. His objections have all of them reference to common school or nursery tasking and examining. We have not heard that the Wilderspin system has been yet realized in America.* In it, Dr Brigham would at

* There are seven Infant Schools in Boston, which were visited and reported on last year by a Committee of the Boston Phrenological Society. The Report is published in the Annals of Phrenology, No. III. These schools are superintended by female teachers, who devote particular attention to the moral culture of the children, but follow no definite system of tuition. Pictures and objects are however made use of to a considerable extent, and the children are not kept too long in a constrained posture. Some of the schools

once see a field for the best possible employment, intellectual, moral, and physical, of children from two to six years of age—the best, the only, arrangement, when they are judiciously managed, for dispensing precisely that kind and degree of intellectual culture, and that moral and physical exercise, which are most desirable, and which can be realized only in a little community of sufficient numbers, as we have often said, and in no private family whatever. But to proceed blindly to cry down the infant school system, by which alone a practical course of moral education *can* be applied to the great body of the people, from a hasty conclusion that an infant school is a machine for overtasking, overworking, and overexciting, the minds, and destroying the health, of children, would be a proceeding of gross ignorance, and great and serious mischief. Yet we are glad it has been threatened; we rejoice, too, in Dr Brigham's work; for the threat and the work will both tend to put infant school conductors on their guard, lest their schools should lapse into the abuse which has thus been pointed out.

We have only to add on this head, that, in the Edinburgh Model Infant School, with which we are best acquainted, although there is more lesson work and less play-ground exercise than we quite approve, we have not seen or heard of any of the effects of overdoing which Dr Brigham justly deprecates: the

are ill-ventilated, and to none is a proper play-ground attached; but still they seem to be much more rationally conducted than those known to Dr Brigham, who resides in Hartford. The Committee, in closing their report, "express the high degree of pleasure and interest they have received from the visits they have paid to these infant schools. The cheerfulness—the activity—the healthy, happy looks of the children—their interest in the various exercises—were such as no friend of the young could look upon without delight. We were glad to see an approach made, as we certainly did in these schools, towards a proper and rational mode of treating and educating the younger members of the family of man. We have observed in these establishments the dawn of a happy day—when human nature shall be trained with an enlightened regard to the powers, faculties, and constitution, assigned it by its great Creator. We are confident that the infant school system needs only to be improved, as it may be, and based firmly, as it ought to be, upon the ultimate principles of human nature, to prove of the highest service in ameliorating man's present condition. Let children be gathered in infant schools as early as possible—let them meet with their fellow-beings in the morning of their days, that they may imbibe early the social principle of humanity—let their various faculties and sentiments be exercised and trained as soon as they are developed—let the infant pupil breathe the atmosphere of love, and yield to the mild but firm pressure of authority—let his early discipline be grounded on the future supremacy of his moral sentiments—let all that can adorn, guard, ennoble, and perfect human nature, be aimed at from the beginning of the child's career—and the great purpose of the Creator of all will be accomplished." It is added, however, by the Committee, that "this system, good as it is, and excellent as it may be made, is very partially understood, and very poorly supported among us. Its true friends are grieved to see it lying under such neglect." Would that we had it in our power to use different language with respect to infant education in Britain!

children appear in school uniformly in the most rosy health and high spirits, delighting in all they learn as mere amusement, —quite as insensible of acquisition as if they were picking it up of themselves, and utter strangers to any thing bearing the semblance of mental labour. These statements are grounded on the personal experience of five years. Mr Wilderspin has enjoyed the experience of nearly twenty, and can fully confirm our conclusions.

ARTICLE V.

LETTER ON THE FUNCTIONS OF THE ORGANS OF COMPARISON AND WIT. By GEORGE HANCOCK, Esq.

To GEORGE COMBE, Esq.

SIR,—I feel assured that the great importance of the science to the advancement of which you have so largely contributed, will induce you to pardon my addressing, I am afraid, rather a long letter to you upon the subject of two phrenological organs with regard to which (though your System and Dr Spurzheim's are the only works which I have had an opportunity of consulting) I have arrived at conclusions entirely different from yours, and in accordance with the opinions of a gentleman whose arguments you appear to have overruled. I allude to the arguments of Mr Scott upon the subject of the two organs of Comparison and Wit, by which he has endeavoured, as it appears to me not unsuccessfully, to prove that the true office of the one is to observe resemblances, and of the other to detect differences. To these arguments Dr Spurzheim objects (and you coincide in the objection), "that the perception of a resemblance is the result of a lower, and that of a difference of a higher, degree of power and activity in each intellectual faculty. Colour, for example, when feeble, *sees* a resemblance between hues, which, by a more powerful organ, are at once perceived to be different; a feeble organ of Tune *perceives* harmony, where a higher faculty discovers discord, &c. Hence every organ perceives both resemblances and differences within its own sphere." But if I might be allowed to differ from so high an authority, I would submit that a small organ of Colour does *not* see a resemblance between colours, which a more powerful organ perceives to be different; neither does a feeble organ of Tune perceive harmony where a larger organ discovers discord. The feeble organs, in both cases, only *do not perceive differences*,

which is a very different thing from perceiving resemblances. For, may I ask, how can any organ, whether large or small, *perceive* resemblances which do not in fact exist? If Dr Spurzheim were correct, a small organ would present the singular anomaly of possessing a greater power of perceiving resemblances than a large organ; and, if the case were to occur, of an individual possessing no organ of Colour at all, he would present the still more wonderful and anomalous instance of a person possessing a power of perceiving resemblances between colours which he could not even perceive. In like manner, a person with little or no organ of Tune, totally incapable of perceiving harmony in sounds which are concordant, would have the power of perceiving harmony in sounds which almost all the rest of the world confess to be discords. The fact however, would appear to me to be, that a person in whom any particular organ is small,—the organ of Colour, for instance,—not being able to perceive the difference between any two or more particular qualities,—the qualities blue and green, or red and brown, for example,—concludes falsely that they are identical: he supposes or fancies a resemblance, but he does not see or perceive one; for, as I have already observed, he cannot perceive what has in fact no existence.

Again, it is no doubt perfectly true that each intellectual organ “perceives both resemblances and differences within its own sphere.” But I would beg leave to observe, that this species of resemblance and difference is implied in the very notion of perception. Thus I cannot have a clear perception of the colour green, without *discriminating* it from all other colours. Neither can I discover the relations which exist between different shades of the same colour, without having a power of perceiving their *resemblance*. In the same manner, the organ of Tune perceives the relation existing between sounds produced by striking the same note of any musical instrument with different degrees of force, and between the same note struck on two different instruments, and between two notes which harmonize if struck at the same time, &c. It also discriminates the difference between one note and another, and between two or more discordant notes, and two notes that harmonize. But it does not therefore appear to me to be a very legitimate conclusion, that because each intellectual organ perceives both resemblances and differences existing between the peculiar qualities of which such organ is alone fitted to take cognizance, another organ which is known to take cognizance of resemblances existing between qualities of which it takes no cognizance, but concerning which other organs are alone conversant, should be the same organ as that which takes cognizance of differences between them. As well might it be maintained that the same

organ which perceives resemblances between such qualities' also takes cognizance of such qualities ; for instance, that the organ of Comparison, which discovers a resemblance between the colour scarlet and the sound of a trumpet, receives not its impressions of those qualities which it compares by means of the organs of Colour and Tune, but that itself perceives the qualities which it compares : for it is not more true, in the sense in which I understand it, that the same organ which compares discriminates, than that the same organ which compares, perceives or takes cognizance of the qualities compared ; as for instance when the organ of Colour perceives three different shades of one colour, and by its own power of comparison discovers both the resemblances and differences which exist among them. It does certainly appear to me, then, that, in this instance, as in the former, a confusion of terms by Dr Spurzheim has been, and it is so frequently, a source of confusion of ideas ; and that the power of perceiving resemblance and difference by each particular organ, which is implied in the very notion of perception, being essentially different from the powers possessed, as I contend, by the two organs under consideration, no parity of reasoning is applicable to the two cases.

It is evident that no man can have a clear perception of any particular quality by means of any organ, unless that organ possess the power of comparison for which Dr Spurzheim contends, and which, of course, I admit. But a man endowed with a small organ of Comparison, though, by the aid of the organs of Colour and Tune he might possess a perfectly clear perception of the colour scarlet, and of the sound of a trumpet, would vainly endeavour to discover any resemblance between them. As vainly, according to my limited observation, would a man endowed with a small organ of Wit (as it is termed), attempt to discover those nice and delicate points of difference which men of acute minds occasionally discover between objects of comparison. I have myself often vainly endeavoured, by explaining the points of resemblance, to make palpable to men in whom I have observed the organ of Comparison small in proportion to the other organs, the relation existing between the colour and the sound above mentioned. They have acknowledged, indeed, when pressed in argument, that both the colour and the sound arrest and arouse the attention ; and that the general impression produced by each is stirring, enlivening, and agreeable ; but a smile of incredulity always accompanied the admission. They have always insisted that it must depend upon association, and have shewn that if they understood, they have not felt, the resemblance which really exists between them. I have observed this more particularly in a brother of my own, in whom Causality and Wit are large, and Comparison, though not small, decidedly

inferior to the organs of the other reflecting faculties. Having the organ of Comparison large, I amused myself with hunting down other similar resemblances, such as the resemblance between the two colours known as Prussian blue and lake (not as addressed to the organ of Colour but to Comparison); and between lighter shades of pink and blue, and the sound of a silver bell or harp; and between the colour, at least the appearance of silver, and the sound of a dulcimer: these, however, were all alike unfelt by the same individual, though all were acknowledged by one of my sisters in whom the organ of Comparison is larger. But if my observations upon this occasion have been accurate, what becomes of Dr Spurzheim's proposition that "the perception of resemblances is the effect of a lower, and that of difference of a higher, degree of power and activity in the same organ?" Here, in my brother, is an instance of an individual endowed with a moderate organ of Comparison, utterly unable to perceive a resemblance which I perceive without effort, and yet possessing such a power of perceiving differences, and these in the cases specified appeared to him so broadly marked, that he ridiculed the very idea of there being any resemblance whatever between the qualities compared, and smiled uniformly at my efforts to explain it. In every other individual who has rejected these resemblances, I have observed a similar conformation; and in one, a physician, who has, I believe, just reason to pride himself upon his great powers of discrimination in his profession, the organ which I would fain call the organ of Discriminateness, is out of all proportion to the other reflective organs,—and from him, accordingly, I obtained only ridicule. Reasoning from analogy, I should expect to find an exactly opposite conformation in the person who maintained the objection to Phrenology, that the two organs of Benevolence and Destructiveness existing in an equal degree of development in the same individual, would neutralize each other like an acid and an alkali. In this case, there is an obvious want of power to discriminate an essential difference, and at the same time evidence of an active organ of Comparison, inducing a habit of mind which inclines the individual to infer identity in all cases in which difference is not perceived; and certainly I have uniformly found a deficiency in the organ of Wit, and a predominance of the organ of Comparison, in all those individuals in whom I have observed a tendency to reason falsely, from a similar disposition of mind. And here the question occurs to me, Have not these organs some higher office than any which has hitherto been clearly assigned to them? Does not their situation in the midst of the forehead, above the knowing organs, and adjoining Causality, indicate their being designed for more important uses than that of merely giving an ornament and a charm to conversation, and

poetry, and literature? Are they not essential to the due exercise of Causality? Between two constant concomitants of which it takes cognizance, can Causality, without their assistance, do more than merely infer a necessary connexion and dependence? Without Discriminateness, can Causality decide between two concomitants which is cause and which effect? Without Comparison, can it trace the relations which exist between similar causes and similar effects? Without the large organ of Comparison which is obvious in the portraits of Malthus, would he by Causality alone have been able to perceive the relation which the poor laws of England, the potato system in Ireland, and the law of inheritance in France, as proximate causes of pauperism, bear to one another? Without the organ of Wit, would he have been able to determine, amid the maze of concomitants by which so many minds have been, and are still, perfectly bewildered, which are originally and essentially causes, and which effects? Were I to be guided only by my own limited observations, and the rather immature reflection I have been able to bestow upon this question since it first occurred to me, I should say not. But these points, perhaps, deserve a more accurate examination, and they certainly require a more enlarged discussion and a more copious illustration, than at this moment I feel prepared to give them. Besides, I wish to avail myself of this opportunity of offering a solution of two questions connected with the organs under discussion, which would appear to be still unanswered. The first occurs in that part of your chapter on Wit, in which, after transcribing the inscription of Mr Littlejohn under the sign of Robinhood, and mentioning the alteration made by his witless successor, and after alluding to the two cases of *lapsus lingue*, you ask, "What is the cause of the more laughable effect of the second class of cases, in which the wit is actually extinguished?" The other occurs where, after stating consecutively a ludicrous and an affecting and beautiful similitude, you ask, "What occasions the perception of wit in the one case, and not in the other?" It appears to me, that, by following up the philosophical mode which Mr Scott has recommended, an easy solution of both questions may be obtained. To begin with the second, which appears to me to be first in natural order. If we examine any particular instance of a witty combination, I believe we shall invariably find, not only that there is, as Mr Scott observes, resemblance and difference, but that the resemblance is uniformly weak, and in many cases more apparent than real, while the points of difference are broadly marked and essential; and that, on the other hand, in every instance of beautiful or sublime similes and metaphors, the resemblance is real and palpable, and addresses itself to the mind in a manner so forcible that it is no longer able to attend to the points of dif-

ference. Thus, in the lines which you have quoted from Hudibras, the "lobster boil'd" bears scarcely any resemblance to the rising morn; though, in this instance, part of the absurdity seems to arise from the extreme vulgarity and bathos of the allusion. Again, in the case of Littlejohn, the resemblance is merely nominal. In the common case of puns, it is merely verbal. When Kitty

" Obtains the chariot for the day,
And sets the world on fire,"

the resemblance to Phaëton, in the car of Apollo, is extremely remote, and the difference between the real and the metaphorical conflagration of the world is obvious. A friend of mine being at a party at Paris where the game of forfeits was the amusement of the evening, a French officer who had forfeited asked him with a certain air of affected nonchalance, "*Que désirez vous que je fasse, Monsieur ?*" To which my friend replied, in an assumed tone of command, "*Faites tout ce que vous ne désirez pas.*" Here is an instance of very fine wit. The obvious meaning of the words, and the *brusque* tone and manner in which they were spoken, had all the *appearance*, the *resemblance*, of extreme rudeness; but as the rule at French forfeits is, that the party forfeiting is to do exactly the reverse of what he is directed, the *real* meaning of my friend was, that he might do exactly what he liked, which was of course extremely polite. Let us now examine an instance of wit of a different order.

" Mrs A. presents her compliments to Mr B. and will thank him not to suffer his *piggs* to run through her garden."

" Mr B. presents his compliments to Mrs A., and will thank her not to spell pig with two *g*'s."

In this instance, perfectly to appreciate the wit, such as it is, we suppose Mrs A.'s servant returning with the answer to her complaint, which she opens, of course naturally expecting an expression of regret and apology. Before she opens the letter, there is every *appearance* of its containing nothing less. She opens the letter, however, and the *difference* is manifest;—an insult is added to the injury, for which not the slightest apology is made.

But if, in every instance of wit, without exception, there be excited in the mind, as Mr Scott has shewn, a perception of resemblance and difference,—and if, without exception, the resemblance in every instance be slight, and the difference be strongly marked,—it seems almost necessary to infer, that these two concomitants of resemblance and difference, subject to the peculiar conditions in which they are found united, are the true cause of that peculiar delight which, in minds capable of appreciating wit, never fails to accompany its exhibition; and this

opinion receives a singular confirmation from the altered proportions in which we find these two concomitants, if we examine a true simile or metaphor. I will take Moore's simile—

“ Like the gale that sighs along
Beds of oriental flowers,”

which you have quoted, for my example—admirably adapted, as I find it, for my purpose. Here, in the first stanza, the poet has, with great art, withheld the point of resemblance, and you read it without discovering the force of the similitude, of which only the terms are stated. Still, as there is not even an appearance of resemblance, and points of difference are alone perceptible, no feeling of the ludicrous is experienced, but the mind remains in a state of suspense and anticipation. But when the second stanza unveils the hidden treasure, we are so struck with the exceeding beauty and force of the similitude, that the points of difference occupy only a secondary station in the mind, which is principally engaged with the unexpected resemblance which it has discovered. So, I believe, in every other case. The conditions of the concomitants are uniformly reversed, and the effect is uniformly different; the pleasure received being of an entirely opposite character from that which is derived from the exhibition of wit. The inference of the causes and the conditions also in this case, seems inevitable, and the two cases seem mutually to confirm each other.

With regard to the second class of cases, in reference to which your first question occurs, it appears to me that the pleasure which arises in the mind of the observer has its source also in the perception of a resemblance and difference, of which the difference again is more strongly marked than ever. In the cases specified, neither Samuel Johnson, nor the unlucky footman, ever enjoyed the original witticisms; nothing of the original wit, therefore, appears in their attempted imitations. They become, however, unconsciously sources of wit, of which a perception arises in the mind of the observer, from the contemplation of the difference between the thing meant and the thing produced, the thing expected by the observer and the thing perceived by him. Exactly as in the case of Mr B.'s answer to Mrs A., it arises from the difference between the answer expected and the answer received. Samuel Johnson and the footman never having perceived the resemblances in the original witticisms, their imitations are as devoid of any resemblance in fact, as the originals were to them in appearance; but the observer who perceives the resemblance in the originals, and finds none in the imitation, perceives at once a new resemblance and difference, and in this instance the resemblance is more slight, and the difference infinitely greater than in the originals. Hence the greater absurdity arises. In these two cases, it seems neces-

sary to the full enjoyment of the laugh, that the observer should be capable of feeling and duly appreciating the original witticism, and that it should be still present to his mind. If Littlejohn had not written the original lines, Samuel Johnson's inscription would have been merely a piece of incomprehensible dulness, and would have been read without producing the slightest feeling of pleasure. The pleasure arising from what are termed *bulls*, is invariably traceable to the same causes. An Englishman, writing a letter at a coffee-house, observes an Irishman reading it as he writes it. Without taking any notice of the offence, he goes on to say, that he has a great deal more to write about, but that a d—d tall Irishman is reading over his shoulder every word he writes. The Irishman reads this, and, amid the tempest of his feelings, witlessly denies the fact, by his very denial proving it. Here the pleasure again arises from a perception of real difference and apparent resemblance, a difference between the thing intended and the thing done. The pleasure arising from practical jokes is derived from the same source. A boy rises for a moment from his seat, which is covertly removed, and upon his attempting to sit down, he overbalances himself and falls. If he is not hurt, and is tolerably good-tempered, he himself cannot refrain from joining in the laugh which follows. The pleasure here again is traceable to a supposed resemblance and real difference, the difference between the thing meant and the thing done.

But although the organ of Wit (as it is termed), aided by the organ of Comparison, appears to me thus to be the principal organ which enables us to enjoy the perception of Wit, I am far from thinking that it is the only organ by means of which the feeling which accompanies that perception is capable of being excited. On the contrary, it would appear to me, that each intellectual organ, within its own sphere, by means of its own innate power of perceiving resemblances and differences, is capable of originating the feeling. Thus a large organ of Tune perceiving the resemblance and difference between the performances of a good and a bad singer or musician, a feeling of ridicule at once arises in the mind, and a smile is the natural expression of the feeling. Nothing, therefore, can appear to me more unphilosophical, than to assign the name of Wit, and particularly of Gaiety, to the organ in question. The organ may, generally speaking, be essential to the perception of wit—according to Mr Scott's theory and mine, it would be; the gaiety too may be inseparable from the peculiar exercise of the organ under discussion: but it by no means follows, that either appellation is appropriate, even if every argument in favour of Discriminateness should be disproved. Convinced, however, as I feel, of the truth of Mr Scott's theory, I cannot help thinking,

that in the end the fact will be satisfactorily ascertained, and that the alteration he proposes will be adopted; in which case, I would venture to propose that some such term as the organ of *Assimilativeness* should be substituted for the organ of Comparison.

I will make no apology for the freedom with which, in discussing this question, I have ventured to dispute an opinion which has so long since obtained the sanction of your authority. You have not only taught your scholars too well to admit of their allowing any thing but complete conviction to satisfy their minds in matters of philosophy, but have also inspired them with too high an opinion of their master to allow them to doubt for one moment his readiness to receive with gladness any effort to remove an impediment in the paths of science. For my part, though your opinion has gone forth, I am so perfectly satisfied that you would derive nothing but pleasure from the success of my attempt, that, in common gratitude for the many hours of pleasure and sources of knowledge for which I am indebted to you, even if I had no other motive to actuate me, I should feel bound to make the effort. With every feeling of respect, I remain, &c.

GEORGE HANCOCK.

7 DELAWARE STREET, WESTMINSTER,
18th May 1835.

P. S. Should you be of opinion that any new light is to be obtained by the publication of this in the *Phrenological Journal*, of course I shall feel gratified by your sending it.

ARTICLE VI.

THE CHURCH OF SCOTLAND'S INDIA MISSION, &c.; BEING THE SUBSTANCE OF AN ADDRESS DELIVERED BEFORE THE GENERAL ASSEMBLY OF THE CHURCH, ON 25TH MAY 1835. By the Rev. ALEXANDER DUFF, A. M., the Assembly's First Missionary to India. 8vo. Pp. 27. Waugh & Innes, Edinburgh; Whittaker & Co., London. 1835.

WE had intended to write a notice of Mr Duff's Speech, and to call the attention of our readers to the forcible illustration which it affords of the manner in which Phrenology may be used as a means of preparing heathen and superstitious nations for receiving the Christian religion,—when we met, in the *London Courier* of 9th July 1835, some remarks upon it which, on account of their brevity, we prefer transferring to our pages. The writer in the *Courier* applies the facts stated by Mr Duff to the education of the Irish peasantry; but they are equally applicable to the education of all ignorant and superstitious nations.

" In lately making some remarks on the First Report of the Commissioners of Public Instruction for Ireland, we observed, that after three hundred years of incessant exertion, and after all that has been done by violence and injustice of every description to diffuse the Protestant faith in Ireland, six millions and a half of her people are still Roman Catholics, and only 852,064 are Protestants; and we drew the conclusion, that there must have been some great imperfections in the means of conversion employed, to end in such a result. We have perused the report of a speech delivered before the General Assembly on the 25th of May last, by the Rev. Alexander Duff, the first missionary sent to India by the Church of Scotland, on the subject of converting the Hindoos to Christianity; and it is so full of valuable instruction applicable to all nations, that we recommend especial attention to it to those who are particularly interested in Ireland. We noticed the speech at the time when it appeared in the newspapers, as remarkable for its honesty and judgment; and the full report confirms our favourable opinion. The parallel between India and Ireland holds good to a greater extent than might at first view be supposed.

" The Hindoos, it is said, have a religion of their own, which has come down to them from a very ancient period, and is attested by a revelation and miracles, and supported by the sufferings of saints and martyrs.

" Exactly the same might be predicated of the Catholics in Ireland, in regard to their peculiar dogmas. Of the Hindoos, Mr Duff says—' You try the argument from *miracles*: this argument, when disentangled from the mazes of sophistry, when understood aright, is invincible. They retort, however, that they themselves have miracles far more stupendous. And doubtless, if mere *gross magnitude* is considered, they say what is true; for, in this respect, *their* miracles set all comparison at defiance. Besides, with them the *original* miracles form an *inherent* part of their *theology*; and they have no notion of what is meant by an appeal to them, in order to authenticate a *doctrine*. And *modern* miracles they have in such abundance, that they are exhibited on the most trivial occasions, and become matters of daily occurrence.'

" Terms almost precisely similar to these have been used in describing the ignorance and superstition of the Catholic peasantry of Ireland; but mark the means by which Mr Duff proposes to remove this obstacle to the Hindoos embracing pure Christianity. It is not by appointing bishops and preachers for the purpose of expounding to them the Scriptures. His words are—' Again you are compelled to wish that you had the power of conveying such a knowledge of common science, the *first* of nature, or first principles of things, as would prevent

their confounding things monstrous with things divine ; things merely extraordinary with things absolutely *supernatural*.'"

"The excellent sense of this observation cannot be too highly commended ; yet this is precisely what the enlightened friends of education insist should be done with a view to the religious reformation of the sister isle.

"Mr Duff next adverts to the inefficacy of the argument from *prophecy*, and says—'Of the countries where the prophecies were uttered, the people to whom they were addressed, the times and circumstances in which they were fulfilled, they (the Hindoos) know nothing, and wish to know nothing ; so the argument falls powerless on their ears as the evening breeze upon the solid rock. Once more you are aroused to a sense of the necessity of communicating general knowledge that is sound in quality and sufficient in quantity.'

"Is the Irish intellect more capable of appreciating the true value and importance of prophecy, in a state of ignorance quite equal to that here described, than the intellect of the Hindoos ? The Irish do not, like the Hindoos, dispute the general truth of Christianity as a revelation ; but the Protestants are pleased to say that they are grossly misled in regard to the doctrines of that revelation. For this evil the only remedy is obviously that proposed by Mr Duff :—'Give them data in general knowledge for sound thinking, and train them to investigate and reflect, and you may then expect some progress to be made in throwing off their superstitions.'

"Mr Duff proceeds :—'Driven to the last shift, you perhaps appeal to the *internal* evidence. You find yourself farther than ever from your purpose. Internal evidence is to them pre-eminently a new and unheard-of idea. It implies spiritual purity, and wisdom, and excellence. And how minds like theirs, that are either pre-occupied with airy subtleties, or stultified with utter neglect, can be brought, in *the first instance*, to attend to or comprehend such topics, constitutes the great, the insuperable difficulty. You are now reduced to the lowest degree of helplessness ; and however sincere, and honest, and apostolic in your zeal,—if not blinded by a wild and senseless fanaticism, you cannot help exclaiming, 'O that I had the means of conveying the knowledge that would enable me to establish, by enabling these people to apprehend, the nature of my authority !' Thus the urgency of the call to communicate general knowledge to such a people is felt to be resistless.'

"Is it not said that the minds of the Irish peasantry are 'either pre-occupied' with gross errors, or 'stultified with utter neglect' ? And we again inquire, Whether a people so circumstanced can be efficiently reclaimed, without the communication of general knowledge, in Ireland more than in Hindostan ?

"In short, the speech of Mr Duff is one of the most powerful vindications that we have ever read, of the system intended to be pursued by government in regard to the religious instruction of Ireland. Instead of paying an enormously overgrown clergy for merely preaching against Catholic doctrines, they propose to apply the surplus revenues of the Church, after providing for Protestant ministers sufficient for the instruction of the Protestant population, in promoting the general education of all classes and denominations; and if this be the only effectual method of propagating Christianity in Hindostan, we cannot conceive that it can fail in also correcting errors in belief in Ireland.

"Mr Duff's speech deserves most serious attention from all persons interested in missions, foreign or domestic. He places the propagation of Christianity on the basis of reason, and fairly discards all pretensions to success from influences operating independently of the known laws which regulate the human understanding. We were much gratified to observe several highly judicious remarks to the same effect in the second volume of Lieutenant Moodie's 'Ten Years Residence in South Africa,' founded on his observations of the inefficacy of mere preaching in converting the Hottentots and Caffres."

To our readers who are familiar with the applications of Phrenology contained in Mr Combe's "Constitution of Man," it will be unnecessary to point out how much it is calculated to promote the object which the Rev. Mr Duff has in view. If it, or a book of a similar nature, were translated and presented to the Hindoos, it would effectually undermine their superstitions, and open up their minds for the reception of the highest views of Christianity. The work, we imagine, might also be employed with advantage as a text-book in the Irish schools. It teaches the great moral principles of Christianity, and shews their foundation in nature. It affords a stimulus to the intellect, and gives a clear view of the utility of knowledge of nature in every department. Experience warrants the opinion, that such a work, if properly expounded, and illustrated by examples, drawings, and other means, would make an indelible and beneficial impression on the youthful mind.

ARTICLE VII.

AN ESSAY ON THE APPLICATION OF PHRENOLOGY TO THE INVESTIGATION OF THE PHENOMENA OF INSANITY.

By DANIEL NOBLE, Esq., Member of the Royal College of Surgeons in London, and President of the Manchester Phrenological Society.

IF Phrenology, as a science, were not susceptible of practical application, its investigation as a philosophical pursuit could not be insisted upon. Hence the inquiry, What are the uses of Phrenology? is nowise impertinent: only it should be remembered, that the answer must always be preceded by the proof, or by the assumption, of its truth; and that a fair understanding of its great principles, and of its leading details, must exist in the mind of the inquirer, before the explanation of its utility can be rightly appreciated. And when it is clearly and satisfactorily perceived that Phrenology is the true philosophy of the mind and the true physiology of the brain, the extent and importance of its practical application will readily be understood; for indeed, without assuming too much, Phrenology may be truly designated as the science of the moral and intellectual nature of man. Upon a former occasion I had the honour of reading to this Society a paper, wherein I attempted to explain the true extent to which Phrenology is fairly applicable in the estimate of human character, in which process the *healthful* manifestations of the mental faculties are observed, in dependence upon the *physiological* conditions of the brain; and in the present paper I shall attempt to demonstrate, that the science which we are cultivating is not less applicable in the investigation of the phenomena of insanity—in the study of the *depraved* manifestations of the human mind, in connection with the *pathological* condition of the brain.

Phrenology having proved, what previously was but a well-grounded hypothesis, that the brain is the organ of the mind, and that, in accordance with the analogy of all nature, a diseased condition of the organ must necessarily tend to the depraved manifestation of function, a flood of light has at once illuminated that hitherto obscure path pursued in the investigation of mental derangement; and Phrenology bids fair, if assiduously cultivated, to remove the intricacy and mystery from this once dark subject of inquiry, for so many ages the opprobrium not only of the professors of medicine, but of the whole of civilized mankind. In what manner, then, it will be asked, has the subject of insanity been placed in a more advantageous point of view, as a matter of philosophical investigation, by the discovery of Phrenology? Precisely in this way—by enabling the

student of insanity to prosecute his inquiries on the same rational principles upon which in these days scientific pursuits are for the most part based ; and by enabling the medical inquirer, and the medical practitioner, to regard mental disease, as it has improperly been called, in the same light that he regards the diseased manifestation of any of the corporeal functions,—and, from the analogy afforded by the actual condition of medical science, to deduce those leading principles of treatment in the management of the insane, which were for so long a period most ignorantly and most wofully disregarded.

By demonstrating that diseased manifestation of mental function is connected with corresponding derangement of the material organ ; by analyzing the human mind, and defining its primitive powers and inclinations ; by shewing the organic connection between special parts of the brain and the special faculties of the mind ; by satisfactorily proving that the phenomena of insanity are invariably and necessarily dependent upon disease of the brain,—Phrenology offers, for the first time, a distinct clue to a system of cerebral pathology and cerebral medicine, as rational as that afforded by any of the other branches of the healing art.

The grand points to be held in view, and the great objects sought to be attained, in the study of disease, by the scientific inquirer, are—to know well the ordinary and natural manifestation of all the functions of the human body, and the organic conditions upon which this depends ; to observe accurately the deviation from such manifestation, with its kind and extent ; to ascertain, so far as is practicable, the precise state of the organ whose function is disturbed ; and, with philosophical caution, to deduce the connection between aberration in function and change of structure. And, in the prosecution of these main objects of medical inquiry, a proper understanding should exist of the relation between the corporeal organs and the agents by which they are influenced ; and the conditions, in this respect, must be investigated in each particular object of inquiry. In this way is the study of medicine rendered a scientific and rational pursuit, in opposition to the empirical procedure of administering medicaments with the mere expectation of a fortunate result, without reference to the known adaptation of the remedial agency to that alteration in structure or function upon which disease depends ; and Phrenology affords the materials for a similar process of investigation of the phenomena of mental derangement.

It is greatly to be regretted that the most vague and indefinite notions as to the real nature of insanity have for the most part prevailed up to the latest period. Nor can our wonder be excited by this circumstance ; for, as sound notions of physiology

must necessarily precede the cultivation of true pathology, it is clear that a right understanding of the phenomena of insanity could not possibly precede the discovery and the practical application of Phrenology. And, on referring to the history of this formidable malady, we shall find that it was for ages a subject of the greatest possible mystery and confusion, alike to the physician and to the metaphysician: the former looking in vain for satisfactory evidence as to the actual essence, the extent, or the locality of the affection: and the latter being bewildered in the attempt to define the nature of a morbid condition of an immaterial principle. Thus many physicians of the ancient schools of Europe and Asia taught with perfect gravity, and most oracular self-complacency, that the stubborn intractability and innate grossness of matter was the source of all that was unamiable, disordered, or imperfect, in every order of thinking beings; that every thing of a refined or celestial nature was attributable to the ascendancy of the etherial essence of the soul; and that the predominance of the qualities of grossness and intractability in the material principle constituted the essential condition of every mental imperfection. The magi and the metaphysicians of antiquity would discourse most learnedly of ideal forms, immutable essences, the transmigration and community of spirits, and other most incomprehensible matters, in discussions of this subject, with the attempted precision with which in these days we discuss the exact or the physical sciences. In some instances, it was believed that mental derangement was brought about by the malignity of demoniacal influence; and in others, where the change of character was very complete, it was believed that an actual exchange of the immaterial spirit had been brought about—from which notion the term *alienation* of mind is supposed to have had its origin. These ludicrously vague philosophisms relative to the nature of insanity prevailed for the most part anterior to the era in which Hippocrates, the father of medicine, began to flourish. The giant mind of this illustrious philosopher appears to have been the first to glance even at the true nature of this afflicting disorder; his views, however, in the absence of correct data, are necessarily imperfect, and in most respects erroneous. Nevertheless, he distinctly recognises the brain as the organ of the understanding; and, mixing up his pathology of the humours with their effects upon the brain, he accounts for the phenomena of irregular or undue manifestation of the mental faculties. Notwithstanding, however, the clew afforded by Hippocrates to the true advancement of this branch of science, but little progress was made for centuries; and minstrels, itinerants, and astrologers, maintained the principal reputation in its humiliating history. Since the days of Hippocrates, a succession of writers have discussed the subject of insanity, professedly and incident-

tally,—and yet, up to the present century even, without any very useful contribution to its history, or improvement in its modes of management; and this unsatisfactory result may readily be traced to imperfection in the data upon which the investigations or theories have proceeded. Even amongst more modern writers, who have had the advantage of an improved condition of medical science, the greatest lack of precision, and most imperfect modes of observation of the phenomena, may be noticed, where the guidance of Phrenology has not been sought; and their definitions and classifications of the phenomena of insanity may be taken as evidence of the actual state of information upon the subject, where the advantages afforded by Phrenology have not been obtained. Thus I will take the definition of insanity as given by an author named Harper, who wrote upon this subject about the end of the last century, and who is quoted with great respect by the celebrated Pinel:—He says, “I will take upon me to define and pronounce the proximate cause and specific existence of insanity, to be a positive immediate discord in the intrinsic motions and operations of the mental faculty, exerted above the healthful equilibrium, its exact seat to be in the prime movement, and its precise extent just as far as the nervous power conveys its influence.” As a specimen of classification, I may allude to the division of the celebrated nosologist Dr Mason Good, wherein he attempts to establish six genera, fifteen species, and twenty-seven varieties, of insanity; of which classification, that most able and truly useful author Dr A. Combe, in his admirable work on Mental Derangement, observes—“Most of them are symptoms not peculiar to one form of disease, but common to many, and depending, not on different kinds of affections, but chiefly on the particular part of the brain which is in fault; and, in short, they are symptoms which may change into others, or even disappear entirely, and yet the disease remain active and unchanged.”

In these instances, and in these historical illustrations, we have a fair specimen of the mode in which the subject of insanity was for ages regarded. Diseased manifestation of the mental faculties was attempted to be defined and explained before the character of the healthful manifestation was understood; and any speculations as to the physical conditions of insanity were necessarily futile, in ignorance of the proper organic connexion between the faculties of the mind and the structure of the brain. And under such circumstances, it is plain that any other result was not to have been looked for.

The history of the general science of Medicine affords almost a precise parallel, in its progress, to that of the particular branch at present under consideration. In the earlier periods of medical inquiry, little theoretical information was possessed or sought

for ; the administration of popular specifics, and the employment of magical incantations, constituted its main features ; and it was not until the time of Hippocrates that we have any well recorded evidence of the existence of any *system* of medicine : hitherto all had been empiricism and degrading superstition ; and he is said to have been the first to be fully aware of the fundamental truth, that in medicine, as much as in any other science, the source of all our knowledge must be in the accurate observation of actual phenomena, and that a careful classification and comparison of these phenomena should alone be the foundation of all our reasoning. But notwithstanding the science of medicine was thus grappled with by such a Colossus in philosophy, the grand source of error and retardation existed in the proceeding of Hippocrates. For he studied, applied, and taught the pathological conditions of the human system prior to the investigation of anatomy and physiology ; and hence, however brilliant and captivating his doctrine of the humours and the temperaments, and notwithstanding its long-continued reign and popularity, it has been doomed to fall beneath the scythe of advancing science. Galen is supposed to have been the first who attempted to erect the superstructure of medicine upon the basis of anatomy and physiology ; and although, by his mixture of merely hypothetical views with inferences fairly deduced, his doctrines of disease were of a nature to enjoy no permanent reputation, yet his having been the first to begin at the right end, so to speak, will for ever insure to him no ordinary fame. However, although the example of Galen was well calculated to produce an important and satisfactory advance in medical science, it yet appeared, for centuries, as if mankind were satisfied with what had been achieved ; and with the obscurity of literature at the destruction of the Roman Empire, the science of medicine, as a subject of rational inquiry, ceased almost to be prosecuted,—and during the middle ages, *opinion* and *authority* seemed to hold unbounded sway. Medical practitioners of those days most commonly enlisted themselves under the banners of some philosopher of the ancient schools, and, by implicitly adopting particular theories, they constituted rival sects in medicine, almost as prominent in its history as political parties are in our own day. There were the chemists and the alchemists, the Galenists and the Hippocrateans—so designated, not so much from their methods of investigating disease, as from the peculiar doctrines which, when once adopted, they acted upon and defended with all the acuteness and subtlety with which perverted ingenuity would supply them. Each rival sect would support its tenets, as though the leading facts of medicine had been definite and settled, and but needed refining by the subtleties of scholastic logic ; whilst, in point of fact, the state of me-

dicine at this era, may not inaptly be likened to the condition of human information upon the subject of insanity prior to the discovery of Phrenology. But this long night of scientific Vandalism was not to endure for ever; it was about to close, and be succeeded by the refreshing dawn of the Baconian philosophy: the revival of letters brought about a new and a better era in the annals of science, and the study of medicine participated in its advantages; a sure foundation was about to be laid, on which a sound and rational system might afterwards be erected. The great Haller, who has been justly termed the Father of modern physiology, was the first, after the diffusion of the light of revived literature, to institute a lengthened series of experiments, with the view of ascertaining the nature and character of the healthful manifestations of the corporeal functions, and the organic conditions upon which they depend; and by carefully abstaining from all opinions founded merely on speculative grounds, he almost exclusively deduced his general principles from actual observation of nature. Hence Haller may, in some sense, and to a certain extent, be regarded as having done for the general physiology of the body and the science of medicine, what Gall accomplished in the physiology of the brain and for the subject of insanity: they each, by actual observation, studied the *natural* actions of the system, and their organic dependences; and hence instituted a sure standard of comparison, by which the extent and the character of *depravation* of action could be estimated. The labours of Haller having given the impulse, and free and extensive intercommunication of thought having been created by the discovery of printing, disease became generally studied upon a philosophical basis; an extensive list of contributors to the great stock of anatomical, physiological, and pathological science soon followed,—forming a splendid catalogue, in which the names of Bichat, Portal, and the Hunters, shine forth conspicuously; and upon the foundation laid by their labours, has been erected the present exalted superstructure of medical science.

In the slight sketch which I have here drawn of the progress of knowledge concerning insanity, and of medicine in general, it will be observed that the parallel in the two histories is most complete; and it must, I conceive, be at once admitted, that we may, in our future inquiries upon the subject of mental derangement, anticipate a most important and satisfactory advancement of our information, with Phrenology, the true physiology of the brain, as the basis of our investigations.

After what has been said in a preceding part of the present paper, the particular mode in which Phrenology promises to elucidate the phenomena of insanity will readily be understood. In the first place, Phrenology having demonstrated that the

brain is the organ of the mental faculties, that separate parts subserve separate functions, and that healthful manifestation of a faculty depends upon the healthful condition of the organic material, and vigour of function, *cæteris paribus*, upon size of the cerebral organ,—a standard is at once fixed, by which to estimate the character and the extent of the affection called insanity. Phrenology, then, having shewn that the mind in this life acts through, and is dependent upon, the cerebral organization, leads most unequivocally to the inference, in accordance with all analogy, that insanity is *functional disease of the brain*, and, so far as we can reason upon such a subject, not a disease of the immaterial soul. And the variety and the character of the functions of the brain being developed by Phrenology, we may now study its diseases upon those rational principles, which at the outset I enumerated as guiding the scientific inquirer in general medical science—viz. we may know the *ordinary* and *natural* manifestation of the mental faculties, and the organic condition upon which this depends; in which case, we shall be enabled to observe accurately the *deviation* from such manifestation, with its kind and extent: and we may, by diligent prosecution of the subject, expect to be enabled, in many cases, to ascertain the precise state of the organ whose function is disturbed,—and may attempt, with no unphilosophical procedure, to deduce the connexion between aberration in function and change of structure.

In the history of insanity, there are few points in connexion with it that have presented greater difficulties than the subject of *monomania*—a term, as is known to all, used to designate those cases where the mental derangement is observed to be upon only one subject; or, if upon several, holding a relation to one mental faculty only. It must immediately strike every one who has the slightest acquaintance with Phrenology, that the strictest harmony subsists between this condition and the whole of its doctrines. The organs, in the aggregate constituting the brain, may, in the most perfect accordance with all that is known of disease, be in a morbid condition individually, and so affect only the corresponding faculty of the mind, the others remaining in a state of perfect sanity; indeed, if nothing had been observed or heard of monomania, the phrenologist, being at the same time a pathologist, would at once have declared, *a priori*, that such cases must occur, or that the brain would furnish an exception to the general laws of the animal economy.

An objection may here be stated to what I have advanced above, to the effect that morbid anatomy does not, in cases of insanity, afford that corroborative evidence of the soundness of the phrenological doctrines, which general physiology receives from the same source; and, in support of this objection, many

eminent names may be adduced. In reply to this, I beg to observe, that phrenologists, and writers ignorant of Phrenology, have recorded numerous facts, clearly connecting mental derangement with evident change in cerebral structure, and many cases where the marks of cerebral disease have accorded with the locality of the organ previously evincing disturbance of function. But our opponents tell us that there are cases of mental disease, as they term insanity, where no corresponding change in the brain can be detected. This we admit. But let me ask, How stands the matter as regards the general laws of the human system? Why, every tyro in pathology is well aware that aberration in function is not *always* accompanied by appreciable change of structure, nor obvious change of structure by marked or appreciable aberration in function; and, moreover, that the nervous tissue is of such a character, that its changes are of a much less notable kind than changes in the appearance of most of the other tissues. It may be further added, that there are many affections allowed by every pathologist to depend upon some lesion of the nervous substance, for which no appreciable alteration in structure will account; and, lastly, I might object at once to the evidence afforded upon this subject by persons ignorant of Phrenology, which, if it be the true physiology of the brain, could alone lead to *accurate* investigation of this branch of science. Hence, if we were to reject Phrenology because its evidences, through morbid anatomy, are incomplete, we might at once reject the doctrines of the whole animal physiology.*

It is not my intention, upon this occasion, to enter upon any discussion relative to the causes or the particular characters of the various forms of mental derangement, nor to suggest or explain their modes of management; my object, in the present paper, being simply to shew the applicability of Phrenology to the investigation of insanity, in the same way as the principles of physiology may be, and are, applied to the prosecution of general medical science: and having shewn that the general history and precise progress of each branch of science have been strikingly analogous, and that an exact parallel exists between the nature of mental disease, if we must so designate insanity, and that of corporeal, I will now pursue the analogy, and shew that, by the aid of Phrenology, we may adopt a strictly rational system in our treatment of the insane, in exact accordance with

* Such of our readers as desire to study the question as to morbid appearances of the brain in insanity, are referred to Gall sur les Fonctions du Cerveau, il. 206-242; Spurzheim on Insanity, ch. ii. sect. iv. il. 2; Dr A. Combe's Observations on Mental Derangement, ch. viii.; Marshal's Morbid Anatomy of the Brain in Mania and Hydrophobia, London, 1816, p. 145-391; and Dr Brigham on the Influence of Mental Cultivation and Excitement upon Health, sect. ii.—EDITOR.

that which we adopt in the ordinary and rational practice of medicine.

In speaking of the philosophical investigation of disease, at the outset of this paper, I laid it down as a necessary position, that, for its satisfactory treatment, a proper understanding must exist of the relation between the corporeal organs and the agents by which they are influenced; and, this being properly appreciated, an ample basis is afforded, upon which may be established a rational system of treatment. Thus, by way of illustration, each animal function having its related objects, by and upon which it is exercised,—the digestive organs are influenced by, and exert their own proper action upon, the various kinds of aliment; the heart and arteries are exercised by and upon the blood; the respiratory system by and upon the atmospheric air; and so on. Suppose, then, that debility of any of these functions has been induced by a deficient or too abundant supply of their related objects, the main indication will obviously be to increase or to diminish their application. Thus, the stomach having been exhausted by excesses of the table, a knowledge of the relation between kind and quantity of food, and the stomach, enables us to relieve the latter, by regulating the supply of the former. Again, if an individual shall have an embarrassment in the respiration, ascertained to be dependent upon the inhalation of impure air, the knowledge of the relation subsisting between the atmosphere and the lungs, will point to a change of air as an essential proceeding in the conduct of such a case. Again, experience having taught us that a certain relation exists between the various organs and functions of the body and certain substances called medicines, a knowledge of such relation leads to their employment when the state of the functions seems to require their peculiar action upon the system. Thus, it is ascertained that certain preparations of mercury, in suitable doses, will stimulate the function of the liver, and increase the flow of bile; and hence a knowledge of the relation between the organ and the medicament leads to the employment of the latter in certain conditions of the former.

These examples are sufficient to illustrate the leading principles which guide the scientific practitioner in his treatment of ordinary disease; and I will now proceed to explain the manner in which we may be led to an equally rational system in the treatment of the insane.

We are taught by Phrenology, that the brain is a congeries of organs, each organ performing only its own proper function, in the manifestation of some primitive faculty of the mind. Phrenology demonstrates to us the locality of the cerebral organs individually, and their corresponding functions, and, moreover, enables us to ascertain the objects, or conditions, in rela-

tion to which each faculty becomes exercised. Thus, for example, there are the faculties of *Individuality* and *Eventuality*, or the power to know and to remember existences and events; these faculties have their related objects in the external world, and in its mutations: among the sentiments, there is implanted within us a sense of *justice*, whose related objects are the rights and feelings of our fellow-men; and amongst the propensities may be adduced the *sexual instinct*, whose related object is the opposite sex: and, in like manner, all the mental faculties, manifesting themselves through the instrumentality of cerebral organs, hold some definite relation to external conditions or circumstances, either in a moral or in a physical point of view, just as the lungs hold a definite relation to the atmosphere, the stomach to the food, or the vascular system to the blood. And as, in our management of disease generally, we can, to a great extent, accommodate the related object to the disturbed function, in such a way as to diminish the irregularity of the latter; so, with a knowledge of the precise disturbance of cerebral function, can we in many cases accommodate the supply of its appropriate stimulus. For instance, suppose insanity to have been induced by a constant and long-continued ramble in the field of metaphysics; suppose the irregularity of mental manifestation to be of a character to shew to the phrenologist that *Causality* is the faculty whose organ is deranged; suppose, from its metaphysical over-exertion, a morbid excitement to have taken place; what would be the indications of cure upon the general principles of pathology? Why, plainly to allow the diseased organ for a time to be as much at rest as might be practicable, by the total withdrawal of the exciting effect of argumentative discussion,—and, by an increased presentation of related objects to other faculties, to *derive*, so to speak, the nervous energy from the diseased to other and healthful parts of the brain. Upon this principle may the *moral* management of the insane be conducted; and, in the *physical* treatment, Phrenology may be of little less extensive application. It is by no means an uncommon circumstance to discover physical signs accompanying mental derangement in the region of the cerebral organ whose function is disturbed; such signs, for instance, as increased heat, pain, and partial baldness: under such circumstances, it is fair to infer that a great advantage in the physical management of a case may be gained. Even in cases where no local physical signs of disease were apparent, treatment applied immediately to the region of the organ manifesting derangement of function, might not improbably be prosecuted with the greater success; and this, too, in perfect accordance with the analogy of other departments of medicine. For example, there are cases of functional disturbance of the stomach where no tenderness on pressure is manifest,

and where no other obvious sign than irregularity of function would induce us to refer the disease to the stomach ; there are such cases, in which a cure may be effected almost at once by the application of a few leeches or a blister to its region. And I apprehend, that in many cases of functional disturbance of the brain, advantage would be gained by directing the physical treatment to particular localities, according to the circumstances of the case, even where no physical signs would lead us to any distinct region of the head. A large proportion of the cases met with amongst the inmates of a lunatic asylum being of an incurable nature, I may here refer to the assistance which Phrenology would render to the medical attendant, in his discrimination of the hopeless from the other cases. Many who have displayed mental imperfection from their birth, owe their misfortune, proximately, to faulty size or configuration of the head. It were almost superfluous to observe, that as Phrenology would readily lead to the discovery of such patients, so would it enable the practitioner to give, in these cases, a much more accurate prognosis than, under other circumstances, would be practicable ; just as an asthmatic chest (to refer again to the general analogy of medicine) dependent upon native malformation or deficiency of size, would at once be pronounced incurable.

I think it will appear manifest from what has been advanced in the present essay, that upon the assumption of the truth of the great principles and of the leading details of Phrenology, the science can be shewn to be of the most extensive utility ; and that, by its aid, facts may be ascertained, and an accuracy in reasoning thereupon be secured, which we should look for or attempt in vain in the absence of this powerful auxiliary. If Phrenology be recognised as sound doctrine, it must be received as the sure physiology of the brain and the true philosophy of the mind, so far as this latter can be made a subject of investigation in the present life ; and insanity, or mental derangement, must be allowed to stand in the same relation to certain states of the brain, as disease of an ordinary nature is allowed to stand to the varying conditions of the rest of the animal fabric. Hence it must be obvious, that if a responsibility attaches itself to one class of individuals more than to another upon the subject of Phrenology, the members of the medical profession constitute that class. If we may in any manner measure the importance of an organ by the character of its functions, we may certainly claim for the study of every thing connected with the brain and its functions, a fair share of that time and attention which medical men devote to the cultivation of their profession. It is, however, much to be regretted that medical men do not pay that attention to Phrenology which the public have a right to demand at their hands. It must, indeed, be granted that many,

of the highest attainments in science and philosophy, are withheld from the study of Phrenology by the persuasion of its want of foundation in nature. But, as is almost invariably the case, we find such individuals to be in ignorance of the true nature of the science at which they scoff, and invariably learn, upon inquiry, that they have not taken the only sure means of arriving at a proper conclusion: they have not appealed to Nature to see for themselves whether the things said of Phrenology be so; and hence, however great or eminent such individuals may be in most of those things which elevate mankind above their fellows, yet, considered as witnesses upon what they have not observed, they are entirely worthless: they may attempt to reason against Phrenology from the analogy of what they *have* observed, but in no case is *analogical* reasoning admissible in opposition to *direct*.

It is a melancholy truth, but one which will generally be allowed, that mankind, for the most part, are stimulated to the prosecution of science by motives of a selfish nature; and Love of Approbation and Acquisitiveness are but too often the main inducements. The medical student does not form an exception to the general character of his race; and hence he studies with assiduity those things only which, according to the state of popular information, will be the most likely to procure for himself honour and emolument. Amongst practitioners, the objectors to the study of Phrenology will allow of a threefold division, upon the same principle as that on which Dr Mackintosh of Edinburgh, in his "Practice of Physic," classes the objectors to the employment of the stethoscope:—1st, There are those who are too well employed to study any thing new; 2dly, Those who have not the requisite mental faculty for enabling them to appreciate the nature of Phrenology; and, 3dly, Those who are too indolent or too old. From any of the above-mentioned classes of individuals, Phrenology, as a progressive science, can have nothing to hope: but to those who neglect to investigate its truth or falsehood because they do not see how it is to be the source of either honour or emolument, it may be said, that, when proved to be true, as it will certainly be to the full conviction of all who inquire of Nature in a philosophic spirit, its advantages to the conscientious practitioner of medicine are of sufficient importance to stimulate the inquirer to obtain their possession; and that the loss which those ignorant of Phrenology sustain in many important departments of their art, is no inappropriate penalty for their contumelious neglect. And, lastly, I may offer to many a more effective and a more *stirring* argument, when I say, that, from the great progress which Phrenology has made, and is now making, amongst the non-professional part of the community, the time may not be at any great distance when

the public will refuse to pardon, in the medical man, ignorance of what they believe to be the only true physiology, and the only sure basis of the pathology, of the most important organ in the animal economy; and it is not impossible that, in many cases, they may be induced to signify their indisposition to pardon such ignorance in a way which may be very sensibly felt, and in a manner not readily to be forgotten. But let no such paltry or ignoble views of the objects of science sully the path which we are pursuing: we are convinced that Phrenology is true; we are assured of its advantages; and we are accumulating evidence to increase our own information, and to carry conviction to the minds of others: and if in this pursuit we have no other reward, we shall have that which is above all price—the satisfaction of an approving conscience.

ARTICLE VIII.

CASE ILLUSTRATIVE OF THE UTILITY OF PHRENOLOGY.

A YOUNG gentleman, 19 years of age, from England, accompanied by a clergyman who acted as his tutor, brought a letter to a phrenologist in Edinburgh, with a request that the young man's head should be examined, as his character and history were very extraordinary. The request was complied with, and the following development was carefully taken, and afterwards confirmed by other four phrenologists who took an interest in the singular case.

DEVELOPMENT.

General size of head considerable; anterior lobe large; temperament, two parts sanguine, two nervous, and one lymphatic. Development irregular and unusual.

(Instinct of Food, rather large, 17)	18. Wonder, rather large, . 17
1. Amativeness, rather large, 17	19. Ideality, full, . . . 14
2. Philoprogenitiveness, large, 18	20. Wit, full, . . . 15
3. Concentrativeness, full, 14	21. Imitation, large, . . 18
4. Adhesiveness, rather large, 16	22. Individuality, rather large, 17
5. Combactiveness, rather full, 12	23. Form, large, . . . 18
6. Destructiveness, full, . 15	24. Size, rather large, . 17
7. Secretiveness, rather large, 17	25. Weight, large, . . . 18
8. Acquisitiveness, large, . 18	26. Colouring, full . . . 14
9. Constructiveness, rather full, 13	27. Locality, large, . . . 18
10. Self-Esteem, large, . . 19	28. Number, full, . . . 15
11. Love of Approbat. rather full, 12	29. Order, rather full, . 13
12. Cautiousness, rather full, 13	30. Eventuality, large, . 18
13. Benevolence, very large, 20	31. Time, rather large, . 17
14. Veneration, very large, 20	32. Tune, rather full, . 13
15. Firmness, rather full, . 13	33. Language, rather large, 16
16. Conscientiousness, full, 14	34. Comparison, rather large, 16
17. Hope, very large, . . 20	35. Causality, rather large, 17

As there was the appearance of a rickety and scrofulous constitution, and the presence of high nervous excitement, it was asked, Whether the young man had been a rickety and scrofulous child, and late of walking alone? The answer was in the affirmative, and that he could not walk alone till he was six years old. To the question as to excitement and excitability, it was answered, that he was almost always under an extraordinary excitement. From this it was inferred, that there would be an unusual impetus in his actions; to the statement of which inference the answer was, "Yes, he is always at *high pressure*, straining after this object and that."

It was obvious that this was a case of unhealthy action; and as the excitement was *known* to the phrenologist, he did not consider the case as one of which, had he seen only a plaster cast of the head, he could have spoken as he actually proceeded to do. Knowing that the impulses were strong, he treated the case as one of a certain degree of derangement, and inferred what it was likely that in *that* character it would turn out to be. From the development he inferred that all the three classes of faculties, animal, moral, and intellectual, would act with a force beyond the control of the individual, and stated to the tutor,—out of the young man's presence,—that there would be a strange contrariety of character: on the one hand, very considerable talents, a very powerful and active benevolence, and strong religious emotions; on the other, a relatively moderate conscientiousness, great self-sufficiency, a tendency to cunning, deceit, and falsehood, a certain unconcern about character, with some animal propensities of a still more puzzling kind. Acquisitiveness being large, Conscientiousness not more than full, and Cautiousness only rather full, it was conjectured that the manifestations of the first might have perplexed the individual's friends. The tutor was much struck with the question, "Does your pupil ever appropriate articles that do not belong to him?"—and the answer was given, not without emotion, that he had been forced to quit a great educational institution for detected *theft*, both in shops and houses; and that to board him far away from all who knew him, and from criminal prosecutions yet threatened against him, was the chief reason for bringing him to Scotland.

It was then asked, If it was not known that he was a slave to the solitary abuse of Amativeness? The answer was affirmative,—that he was brought home from school on that account, and that the vice shewed itself by natural impulse so early as six years of age. The organ supposed to be that of the instinct for food,—to which the name of Alimentiveness has been given,—being considerable, a question was put, Whether or not fits of unaccountable voracity did not sometimes shew themselves?

To this also the answer was affirmative, and that the whole three vices seemed to have a simultaneous activity, the one impelling to the other, so that it was necessary to watch the stealing propensity whenever the voracity shewed itself. The solitary vice had evidently injured the whole brain; and incipient paralysis, its usual consequence, was observed from other symptoms.

The case was so evidently one of cerebral derangement, that the phrenologist told the tutor that the poor young man was a *PATIENT*, and not a *CRIMINAL*. He was of a family of fortune, wanted for nothing, and had no temptation to theft; yet, nevertheless, the propensity was beyond his control. The tutor expressed a feeling of great relief on hearing that there was really an excuse for the conduct of a youth whom, with all his faults, he could not help loving for his many amiable qualities. With considerable emotion he said that it was the first moment of something like consolation which he had experienced in the unhappy case. Wherever he had before turned, he had seen hostile society, and even legal vengeance; the walls of the late place of his pupil's studies chalked with his disgrace, and prosecution threatened by tradesmen. The present was the first time that he had heard him humanely sheltered as an irresponsible being, visited with *disease* by his Maker's hand.

There was no difficulty in explaining from the development, the tutor's affection for a youth, whom society had, in ignorance, hunted from its pale; for the organization of the young man indicated great kindness of heart, which his tutor said was manifested at any expense of personal labour,—great tenderness to children,—and, what was most to his tutor's content, who himself had strong religious feelings, ardent devotional sentiments, and active religious habits. These last, he said, extended not only to much prayer and contrite confession of his besetting sins, but to visiting and praying with the sick, reading with the poor, and zealously teaching a Sunday school. Of course, all who knew the fatal propensity to which the young man is subject, set all his religion down to gross and disgusting hypocrisy. Not so the phrenologist, who knows that such feelings, *as feelings*, are quite as much impulses as the acquisitive propensity itself. The tutor was furnished with a series of queries, and his observations in writing requested,—each query being understood to be a predicate of what the phrenologist had concluded from his own inspection; and, for a reason to be stated in the sequel, we are permitted to publish the whole case, including the following letter received from the tutor. The queries will be easily distinguished from the answers, as the latter are printed in italics, within brackets.

1. To note down a history of Mr ——— as far as known to him, beginning with his infancy; and the nature of the weak-

ness of health then experienced.—If rickety? (*Yes.*) If subject to fits? (*No.*) If long of walking alone? (*Yes.*) If slow development of mind? (*Yes*), or precocious.

2. The history of the *secret abuse*. When it commenced? (*At a very early age, six or seven.*) And if a native impulse? (*Yes*); or the effect of example, or corruption of companions or others? (*No.*)

3. If subject to occasional fits of excessive appetite for food? (*Yes.*)

4. At what age the propensity to appropriate shewed itself strong? (*From infancy*); and when it is strongest: if when the other propensity is in activity? (*Yes.*) Is it irresistible? (*Yes*); so that nothing exposed would be safe? (*Yes.*)

5. Is what is taken concealed and stored up? (*No.*)

6. Is there cunning, and any tendency to prevaricate or lie? (*Very great.*)

7. Is there not a want of firmness of purpose or power to control or resist temptation? (*Very great.*)

8. A carelessness about what opinion is formed by others? (*To those he is indifferent to, but not to those he likes.*) A certain want of shame? (*Rather so; his own confession.*)

9. A high estimate of self, even to pride and self-importance, and a tendency to love and tell marvellous tales, of which self is the hero, often untrue or exaggerated? (*Yes!!*)

10. Kindly feeling and love to children (*Yes.*)

11. A tendency to attach to friends? (*Very much so.*)

12. A want of caution and circumspection? (*Very much so: books stolen placed immediately on his book-shelves; rings stolen exposed on his lamp-stand at the very time when he was charged with the theft.*)

13. Great kindness of heart, charitableness, and obligingness? (*Very much the case.*)

14. Obedience, respect, submission, deference to rank, love of antiquity? (*Very great: the attraction of Loch-Leven Castle and the keys is remarkable; is frequently saying he should like to be an Earl; has collected autographs and seals of living characters, Lords Grey and Brougham, and most of the nobility, which he values highly.*)

15. Religious fervours; facts on this? (*Just the very thing: strong convictions; "religious fervours;" generally correct in his moral conduct; remarkably attentive to the Sabbath, would teach at the Sunday school, and read to the labouring poor in the evening; seemed really in earnest, and I have no doubt was so. His theory of religion correct, and what would be decidedly considered evangelical. A great admirer of the Record newspaper, to which he contributed occasionally, in letters complaining of Sabbath desecration by Cabinet Councils, &c.)*

16. A generally happy and sanguine frame of mind; always hoping the best? (*Always!! quite a feature in his character.*)

17. Some love of the sublime and beautiful? (*He writes—“greatly so.”*)

18. The intellect quick, apt? (*Just so—apt.*) The memory good? (*Yes.*) The reflecting powers considerable? (*Yes.*)

19. A decided talent for drawing, worth cultivating? (*He says, No; we are inclined to think he has—certainly worth cultivating.*)

20. No music? (*Cannot whistle a tune.*)

21. A mechanical turn, and would like to work at the turning-lathe? (*Does work at it; has expended L. 12 or L. 14 in tools.*)

22. If the articles apt to be appropriated are such as gratify any one strong feeling? (*Yes*); as books on religious subjects, science, &c.? (*Yes; Cecil's Remains, Bridgewater Treatises, for instance.*) Or is it not indiscriminate? (*No.*) What use made of articles; if ever given away? (*Very frequently.*)

23. If ever any wanderings of mind or eccentricity of manner? (*A little—not a little.*) Headachs, sleeplessness? (*Yes.*) Any disease? (*Strong and muscular, though always fancying himself ill; very timid. There is scrofula in the family, and it has been the fashion to consider him unhealthy. I gather from him farther, that the desire of appropriation is strongest after he has taken one thing; he then feels reckless, and tries to get all he possibly can, and feels reckless of the consequences. His outward behaviour, it has been stated, is not only decent but exemplary. There is about him a strong impression that God sees him; and at times, he says, he can almost hear his Saviour intreating him, by all His sufferings, not to commit the sin; but yet, at times he has committed both of the sins, with passages of Scripture condemning him at the time; and he very seldom does wrong but what some most striking passage occurs to him at the time. The most dreadful sin, he says, he did once leave off, viz. after he had been told of it, when residing with a private tutor for about three weeks; yet so great was the difficulty at times, that he says, “I have known the perspiration to run down me.” It is strongest after drinking much wine or spirits, and more so in warm weather, particularly after bathing in either warm or cold baths.*)

The following letter, written subsequently to his visit to Edinburgh by the young man himself, will serve to shew the kindness, affection, and devotion, of his better feelings. Its sincerity will not be doubted by any phrenologist who has perused the cerebral development. It was not expected by the unhappy writer that it would be seen by any eyes but those of his sisters,

to whom it is addressed. We have permission to publish it also :

“ MY DEAREST T— AND B—

Sunday, March 15.

“ I have just parted from dear Mr L., who left me in tears. I fear I shall never be able to repay him for his very great kindness, and for the uncommon trouble and interest he has taken in and for me. O my dear girls, you will AGAIN see the finger of God pointing out to me the road to heaven, and calling upon me, and urging me, to flee from the wrath to come, by all the horrors which will else come upon me in this world, both in mind and body, and by the still more dreadful agonies I shall bring down upon myself in another. Mr L. will tell you such a tale of the great goodness of God, in raising me up friends, both in this place as well as Edinburgh, that you will not fail to believe that the Almighty has not given me quite up, but has given me another opportunity to see whether I will or not return unto him. O my dear girls, every morning of your lives offer up prayers to God that I may be enabled to *resist* my ALMOST irresistible SINS, recollecting that the effectual fervent prayer availeth much ; and say, dear T—, to yourself, when you have left your room without saying your prayers, ‘ I must not leave my room without offering up a prayer for poor wicked S—, or else perhaps he will fall into sin to-day ;’ and doing so, it will be doing good to yourself as well as to me. I am glad to hear, dear B., that Mrs L. thinks you so much improved in spiritual things. Go on, dear girl, from strength to strength ; great will be your reward hereafter.

“ I walked with Mr L. to-day so far that I was not in time for *kirk*, but I have been reading *our* own dear Churchprayers, and love them better now than ever. I intend going to kirk this afternoon : it begins at five o’clock.

“ When Mr L. writes to me, be sure to write to me, as perhaps he will get a frank ; for you know he won’t tell me about C—, dear man. Give my kind love to Mrs L., and tell her I trust what she said to me will not come true, viz. that it was hoping against hope ; tell her to pray for me.

“ I must conclude with kind love to all. Believe me, ever your truly attached but unhappy brother,

“ S——”

“ I did not see the DEAR G.’s ; tell me about them.”

The young man is no longer with his tutor, but, at the desire of his friends, in which he has submissively concurred, he is boarded in Scotland in the country. The treatment for him which the phrenologists who saw him recommended, was con-

tinued, and rather hard exercise in the open air : with his tools and books, for he is a great workman and reader, to give him occupation within doors. Viewing his case as one of partial insanity, they were unanimous in recommending the treatment and regulated surveillance of a private asylum : but of this his relatives, probably for their own sakes, would not hear ; while they seemed to be contented that the poor youth should be hid, that he might not disgrace them. A pittance was proposed for his board, which, compared with the means of the family, was more like a sum to bury him than to maintain him in decency and comfort ; and as it seemed to have been meted to him under the impression that it was bestowed on a criminal, the phrenologists suggested a more suitable provision for him as an unfortunate patient, and had the satisfaction to see this proof of a better feeling towards him actually realized. He is, in consequence, very suitably boarded and cared for.

This interesting case may, it is thought, be ranked among those which tend to shew the usefulness of Phrenology ; and the writer recommends it to those who are wont to ask, "What is the use of your science, even supposing it to be true ?" Here was a case which was well known to, and had been observed by, professors, divines, physicians, and lawyers ; to all of whom it appeared an inscrutable mystery, or, as it did to shopkeepers, a plain case of hypocrisy and crime, for which there was no better cure than well merited exposure and punishment ; while flight from justice to the concealment and oblivion of a distant country, was the course which appeared the best to the relatives, who used no measured terms in the expression of their feelings on the disgrace brought by the *disinherited criminal* on the family. Flying from prosecution and persecution, without one friendly hand held out to him, save those of his kind-hearted tutor and a few pious persons who prayed over him in vain, the outcast comes, at last, at the distance of hundreds of miles from his forbidden home, into contact with the disciples of a new and ignorantly despised philosophy of man ; by whom his case is at once understood and explained,—a friendly shelter thrown over his disease,—the means of providing, not unfeeling penal banishment and privation, but an asylum of care, and kindness, and comfort, obtained from his relenting relations,—and an appeal made in his behalf to all who had unknowingly treated him with injustice, to remove the brand of crime which they had contributed to stamp upon his brow, and to judge him, as we humbly trust his Maker will, who has visited him with disease, and in so far released him from responsibility. We would especially recommend a candid revision of their judgment to the heads of the seat of learning from which the publicity of his conduct forced him to retire. We shall take care that this statement shall be put in their way. They will be at no loss to know to

whom it applies ; and we call upon them to take some pains, by a generous use of the influence of their position, to remove from the minds of all who entertain them, erroneous feelings towards an unhappy but really guiltless young man.

ARTICLE IX.

ACCOUNT OF THE SKULL OF DEAN SWIFT, RECENTLY DISINTERRED AT DUBLIN.

IN making some alterations on the building of St Patrick's Cathedral at Dublin, it was found necessary to shift several coffins, amongst which were those containing the remains of Dean Swift and Mrs Johnson (better known as Stella). The Rev. Henry Dawson, Dean of St Patrick's, with his usual liberality and anxiety for the advancement of science, allowed Dr Houston to remove the skulls of these two celebrated persons, in order that drawings and casts of them might be made, and that they might be submitted to phrenological examination ; under an engagement that they should be duly restored to the coffins. Mr Combe luckily happened to be in Dublin at this time, attending the annual meeting of the British Association for the Advancement of Science ; so that he had an opportunity of examining the actual skulls. The examination took place on 16th August, at the house of Dr Marsh, in presence of that gentleman and Dr Harrison, Mr Snow Harris, Mr Richard Carmichael, Mr Wheatstone of London, Mr Andrew Carmichael, Mr J. Isaac Hawkins, Vice-president of the London Phrenological Society, Mr John Wilson, Dublin, Dr Houston, Dr Evanson, and Dr Croker, Dublin.

The skull was found to present the following appearances. At the base—roughened in the sphenoidal region ; the processes prominent and sharp-pointed ; the foramen magnum of the occipital bone irregular, and the condyloid processes projecting into it. Some parts, in the occipital fossæ, the super-orbital plates, and other portions of the skull, were so thin as to be transparent. The marks of the arteries of the dura mater on the vault were large and deep, but the general surface of the interior of the vault was smooth : along the line of attachment of the falx the bone was porous, from the multitude of small foramina which had transmitted bloodvessels from the dura mater to the bone in that situation. Above the frontal protuberances (in the region of Benevolence) the bone was thickened, apparently by a deposition of bony matter on its inner surface—making the inner surface at that part on both sides flat in place of concave, and smoother than the other parts ; which was the more remarkable as the other portions of the skull were rather thin. Below

or anterior to that flattened space, about a dozen of small deep fissured foramina existed in a cluster of six or seven on each side, apparently indicating a fungous state of the dura mater at that place. Some foramina in the middle basilar fossæ of the skull were observed, similar to those just noticed, and evidently arising from the same cause. The exterior surface of the skull was smooth and natural. The skull shewed clearly increased vascularity of the dura mater in the basilar and anterior regions. The anterior fossæ were small both in the longitudinal and in the transverse directions. The middle fossæ were of ordinary size; the posterior fossæ very large, wide, and deep. The internal parts corresponding to the frontal protuberances were unequal in concavity; at neither was there any depression corresponding to the great prominences on the outer surface. The two hemispheres were regular and symmetrical. Dr Houston (who dictated to Mr Combe the foregoing description of the skull, which was approved of by all the other gentlemen present) suggested that the extraordinary powers of mind which Swift exhibited on many occasions may have arisen from diseased activity;* and Dr Harrison remarked that the appearances were such as he had observed in patients who had been affected with epileptic fits. The dimensions of the skull, and cerebral development indicated by it, are reported by Mr Combe to be the following:—

	Inches.
From Individuality to Philoprogenitiveness,	7½
Ear to Individuality,	4½
Ear to Philoprogenitiveness,	4½
Ear to Firmness,	5½
Destructiveness to Destructiveness,	5½
Secretiveness to Secretiveness,	5½
Cautiousness to Cautiousness,	5½
Ideality to Ideality,	4½
Constructiveness to Constructiveness,	4½
1. Amativeness, large.	19. Ideality, small.
2. Philoprogenitiveness, large.	20. Wit, small, (skull thickened here).
3. Concentrativeness, full.	21. Imitation, rather full.
4. Adhesiveness, large.	22. Individuality, very large.
5. Combaticiveness, very large.	23. Form, very large.
6. Destructiveness, very large.	24. Size, large.
7. Secretiveness, very large.	25. Weight, full.
8. Acquisitiveness, large.	27. Locality, large.
9. Constructiveness, large.	28. Number, moderate.
10. Self-Esteem, large.	29. Order, full.
11. Love of Approbation very large.	30. Eventuality, full.
13. Benevolence, small.	31. Time, moderate.
14. Veneration, large.	32. Tune, small.
15. Firmness, large.	33. Language, large, (skull very thin.)
16. Conscientiousness, full.	34. Comparison, moderate.
17. Hope, rather full.	35. Causality, moderate, (skull thickened.)
18. Wonder, small.	

* We dissent from this opinion, but have no room to state our reasons.—ED.

Mr Combe has forgotten to mention the organs of Cautiousness and Colouring. In taking the development he was assisted by Mr Hawkins.

There was produced at the examination of the skull an engraving after a portrait painted by Jervis, principal painter to his Majesty, shewing a considerable forehead in the upper region; from which, and the aspect of the skull, it appeared that the head had diminished at the position of the anterior lobe.

We received the foregoing information when the last sheet of our present number was on the eve of being put to press, and have been forced to sacrifice other matter on its account. We can fancy the "glorious triumph" the first blush of the facts will give our friends the antiphrenologists, and the delight with which they will hail a skull with *small intellectual and large animal* indications, as that of the caustic and powerful Swift. But as a triumph founded on error must of necessity be very short-lived, we advise them to make the most of it in the mean time; because the more minutely the case is examined, the more completely will it be found to harmonize in all its features with the phrenological philosophy. At present we have room and time for only a few hasty remarks.

In the first place. After being subject to fits of giddiness and deafness, and to occasional epileptic attacks, from the early age of twenty-one, Dean Swift at last died in October 1745, at the advanced age of seventy-eight, from disease of the brain, of several years' duration, and which, in 1740, gave rise to a "*state of violent and furious lunacy*," followed by a total failure of understanding, which sunk him "*into the situation of a helpless changeling* *," and ended only with his life. In reference to this, our readers will recollect, that as the brain decreases in volume in old age, and the skull no longer indicates its form with certainty at that period of life, it is held by Gall and Spurzheim, and all other phrenologists, to be impossible to predicate from the inspection of the skulls of very aged persons what their talents or dispositions were at the time of vigorous maturity; and consequently, although useful as *illustrations*, such cases are never considered admissible as *proofs* either for or against Phrenology. For the same reason—that the shape of the skull no longer represents accurately that of the brain,—cases of disease also are excluded; an additional reason being that the relation between organic size and functional power can no longer be depended on, as the morbid action sometimes increases and at other times diminishes mental energy, just as, in the case of the liver, it sometimes excites and at other times diminishes the secretion of bile. Applying this principle to the case of Dean

* Sir Walter Scott's *Life of Swift*, p. 457, 460.

Swift, who is known to have died *in very advanced age from water in the brain, the effect of long-standing disease*, the phrenologist would not hold himself warranted to infer, from the mere inspection of the skull, what had been the talents and dispositions of its possessor in the prime of life. All he could do would be to point out the relative proportions of the organs *as they then existed*, and compare them, for the purposes of illustration rather than of proof, with their then accompanying manifestations.

Assuming, *in the second place*, that, for the sake of mere illustration, we *may* make such a comparison, it is astonishing how closely the development corresponds with the state of mind. In the skull, the intellectual region is small, the animal region large, and the moral moderate, except at Conscientiousness and Veneration, which are larger; and, with respect to the manifestations, we know that Swift was for years idiotic in intellect, and that even so early as 1734 (eleven years before his death) "*his memory became imperfect, and his temper, always irritable, was now subject to VIOLENT AND FRANTIC FITS OF PASSION upon slight provocation* *;" evidently shewing both the work of disease and the close coincidence with the indications now presented by the skull. If it could be shewn indeed, that in the vigour of Swift's life and faculties his forehead was as small as after years of idiocy, there would be more plausible grounds for maintaining the existence of a discrepancy between his talents and the phrenological indications: but, in the various portraits which have come down to us, including that prefixed to Sir Walter Scott's Biography of Swift, the forehead is uniformly represented of much larger and fuller dimensions; and, in the face of such evidence, it would be arguing on a mere assumption to say that the skull is a fair index of what the brain was in the prime of life.

In the third place. The brain is well known to decrease in volume, and the skull to follow its shrinking surface, both in old age and in disease. The constant recurrence of giddiness and deafness, and the liability to epilepsy, with many other symptoms, from which Swift was seldom entirely free,—and lastly, the termination of his ailments in furious mania and idiocy,—shew to how great an extent he was a victim to disease, and prove that the morbid indications presented by the skull are in accordance with the phenomena observed during life, as well as with the other appearances on dissection. There is, in fact, the strongest presumptive evidence that the anterior lobe, or intellectual region of the brain, had actually shrunk very considerably even before the supervention of the "furious lunacy" in 1740. It is, we repeat,

* Sir Walter Scott's Life of Swift, p. 442.

no new doctrine, that in old age the brain participates in the general decay of the system, and that the skull, which is moulded on the brain, shrinks in proportion. Even the hard and solid bones are familiarly known to decrease in size between maturity and extreme old age, and the large and erect man of the prime of life dwindles into the lean and slippered dimensions of advanced age. In disease this change is often greatly accelerated, and in medical works cases are recorded in which the brain and head diminished with unusual rapidity. In the second volume of this Journal, p. 210, there is an account of a remarkable case, which fell within our own observation in 1819, when studying under Esquirol at the Salpêtrière Asylum. The patient, a woman, died after having been four years insane, and at last idiotic. At her entry, her forehead was so large that Esquirol had a drawing of it made on account of its remarkable size; whereas, at the time of her death, the great diminution which it had undergone was so striking as to form a perfect contrast to the portrait. The brain had shrunk even faster than the outer table, as the skull was unusually thick—much more so at the frontal bone than elsewhere. In our fourth volume, p. 495, we have reported another case of chronic insanity, in which the mind was much weakened, and where the diminution of the head became so great as to attract the attention of the patient himself, who, on finding a smaller and smaller hat required in succession, boasted of the circumstance as a proof of his becoming *etherialized* by the evaporation of the grosser particles of his head. On dissection, we found the forehead not only smaller than it had originally been, but the bones of very unequal thickness and extremely dense. But, to come even closer to the point, we have in our possession a portion of the skull corresponding to the forehead of another patient, who had suffered for many years under an affection of the mind characterized by instability of purpose and deficient power of understanding, and the internal surface of whose frontal bone presents a singular thickening, evidently produced by the shrinking of the contained brain, and similar to what is described above as visible on the inner surface of the skull of Swift. In this instance it was impossible to doubt that the brain had shrunk, and that the inner table of the skull had followed it. If time and space permitted, we could adduce other examples of a similar nature.

In the fourth and last place. It is curious to notice the coincidence between the development of many of the organs of the propensities and sentiments, and the Dean's habitual manifestations during life. His large Firmness, Self-esteem, and Combativeness, are in accordance with his "stern and unbending pride of temper;" his large Acquisitiveness, with his reputed parsimony and real economy; and his large Destructiveness

Combativeness, and Self-esteem, with his caustic severity, passionate temper, and misanthropic spleen. His Ideality is moderate, and he seems to have been altogether indifferent to the beauties of nature (Life, p. 472). Sir W. Scott says of his poetry, that "its elevation of tone arises *from the strong mood of passion rather than from poetical fancy*" (p. 491); and Dryden told Swift himself, that he "would never be a poet, *where power of imagination was necessary for success*" (p. 491). Sir Walter adds, that "*we look in vain for depth of feeling or tenderness of sentiment; although, had such existed in the poet's mind, the circumstances must have called them forth.*" This is singularly consistent with the moderate development of Benevolence, and we think it would be easy to trace most of Swift's kindnesses to other feelings than pure benevolence. This organ, however, has evidently decreased in size, as the thickening of the skull occurs immediately over it; but most probably it was never greatly developed. Individuality is very large; and in discussing Swift's intellectual superiority in the great art of verisimilitude, Sir W. Scott justly infers that the secret rests mainly upon "*minuteness of narrative,*" and goes on to prove his position. We have much more to say, but our space is exhausted.

ARTICLE X.

CASE OF DERANGEMENT OF THE FACULTY OF LANGUAGE.

By JOHN GRATTAN, Esq. Belfast.

G—— B——, Esq., aged fifty-six, a gentleman of a highly cultivated and vigorous mind, had, about two years since, and within a short period of each other, several attacks of paralysis, affecting the right side, from which he has only partially recovered. His daughter, to whom I am indebted for the details of the case, and who has perused and confirmed the accuracy of the present report, states that at first his speech was not affected. The first symptom which he manifested of any disorder in the organ of language, was an inability to remember the name of a place in the country, in which he was much interested, and which he called "*Red Well,*" instead of "*Red Hall,*" without appearing to be conscious of the error, as he seemed to be annoyed with his friends for not understanding him. Very shortly after, he became unable to articulate at all. The only words which he can at present pronounce are "aye" and "no;" and even in the use of these simple monosyllables he occasional-

ly becomes embarrassed and confused, particularly if more than ordinarily unwell.

He understands distinctly and clearly every thing that is said to him, and likes to have any interesting occurrence in the newspapers repeated, but does not attempt to read for himself. So far the deprivation of speech might be supposed to depend upon disease of the mechanical vocal apparatus. But if that were all, he should be able to communicate his thoughts in writing. This, however, he cannot do; and the great peculiarity of the case is, that while his efforts to put his thoughts on paper are uniformly abortive, and accompanied with such evident marks of mental confusion and agitation as to be distressing to his friends and harassing to himself,—as though he felt provoked at being unable to accomplish what he thinks he ought to be able to do,—he can calculate figures with perfect *accuracy* and *facility*, and even takes at times a pleasure in the employment. Of late, he has succeeded occasionally in writing an intelligible word, which has been observed to be always a proper name. In attempting other words, he so misplaces the letters as never to be understood. It is also quite apparent that the effort is unpleasant to him. Recently he wished to communicate something respecting a particular individual; and, after several efforts, such as writing *Hu*, *Huh*, finally accomplished so much as to write intelligibly the word *Hugh*, and then turned to his daughter with an air expressive of a desire that she should help him by repeating the surname, which she did, naming different individuals who had that name, until he gave his assent. In other respects, as far as can be judged under such circumstances, his mind exhibits no want of integrity whatever.

He took so warm an interest in the result of our contested election, as to go in a chair to give his vote, when he found his party was likely to be unsuccessful; and this contrary to the wishes and entreaties of his friends, who were apprehensive of its injuring his health. In money transactions, he shews as much acuteness as ever. He not long since made a transfer of some property; and, after signing the deed, and finding that it had been given to the purchaser before the purchase-money had been paid, he became quite unhappy until informed that the original deed of transfer to himself was in his own possession, when he was perfectly satisfied. He was also desirous of knowing how a certain sum of money had been appropriated, and would write down without difficulty or exertion the amount he wanted to inquire about, such as 800, 200, &c.; but for any thing farther, he would only look and listen, expressing his assent or dissent, as his friends happened to hit upon his meaning or not: they are able to understand much of his wishes by the expression of his countenance.

The sound of his voice is as strong and clear as ever. He was always particularly fond of music, and still continues to derive great pleasure from it; keeping accurate time during its performance.

As he began to recover, he employed a schoolmaster to teach him to write with his left hand, and made unusual progress in that acquirement: but he can form letters accurately only when he has before him a copy from which to write; whilst he has no difficulty in writing figures:—evidently shewing that though Form is intact, Language, which associates the word with its symbol, being impaired, is incapable of exciting the former organ into correct action; whilst with Calculation the fact is otherwise.

A most extraordinary peculiarity in this gentleman's head is the existence of two fissures in the skull, having the appearance of the fontanels in children, as if there had been an absorption of the bone, but lying, as far as I could learn from mere description, the one on the left nearly over Veneration and part of Firmness, and that on the right across part of Conscientiousness and Hope: and I am positively assured by his daughter, that his clerks could at any time tell when he was angry, without hearing him speak or seeing his face, but simply from the great *depression* which on such occasions occurred in those fissures, or, as they termed it, "the holes that would appear in his head;" and that she has at different times observed the same phenomenon herself.

Viewing the circumstance physiologically, is it not possible that the excitement of Combateness and Destructiveness causes, as in the case of blushing, a sudden impulse of blood to the parts, and that the unequal distribution of blood thus produced is attended with a temporary collapse of the organs of the moral sentiments, which are situated in the neighbourhood of these openings, thereby diminishing the resistance which they afford to the atmospheric pressure? Whether this be the reason or not, the fact is indisputable: the appearance is described to be as if the integuments were "drawn in."

BELFAST, 22d April 1835.

[The fact mentioned in the two concluding paragraphs of Mr Grattan's communication is so curious and important, that we have requested from him information upon several points not above adverted to. He has kindly undertaken to investigate the case as thoroughly as possible, and we hope to be able to publish the result in our next number.—ED.]

MISCELLANEOUS NOTICES.

EDINBURGH.—The following donations have recently been added to the collection of the Phrenological Society:—Cast of the head of Mary Ann Burdock, executed at Bristol on the 15th April 1835, for the murder, by poison, of Mrs Clara Ann Smith; and casts of two Peruvian skulls, one from the Temple of the Sun at Pachacamac, and the other from an ancient Peruvian tomb at Huacho, an India town north of Lima—all presented by Samuel Stuchbury, Esq., Bristol; cast of the skull of a mechanician at Alyth, presented by the Dundee Phrenological Society; skull found in a stone coffin in a cairn at Nether Urquhart, Fife, 16th March 1835, presented by the proprietor of the estate; Eloge Funébre de S. M. Don Pedro, and Manuel des Maladies Veneriennes, both by Count Godde de Liancourt, presented by the author; Annals of Phrenology, No. 5, presented by the publishers; two old skulls found at Gogar near Edinburgh, presented by Dr J. R. Sibbald; and cast of the brain of the whale lately exhibited by Dr Knox in Edinburgh, and mask of the late Rev. J. Brown Paterson, minister of Falkirk, both presented by Mr Anthony O'Neill. In expressing the gratitude of the Society for these valuable donations, we embrace the opportunity to urge on all who take an interest in the advancement of Phrenology, the importance of letting slip no occasion of adding to the collections of phrenological societies. We would, in particular, solicit the exertions of medical men at home and abroad; than whom no class of persons enjoys so many favourable opportunities of obtaining crania. The collection of the Phrenological Society is already rich in Asiatic, African, and American skulls; but these are by no means so numerous as we desire to see them. Skulls of the aborigines of New Holland, China, the South Sea Islands, North and South America, and the different parts of the European and African continents—skulls, in a word, from every country under heaven—will be most thankfully received; and their value will be much enhanced by minute information as to the place where they were found, the evidence of their authenticity, their probable age, and the characteristic dispositions of the tribe to which they belong. It is only from extensive collections of national crania that satisfactory general conclusions can be drawn, and we hope that there will speedily be accumulated materials sufficient to enable us to treat of the Phrenology of nations more fully than heretofore. Skulls and casts of remarkable individuals in our own country are likewise highly valued.

The Edinburgh Ethical Society for the Study and Practical Application of Phrenology has met regularly every Friday evening, during the winter and summer sessions, and many interesting papers have been read. The discussions also have been in general very animated. We have not room to mention the essays in detail.

GLASGOW.—We are happy to learn that Phrenology has made a decided advance in Glasgow during the last twelve months. It was discussed at two of the Andersonian Soirées, and was received in a different spirit from that manifested with respect to it on former occasions. In November 1834 a lecture on Phrenology was delivered in the Assembly Room, by Dr Crook of London, for the benefit of the Royal Infirmary. It was given under the patronage of the Lord Provost and Magistrates, and was numerously and respectably attended. Dr Wood, in his course on popular anatomy and physiology, delivered at the Mechanics' Institution, devoted several lectures to the consideration of Phrenology. The managers of the institution have announced a course of upwards of twenty lectures by Dr Weir, to be delivered during September and October. They have made this arrangement in consequence of numerous applications from those who heard only a part of Dr Weir's last course.

The Glasgow Phrenological Society has, during the last session, exhibited

symptoms of improvement. It has received a considerable accession of members, and has commenced the formation of a phrenological library, which is likely to prove of considerable advantage. At the annual meeting, on the 22d October 1834, the following gentlemen were elected office-bearers for the ensuing year:—Dr Andrew Alexander, *President*; Dr Wm. Weir and Mr Wm. Cassels, *Vice-Presidents*; and Mr Richard S. Cunliff, *Secretary*. The following are the Essays which have been read during the session:—October 22. Mr Cassels, "On the Causes of the Difference of Religious Opinions;" Nov. 5. Dr Crook of the London Phrenological Society, "On the Organ and Function of Gustativeness" (*Alimentiveness*); Nov. 19. Dr Maxwell, "On Religious Public Instruction;" Dec. 17. Dr Alexander, "On the Moral Character and Cerebral Development of Robert Burns;" Jan. 28. 1835, Mr Harvie, "On Adhesiveness;" March 11. Dr Maxwell, "On Benevolence;" March 25. Dr Weir, "Character inferred from the Development of a Female Skull, with Remarks;" April 8. Mr Cunliff, "On the Legitimate Application of the Intellectual Powers;" April 22. Mr Brown, "On Instinct;" May 6. Dr Hunter, "On the Development of the Foetal Brain, and on some Anatomical Arguments in favour of Phrenology." During the session, the Society received the following donations:—Chart of Phrenology, by Dr Crook, from the author; Cast of the Skull of Robert Burns, from Mr Andrew Rutherglen; Busts of Gottfried, Goss, and Rammohun Roy, from Mr M'Clelland; Combe's Constitution of Man, Bust of the Salford Idiot, and Bust of himself, from Dr Weir; Bust of himself from Dr Maxwell.

DUNDEE AND MONTROSE LUNATIC ASYLUMS.—We owe Mr Mackintosh, the intelligent and indefatigable superintendent, our best thanks for the last Annual Report on the Dundee Asylum, and rejoice to see that the success which has attended the institution has led to no relaxation of the efforts hitherto made to deserve it. Within the last year, three new workshops for the pauper female patients have been erected, and two new airing courts opened, one for the ladies and the other for the gentlemen. The system of constant occupation, as a means of cure and of comfort, is carried more and more completely into effect, and its value is becoming more apparent. By most of the patients work is felt to be a privilege, and idleness a punishment; and the result in promoting bodily and mental health is precisely what every thinking physiologist would expect. Mr Mackintosh has experienced so little difficulty in inducing the patients to labour, that, out of 96 paupers, 92 are generally employed, and of the recent cases rather more than one-half have been cured, being a larger proportion than is common even in the best asylums. We regret to notice the death of Dr Ramsay, the able and zealous physician of the establishment, to whose services it owed much in its days of difficulty. But as the internal and moral management depends essentially on the resident superintendent and matron, we see no reason to anticipate any falling off on that account. His successor Dr Nimmo has been long in high reputation in Dundee, and it is expected that he will prove equally efficient and zealous as Dr Ramsay. We sincerely wish that our friend Mr W. A. F. Browne, had the same facilities for improvement in the Montrose Asylum; but the difficulties which he has to encounter have been very great. We are glad, however, to perceive from the Report of the Directors of that Asylum for the year ending 1st June 1835 (with a copy of which we have been favoured), that a great deal has been accomplished in the way of classifying the patients, and especially in separating the furious and vindictive from the docile and industrious—a step extremely conducive to the comfort and convalescence of the latter. For this purpose four large cells, well lighted, warmed, and ventilated, and every way comfortable, have been erected at some distance from the main building. The patient receives frequent visits from the keepers, superintendents, &c., and, whenever he manifests a disposition to become reasonable and gentle, is again admitted to the common hall. Each cell opens into a court-yard, where the patient may take constant exercise, unrestrained by fetters, and without danger to his own person, or to the property of the institution. "As a remedial measure, this system of

isolation has been found in some asylums to prove highly serviceable in quieting the turbulent and irascible, probably from its excluding all those sources of annoyance and irritation to which they are exposed in public halls. In the penitentiaries of America, a similar plan has been found efficacious as a punishment. In both cases it may act by producing a strong desire for society, and by impressing upon the mind the necessity of using efforts to control paroxysms of passion—in other words, of regulating itself to such a degree as to render the gratification of that desire possible or expedient." A parlour has been constructed for such of the educated female patients as do not require incessant surveillance, so as to afford them opportunities of pursuing their work, reading, or enjoying music. Many of the paupers are engaged in spinning and weaving. "The clothes of the females are generally made, and the clothes of all the patients are mended, in the house, and by the assistance of the lunatics themselves. The majority of the female workers are busied in knitting, spinning, or sewing; some of them assist in the laundry, kitchen, and in various departments of the household. One, strange to say, has acted, and acted with exemplary fidelity, as porter to the establishment. The male patients are principally engaged in gardening, weaving, &c.; but some of them have literary tastes, and greedily peruse such works as are procured from the library—the newspapers, Penny Magazines, &c. One is a zealous politician, and, after a confinement of seventeen years, complains sadly that he hears so little of the state of parties, and that the newspaper is a month old before it reaches him. Another retains his business habits, and carefully copied the description of the cases of the lunatics, his own among others, for the medical superintendent, expressing himself highly amused at the follies which he had to record, and regretting when his task, which he designated lunatic biography, was finished. The great inducement to work is generally found in the patient's own bosom, in the insipidity of idleness, or in the wish to escape from himself. Where such motives are wanting, persuasion may sometimes avail, an appeal to the selfish feelings is still more successful, and the expectation of rewards, or rather remuneration for labour, proves in nine cases out of ten successful. Punishment is an act and even a word that should never be alluded to. Coercion *may* be absolutely necessary; but to designate it punishment, is to treat the man who is held to be guilty as sane at the very moment when he is least so, as evidenced by the violence or insubordination which it is intended to control. Very rarely does the employment of this agent, or even the threat of it, avail any thing in *compelling* a patient to work. It rather inspires a spirit of disobedience, dislike, or resistance; feelings which are likely to frustrate the end in view, and tend directly to aggravate mental disease. Hence the managers have judiciously proposed that the patients should in future have an interest in the products of their labour, and receive payment in the form of those innocent indulgences or additional comforts they may desire. The regular occupations of the paupers are relieved by weekly music and dancing; and the anxiety with which these amusements are anticipated, and the zest with which they are enjoyed, are highly gratifying. In general, greater difficulty is experienced in restraining than in arousing their disposition to participate."—"The internal economy of the establishment has been greatly improved by the introduction of gas into the passages, sitting rooms, and parlours, and will be still more so by carrying into effect a plan for heating the whole building by means of water, which is now in contemplation. The whole house may now be said to be well and sufficiently lighted; and no one can imagine how great an additional amount of comfort and cheerfulness is secured for the lunatic at those periods of the year and day when his sorrows press most heavily upon him, but those who have visited the common halls when supplied with only two miserable lamps. Besides enabling them to read or pursue their occupations or amusements, the enlivening and exhilarating impression which it conveys to the mind may be compared to that of warmth to the body." An adequate supply of baths has been obtained, and every patient bathes at least once in ten days. No visitors, whose motive is mere curiosity, are now admitted. Mr Browne has been indefatigable

in his exertions, and will doubtless effect farther improvements. It must be gratifying to every friend of humanity, to observe the rapid stride so generally made throughout the kingdom in the path of improvement in the method of treating the insane.

STIRLING.—About nine or ten months ago, Mr Aitken delivered, in the Guild-hall here, several lectures on Phrenology; and fourteen young men, conceiving that its doctrines were not without truth and importance, engaged him to enter into a private conversation with them regarding it. Mr Aitken advised the formation of a society, and eight of these individuals agreed to the proposal. Two months ago, the number of members had increased to fourteen. "We usually meet once a-week," says one of them; "and a number of phrenological works having been purchased, (among others, a few numbers of the Phrenological Journal, which is regularly received as it issues from the press), portions of these are read and discussed, and occasionally some of the members prepare and read essays, embodying in them as much as their knowledge can impart of phrenological principles. None of us having any practical knowledge of physiology or anatomy, we do not presume to press ourselves upon the notice of the public as a Phrenological Society."

IRELAND.—The Dublin Journal of Medical and Chemical Science, for July 1835 (No. xxi. p. 456), contains the following passage:—"Ireland, we say it with pride, is not a country for charlatans.—In proof of the assertion, that the Irish, in medical matters at least, are by no means credulous, it may be observed, that animal magnetism, which had so many admirers on the Continent and in England, and was beaten out of the French capital but by the united forces of the most distinguished Parisian literati, was at once rejected by our countrymen; even Phrenology, a mild and feminine science, scarcely found in Ireland where to lay her head; and Homœopathy quickly turned her steps from our shores, not, however, before one voice had been lifted up in her favour; but that voice, although speaking many languages, polyglott beyond the gift of tongues, and the fruitful parent of false derivations innumerable, soon died away unheeded." The assertion, that Phrenology has scarcely found in Ireland where to lay her head, is not remarkably consistent with the facts, that Dr Marsh, Mr Richard Carmichael, and Dr Stokes, who rank among the most eminent medical men in Dublin, are its avowed defenders; and that the names of Dr Spurzheim and Mr Combe have been enrolled in the list of honorary members of the Royal Irish Academy.

AMERICA.—From the fifth number of the Annals of Phrenology, we observe that a keen controversy has taken place between the Boston phrenologists and a writer in the Christian Examiner published there. We shall revert to the subject in our next. A monthly periodical, entitled "Phrenological Magazine and New York Literary Review," has been commenced at Utica, New York. According to the Annals, the first number "is an octavo pamphlet of 48 pages; and though we have not read all the articles, of which a good proportion are original and editorial, we have read enough to see that the editor holds the pen of a ready writer, and fears not to speak his mind upon the science, and upon those who, without the requisite knowledge or powers,—except the 'power of face,'—go about lecturing, and 'examining heads' at so much a piece. The contents of this number are as follows:—'The true Philosophy.—Outlines of Phrenology.—Phrenology and the Ladies.—Itinerant Phrenologists.—Opinions of Tiedemann and Arnold.—Sketch of Dr Gall.—Oneida Phrenological Society.—Notices.'" Mention is made of a prospectus of another Phrenological Journal, to be published semi-monthly by a number of scientific gentlemen at Poughkeepsie, New York. The editors of the Annals complain loudly of the number of phrenological quacks who are abroad in the United States.

Dr W. P. ALISON, Professor of the Institutes of Medicine in the University of Edinburgh, has lately published, in the Cyclopædia of Practical

cine, part xxiv., a very instructive "History of Medicine in the present Century." We extract the following passage, in which he alludes to the progress recently made in elucidating the functions of the nervous system :—

"The next important addition to the science of medicine has been furnished by the labours of those physiologists who have done so much, within the last twenty years, to determine the different purposes which are served by the different parts of the nervous system. The general result of these inquiries may be thus stated: that the very different offices to which the nervous system has long been known to minister in different parts of the body, are not determined, as was formerly suspected, by the various organization of the parts, but by the various endowments of different portions of the nervous matter itself, in relation to those mental acts of which they are the seat and the instrument.

"The dissections, experiments, and clinical observations of Sir Charles Bell, Mr Shaw, and Mr Mayo, in this country, and of Magendie, Serres, Desmoulins, and Flourens, in France, and of Rolando and Bellingeri in Italy, are the most important of those by which it has been ascertained, that the conditions which are necessary to all the sensations, and to the excitement of all muscular motions by mental acts, are confined to those nerves, and to those portions of the spinal cord, and its immediate prolongations within the cranium, to which we now give, without difficulty, the names of sensitive and motor respectively. We can specify those portions of this cerebro-spinal axis, on which each of the sensations peculiarly depends; we can point out the use of parts within the cranium, in immediate connexion with the cerebro-spinal axis, by which voluntary or instinctive motion in different directions is determined; we can form some idea of the parts of the nervous system, and of the peculiarities of structure, by which the influence of mental acts over the involuntary motions, and other organic functions, is maintained; and we can shew that the brain and cerebellum are not essential to the performance of the functions of the spinal cord and nerves—that they are neither required for sensation, nor for those instinctive actions which are most intimately linked with sensations, but are superimposed on those organs with the intention of combining sensation and instinctive action with the higher attributes of mind. These parts of the nervous system furnish the conditions, not of sense or motion, but of intellect, of desires, and moral feelings; they are required, not in order that sensations may be felt, but that they may be remembered, and availed of for useful purposes,—not in order that volitions may act as stimuli on muscles, but that they may be so excited, and so succeed one another, as to produce regular and useful voluntary actions, under the guidance of desires, and of judgment and experience, as distinguished from blind instinct.

"So far the different endowments of the different parts of the nervous system may be held to have been determined by observation and experiment; and, if we decline to enter farther into the speculations of phrenologists (which have attracted so much attention of late years), as to the connexion of the individual parts of the brain with the different intellectual powers, or with the exercise of these powers on particular objects of thought, it is not because we regard the general principle of those speculations as unphilosophical, but simply because they are founded on a kind of observation which is open to various sources of fallacy, and derive little or no support either from experiments on animals or pathological observations on the human body, and appear therefore to be built on insufficient evidence."—Pp. 77, 78.

We are pleased to find Phrenology recognised by Professor Alison as a philosophical pursuit. It would, however, have been satisfactory had his limits allowed him to specify the "various sources of fallacy" to which he conceives the observations whereon it is founded are open. That Phrenology derives little direct support from experiments on animals is true, only because the evidence afforded by such experiments is faulty in principle—an opinion in which the great body of general physiologists concur. It is quite impossible to mutilate one organ without disturbing the functions of others with which it is connected; and for this and various other cogent reasons

(see *Gall sur les Fonctions du Cerveau*, iii. 156-9), phrenologists have not resorted to experiments made upon living animals. But such experiments, when made by others, have on no occasion afforded evidence hostile to Phrenology. As to Professor Alison's allegation that our doctrines derive little or no support from "pathological observations on the human body," we respectfully give it a positive denial. Had Dr A. been acquainted with the contents of Dr Gall's work above referred to, and with the numerous pathological cases published in our own pages, and in the Transactions of the Phrenological Society, he would probably have held a different opinion on this subject.

ITINERANT PHRENOLOGISTS.—A paragraph among the notices in our last Number, contains the following words, in reference to an itinerant lecturer whom we did not name:—"One of them, we are told, has published in the newspapers a narrative of a visit said to have been made by him to a prison in a distant town, and of his success in divining the dispositions and talents of a criminal there confined; and this narrative is suspected to be a fabrication. Of this matter, and the individuals alluded to, we have personally no means of judging," &c. Before publishing the paragraph alluded to, we gave this lecturer an opportunity of satisfying us that the suspicion was ill-founded; but we did not hear from him till several days after the publication of our last Number, when he sent us the following letter, addressed to him by Dr White of Newcastle, and which we are happy to insert: "DEAR SIR,—I can certainly testify as to having been present at the examination of the head of the book-stealer in the gaol of this town; and my impression is, that at the time I believed that you had intimated the strong peculiarities of his character. I believed also that you had a competent knowledge of the system you professed to teach, in as far as I was competent to form a judgment on the question. Understanding that such circumstances have been doubted, I have no hesitation in making this statement; and am, Sir, yours truly, D. B. WHITE, M. D.—*Portland Place, 3d June.*"

THE EDUCATIONAL MAGAZINE.—This is a London monthly periodical, which was commenced in January last. It is published at a very low price, and is conducted in a liberal spirit—admission being given to articles in defence of conflicting opinions, when discussion is likely to be of service. The seventh number contains a long paper on "Phrenology and Education," written with considerable ability, though not free from one or two rather startling propositions—for example, that education is the cause of the difference between the infantile state and that of manhood. The writer considers Phrenology as "essential to the foundation of, and carrying on, a proper system of education." In the same number is an article on "the effect of physical influence on the mind," wherein it is shewn that the brain is the organ of the mental faculties, and that whatever affects the former unavoidably affects the latter also. The article is, however, in several respects unsatisfactory. Thus an absurd distinction is drawn between the dreaming and waking states, with regard to the activity of the immaterial mind. During our waking hours, according to the writer, it is the mind which thinks; but "dreaming is to be ascribed to a condition of the *material brain*, not of the *immaterial principle*."—"The immaterial principle," says he, "is not necessarily engaged in the phenomena of dreaming; the brain is not its servant during sleep, because by that very state it is unfitted for intellectual operations, and when it does act, it is without the control of a presiding mind; and therefore the morbid state of dreaming, instead of the physiological process of *correct thinking*, is produced. If we assumed the contrary, we must then concede that the immaterial spirit possesses very limited powers of intelligence, and that these require to be aided by its material connexions—results which are falsified by daily experience, and which, if allowed, would leave us at once in the dark night of materialism." This reasoning is so futile, as to be altogether unworthy of comment; a remark not less applicable to a portion of the following sentence in No. V. p. 314:—"From phrenological re-

search much information connected with the relations between matter and mind has been obtained; and it may be said with [of] this science, as Lord Bacon said of knowledge generally, that *a little of it inclineth man's mind to atheism*, but that a copious draft of it brings him back again to Providence and Deity." The remark in italics is somewhat inappropriately directed against Mr Combe's work on the Constitution of Man, which is literally, from beginning to end, an exposition of the Creator's attributes.

MANCHESTER.—Letter from Mr Rawson, secretary of the Manchester Phrenological Society :—"20th August 1835. We shall feel obliged if you can insert a notice in the Journal, to the effect that we have held our meetings as usual since our last communication, except during the summer. Several interesting papers have been read; and, at the meeting on 7th July, Mr George Combe, Dr Andrew Combe, Mr James Simpson, Mr Robert Cox, and Dr Elliotson, were unanimously elected honorary members of our body."

Our valued *collaborateur* Mr Simpson was lately summoned to give evidence before the Committee of the House of Commons on National Education in Ireland; and so instructive and satisfactory was his examination found by the Committee, that it was continued for seven days, during four hours of each day. This circumstance is exceedingly gratifying to us; seeing that, by means of the Committee's Report, in which Mr Simpson's evidence will be printed, the views entertained by phrenologists on the means of improving education, will be widely diffused among those who are interested in that vitally important subject. Mr Simpson's opinions with respect to both principles and details were minutely inquired into; and we have heard that Mr Wyse, and the other members of the committee, were much impressed by the clearness, precision, and consistency of his views.

Mr Combe has just published a third edition (stereotyped) of his work on the Constitution of Man, considerably enlarged and improved. It is printed with a closer type than the second edition, and is sold at four shillings. A fourth edition, printed in large double-columned pages, with the same type as that of Chambers's Edinburgh Journal, will be published in a few days; and in order to bring the book within the reach of the poorest class of operatives, the price of this edition will probably be so low as eighteen pence.

We are happy to be able to announce to our friends, that the circulation of the Phrenological Journal has considerably increased during the past year. Phrenology is attracting more and more every day the attention of the public.

The indulgence of correspondents is respectfully solicited, our pages being so full that many articles are, as usual, unavoidably postponed. The communications of Mr W. A. F. Browne, Mr Gibson, Mr Holm, and Mr William Hancock jun. have been received; also that of Mr Edmondson on Weight, which last, we fear, is hardly perspicuous enough for publication. On the subject of the Penny Cyclopædia we refer Mr Hancock to the 8th volume of this Journal, p. 286, where he will observe that in 1833 the editors declined to receive an article on Phrenology offered by Sir George Mackenzie.—There is much sound thinking in J. D. W.'s esteemed communication; but we despair of finding room for an article containing ideas so little recommended by novelty. We are gratified by his information that our Journal has been instrumental in bringing peace to a troubled mind.—Mrs Loudon's *Philanthropic Economy* has been received.

EDINBURGH, 1st September 1835.

THE
PHRENOLOGICAL JOURNAL.

No. XLVI.

ARTICLE I.

THOUGHTS ON PHYSICAL EDUCATION : being a Discourse delivered to a Convention of Teachers in Lexington, Kentucky, on the 6th and 7th November 1833, by CHARLES CALDWELL, M. D. Boston (U. S.): Marsh, Capen, and Lyon. 1834.

THIS most valuable little volume should be in the possession, and in the thoughts and practice, not only of every teacher of youth, but of every parent who desires health of mind and body to bless his children. Dr Caldwell, we have often said, is one of the best informed and most practical phrenologists of the age, but he did not address his discourse to phrenologists; for to them he would have offered little that had not been already published by himself and other phrenological writers. Addressed as it was to an unphrenological audience, to whom it was new, it contains the most concise and practical view of physical education, on phrenological principles, which could be presented; recommended by that spirit and vivacity, that logical clearness and eloquence, which characterize Dr Caldwell's writings. As a system of the principles of practical education, the book is complete. A brief description of it is all that seems to us to be necessary in this Journal.

Dr Caldwell sets out with a powerful appeal in favour of "*an improved education*" as the only means of "*the advancement of the people in intelligence and virtue,*" and urges its "*necessity*" even for the safety of the American people.

In explaining what he means by the term *education*, the lecturer stated to his audience that he must speak phrenologically. The *education of mind and body must have relation to some philosophy of man.* "But," says Dr C., "of all the systems I

have examined (and I have looked carefully into several of them), that of Gall and Spurzheim is the only one I can either believe or understand. As soon would I bind myself to discover the philosopher's stone, or to concoct the elixir of life out of simples, as to find substantial meaning in many of the tenets of fashionable metaphysics." "By education, in the abstract, I mean a scheme of action or training, by which any form of living matter may be improved, and by perseverance reared to the highest perfection of which it is susceptible. I say 'any form,' because the lower orders of living beings, vegetables not excepted, may be educated and improved, as certainly as the higher, and on the same grounds." The constitution of the being to be educated must be intimately known; and by the constitution of man, the author means his material portion, *that* being the only part of him *we* are able to improve—to amend spirit, if it requires amendment, belongs only to Him that made it. The whole machinery of education is material, and material means cannot affect inscrutable abstract spirit, otherwise matter would be superior to spirit.

"The organized system of man," says Dr Caldwell, "constitutes the machinery, with which alone his mind operates, during their connexion as soul and body. Improve the apparatus, then, and you facilitate and improve the work which the mind performs with it, precisely as you facilitate steam operation, and enhance its product, by improving the machinery with which it is executed. In one case, steam, and in the other, spirit, continue unchanged; and each works and produces with a degree of perfection corresponding to that of the instruments it employs.

"As respects several of the functions of the mind, the correctness of the foregoing theory is universally admitted. Seeing, hearing, tasting, smelling, and feeling, as well as voluntary muscular motion, are as true mental operations, as judging, reasoning, remembering, or calculation by numbers. And the former are as susceptible of improvement as the latter. But when improved, no one considers the result as consisting in any amendment of simple spirit, but of compound organized matter. When, for example, vision is improved, the amendment is uniformly referred to the eye, the optic nerve, and that portion of the brain immediately associated with them; they being the organs by which the mind sees, and without which it cannot see. Is hearing improved? For the same reason, it is not the mind, but the auditory apparatus that is amended. Of the other senses, the same is true. If either of them be improved, it is the organ that is meliorated in its condition, not the mind that uses it. Nor is this truth less obvious as respects the instruments of voluntary motion. The opera-dancer, the tumbler,

and the swordsman, do not, in acquiring expertness in their occupations, improve their minds, but their muscles and joints, with the nerves and portions of the brain that have the governance of them. These positions are so plain, that to state them is to prove them.

"Respecting the higher mental operations, the same may be affirmed with equal safety. In performing them, the mind works with the brain as its machinery, as certainly as it does with the eye in seeing, or the muscles in dancing and swordsmanship. Is any form of memory—say the memory of words, or that of places—rendered more apt and retentive, by judicious exercise? We have no reason to believe that the mind or spirit is amended, in this instance, any more than in those heretofore enumerated. It is a portion of the brain—the organ of Language or Locality—that is amended. By practice, man becomes more powerful and adroit in reasoning and judging. Here again the mind is not changed. The belief to that effect has no shadow of evidence to sustain it. The improvement in this case, as in the preceding ones, is confined to the organs with which the mind reasons and judges. Arguments, not to be refuted, could be adduced in favour of this statement, were the discussion admissible. Indeed, for man to claim the power of operating immediately on spirit, and either amending or deteriorating it, by any means he can employ, is an assumption perfectly gratuitous, and, in my opinion, not a little extraordinary and arrogant. It is enough that he is able to change matter, and control it to his purposes, *by material agents*. And all the means used in teaching *are* material. There is good reason to believe, as already stated, that nothing short of the CREATIVE WILL that brought spirit into existence, can modify it, either for better or worse. When we wish, then, I say, to improve mental operations, we have only to amend the organs which the mind employs in performing them. And it will appear hereafter, that this is a proposition of great importance in the scheme of human improvement. For no other reason would I have ventured to introduce it on the present occasion, aware, as I am, that its correctness is not likely at first to be generally acknowledged by you. Allow me, however, to repeat, that a difference of opinion on this point will have no tendency to create a difference on many that are to follow. The difference will be in theory, not in practice."—P. 22-24.

Education is physical, moral, and intellectual. These branches may be conducted separately, but they are intimately connected, and mutually dependent. Moral and intellectual education amends the condition of the brain; physical that of the remainder of the body, in its cutaneous, digestive, respiratory, circulatory, secretory, absorbent, and muscular systems. It is plain

that derangement in these systems affects the brain, and *e converso*. Physical education is to moral and intellectual what the root, trunk, and branches of a tree are to its leaves, blossoms, and fruit; it is the source and *sine qua non* of their existence. Dr Caldwell would prefer using a language on this head less technical, and would speak of the education of the different portions of the body, each portion being trained according to its organization and character. "The skin, for example, must be educated by one mode of discipline, the stomach by another, the lungs by a third, the muscles and circulatory system by a fourth, and each external sense and cerebral organ by a method corresponding to the peculiarity of its nature. In this view of the subject, which is the only rational one, the training of the brain, in all its departments, by whatever name they may be called, is as truly a *physical* or *physiological* process, as the training of any other part of the body."—P. 28.* Dr C. defines physical education to be "that scheme of training which contributes most effectually to the development, health, and perfection of living matter; as applied to man, it is that scheme which raises his whole system to its summit of perfection. In this are included the highest tone and vigour of all parts of the body, that are consistent with a sound condition of them; for the tone of a vital organ, like that of a musical instrument, may be too high, as well as too low." Extensively viewed, physical education should embrace an entire system of Hygiène; this, however, was beyond the lecturer's limits.

A provision for physical education must commence even anterior to birth. On this head the author gives a very concise and satisfactory account of the natural laws of hereditary qualities—the marriages to be avoided—health, mental as well as bodily, of the mother during gestation—sound nursery education, in diet, cleanliness, clothing, temperature, respiration, muscular exercise, sleep, and the *animal* passions. He recommends the habit of *thorough mastication* and attention to the bowels, with avoidance of high seasoning and uncooked vegetables; even of ripe fruit he doubts the benefit, children being generally permitted to eat too much of it, and to take it at improper times. On all these topics we must refer to the volume; as also for the very sensible management proposed for the regulation of the animal passions.

Dr Caldwell takes the same view as Dr Brigham of *too early* school training, and goes over nearly the same objections to it. In these, therefore, we need not follow him; and have only to remark, that there is not one of them really applicable to the

* To the *education* or training of the intellectual organs, however, is added *instruction*, or the communication of knowledge which the intellect stores up.

employments of a *well-regulated* infant school, none of which are inconsistent with the following sentence of his own:—*The exercise of the brain in the young "ought to be the general and pleasurable exercise of observation and action; it ought not to be the compulsory exercise of tasks."* "I have never," he adds, "been an advocate for infant schools. *Unless they are conducted with great discretion, they cannot fail to eventuate in mischief. They should be nothing but schools of pleasurable exercise, having little to do with books.*"—P. 46. With this very discretion it is the wish of all rational promoters of infant schools to see them managed, that their vast moral benefits may be obtained without any physical sacrifices. Dr Caldwell has eloquently described how infants ought to be employed, and we should have liked better to receive from him an idea of a perfect infant school, than to hear rather indiscriminate condemnation of their use from their abuse. We remain decided advocates for *proper* infant schools, upon the general views of the infant constitution taken both by Dr Caldwell and by Dr Brigham, and cordially agree with Lord Brougham that they are among the most important improvements of the present age. One good has been done by Drs Brigham and Caldwell. They have given so clear an exposition of the *abuses* of the system—abuses, too, into which it is apt, in the absence of great care, to run—that this very care is the more likely to be in future bestowed.

The lecturer then proceeded to instruct his audience on particular points of physical education, which especially required their attention as teachers. The sets or systems of organs of which the human body is composed, are so intimately connected, that the derangement of any of them deranges the rest; and a proper physical education is that which shall keep them all in health and activity. He enumerated the skin, the digestive system, the bloodmaking and circulating system, the cerebral and nervous system, and the muscular system. Train all these systems in the best manner, and physical education is complete. We cannot follow Dr Caldwell, nor is it necessary with our ordinary readers, into his details on the education of each of these systems; but the book itself on these is well worthy of perusal. The bad effects of inattention to cleanliness, to proper diet, to ventilation, &c. are exposed in a very wholesome and convincing manner. His caution as to the excessive use of gymnastics is salutary, and he recommends fencing, dancing, and swinging by the arms; but severe exercise should never be taken in hot weather, or immediately after a full meal. The author concludes his observations on muscular exercise, with the following striking and true remark:—

"Much is said about matter being a clog on mind; and that the soul is incarcerated within the body, like a prisoner in his

cell. The sentiment is as impious as it is untrue. Matter clog and incarcerate mind, and prevent it from acting in a manner suitable to its powers ! The assertion is a slander on HIM who made and governs both mind and matter. If the inferior substance be thus prejudicial to the superior, and so unworthy of it as many pronounce it, why did the Deity link them together ? No good motive could have led him to this ; and who will dare to charge him with an evil one ? Did he unite them through inadvertence or mistake, or because he did not know what influence matter would have on mind, until he had made the experiment ? or, did they, when created, rush together forcibly, he having no power to restrain them ? Did he yoke them, in sport and wantonness, that they might fall to civil war, and try which could do the other most harm, he enjoying their strife and suffering as an amusement ? or, was his motive a desire to shew how unharmoniously and incongruously he could pack the works of creation together ? No one will *openly* impute to him faults or weaknesses like these. Yet all *virtually* do that, or something worse, who pronounce matter a hinderance to mind in any of its operations. For aught that man can shew to the contrary, mind would be as imbecile without matter, as matter would be without mind. What can the latter do without the aid of the former ? Can it see, hear, taste, smell, feel, or move ? Can it lift a pound weight, make a pin or pen, or use them if already made, think, reason, judge, or perform a single useful act, intellectual or moral, theoretical or practical ? If it can, let that act be specified and proved. I say ‘ proved,’ because I wish for *realities*, not *suppositions* or *fancies*.”—Pp. 66, 67.

The author proceeds to treat of the physical education of the brain, which he explains phrenologically, as it cannot be explained otherwise. It resolves into proper exercise of the various organs ; avoiding over-exertion on the one hand, which will weaken the power, and dormancy on the other, which will for the time annul it entirely. He deprecates excessive exertion of feeble organs, as both useless and dangerous,—and counsels parents never to attempt to make a scholar a professional character, or man of science, of a boy whose brain is unusually small. The great end of the physical education of the brain, is to strengthen the whole of it, and maintain a due balance among its several parts—from which comes longevity, the common and marked consequence of calmness and equability of character. Dr Caldwell adds the following among other curious facts, on the subject of the comparative longevity in different employments, according to the way in which they affect the brain :—

“ The less impassionate the pursuits of men of genius are, the greater is the average longevity of each class of them. Mathematicians and natural philosophers have but little in their

studies to excite feeling or stir up passion. The *tenor* of their lives is generally tranquil. Hence the aggregate age of twenty of them, taken promiscuously, has been found to amount to 1504 years, giving to each the average of seventy-five.

"Poets, on the contrary, are proverbially an '*irritable genus*,'—men of strong and easily excited feelings, and a burning imagination. Their productions, moreover, being works of passion, their minds must be in tumult during their composition. From these causes, the aggregate age of twenty distinguished poets has been ascertained to be 1144 years, giving to each an average of fifty-seven—a very striking balance in favour of a mind free from passion!"—P. 84.

Much curious matter follows on the tendency of the embroilment of party politics and religious differences to over-excite the brain, and produce insanity, and also dyspepsia or indigestion, which, says Dr Caldwell, is more nearly allied to insanity than is commonly supposed. "So true is this," he adds, "that the one is not unfrequently converted into the other, and often alternates with it. The lunatic is usually a dyspeptic during his lucid intervals; and complaints which begin in some form of gastric derangement, turn, in many instances, to madness. Nor is this all. In families, where mental derangement is hereditary, the members who escape that complaint are more than usually obnoxious to dyspepsia. It may be added, that dyspeptics and lunatics are relieved by the same modes of treatment, and that their maladies are induced, for the most part, by the same causes."—P. 87. The passions of grief, jealousy, anger, &c. injure the digestion. Dyspepsia is very frequently cured, when curable, by abandoning care and business, and giving rest to the brain. This is the chief reason why watering-places so often succeed. The agitations of wealth-getting and commercial speculation, have the same effect as political and religious controversy, in over-exciting the brain. All these he looks upon as the causes of the inordinate sum of insanity and dyspepsia which prevails in the United States. We recommend to the perusal of parents the author's description of the frightful consequences of the solitary abuse of Amateness, which runs like a contagion through schools, often destroying the individuals, and, at the least, seriously injuring the race. Even in Britain, this baneful practice prevails to an extent which we should have thought incredible, had not the clearest evidence of the fact been within our knowledge. We must also refer to the volume for the author's judicious observations upon dress, in which he exposes the mischiefs arising from the tightened corsets of the ladies; a subject fortunately now so well understood, as to have nearly banished the practice from rational society. Dr Caldwell thus concludes his lecture:—

“ Finally, One of the leading benefits to be bestowed on our race, by Physical Education judiciously practised and carried to the requisite extent, is the production and preservation of a well-adjusted balance, not only between the different portions of the brain, but of the whole body. Few persons, if any at all, bring into life with them a system perfectly balanced in all its parts. Some organs predominate in size and strength, while others are comparatively small and feeble. This is a tendency to disease, and can be removed or amended only by competent training. Let it never be forgotten, that the proper exercise of a part, and *that alone*, increases both its bulk and power, and, at the same time, diminishes any excess of sensitiveness it may possess. And this is precisely what small and feeble parts require, to place them on a par with others, and secure their health. To illustrate my meaning, and shew it to be true:—

“ Is the chest of a boy narrow, and are his lungs weak and irritable? Let those parts be habitually exercised, according to the directions already given, and such a change may be produced in him, as will give an equipoise to his body, and prevent disease. His chest and lungs may be enlarged not a little, and as well secured from complaints as his other organs. From the free and constant exercise which their calling gives to their arms, shoulders, and thoracic walls and viscera, London boatmen have large chests, and are strangers to consumption. The loud and habitual call, moreover, by which they announce their business and solicit employment, aids in the development and strengthening of their lungs. From these causes, though perpetually exposed to the damp and chilling air of the Thames, they rarely experience any form of pectoral disease.

“ Of every small and feeble part of the system the same is true. A judicious scheme of training will enlarge and strengthen it. But hereditary predisposition to disease is nothing else than the want of an equipoise between all the different portions of the body. Some organs, being comparatively weak and sensitive, are preternaturally prone to actual derangement. By well directed exercise, therefore, continued through successive generations, may every predisposition of the kind be eradicated.

“ Such is the best outline of my views of Physical Education, that my other engagements have allowed me to prepare. Sensible of its imperfections, but unable at present to remove or lessen them, I must throw it, for acceptance, on the indulgence of those to whom it has been presented.”—Pp. 132, 133.

If we have a stricture to offer on so excellent a treatise, it is this—that in treating of the *physical* education of the brain, Dr Caldwell departs from the restrictions he previously imposed on himself, and trenches too much upon what, distinctively speaking, constitutes moral and intellectual education. It is not a

question of substantial truth,—for he is right in affirming that even intellectual and moral education are to a great extent material; but it is an important question of classification, and we take it there would be more convenience in limiting physical education, *directly* applied, to all the other corporeal systems but the brain.

ARTICLE II.

OWENISM AND PHRENOLOGY.

IN March last, at the conclusion of one of Mr J. D. Holm's lectures on Phrenology, delivered in his rooms, No. 12 North Crescent, Bedford Square, London, Mr Robert Owen read to the audience certain remarks on the influence of external circumstances in forming the human character, and gave it as his opinion that phrenologists ascribe too much efficacy to innate qualities, and too little to external circumstances. The substance of these remarks, and a reply by Mr Holm, appeared in the 26th number (25th April 1835) of "The New Moral World," a periodical conducted by Mr Owen. We subjoin, without comment, what is said on both sides: readers who desire to pursue the subject farther, are referred to a phrenological analysis of Mr Owen's views in the first volume of this Journal, p. 218. "The New Moral World" contains also two dialogues on the same subject, but the whole substance of the controversy appears to us to be sufficiently embodied in what is here subjoined.

REMARKS BY MR OWEN.

Mr Holm has this week given a more full answer than he did last week to the observations which were made in our previous dialogues, in which Phrenology was very partially discussed. The subject is one of deep interest, second to none, perhaps, except the "science of the influence of external circumstances over the formation of the human character."

Upon these subjects it may be useful to submit to our readers the following observations, that an accurate knowledge of these two parts of the same science may be elicited. Our remarks are, of course, open to refutation, if they can be proved to be erroneous.

Since the year 1812 I have stated, in various publications which may be referred to, that man is a compound being, formed in part at birth by that power which gives existence to all organized beings; but, in a more essential part, by the influence

which external circumstances make upon the infant, from the hour of its birth to the end of its life.

Now this has been the solid foundation on which the system of the New Moral World has been raised. It was this view of the subject that created the first ideas from which the system originated. It was this view of the subject that induced me to make the great and singularly successful experiment for so many years at New Lanark. It was this view of the subject which produced the motives which originated the first Infant School, the foundations of which were laid in 1812, and which, before the second was established in Westminster by Lord Brougham, the late Henry Hase, cashier of the Bank of England, and others of my friends, had attained so much perfection as to be the wonder, astonishment, and unlimited praise of the most intelligent of all classes of natives and foreigners; indeed of all educated or uneducated persons who visited that establishment, except the bigot, the fanatic, or the grossly superstitious, who could not approve of any measure, however beneficial in practice, that did not originate or fall in with their own sectarian notions, or erroneous, inexperienced, and confined views of human nature.

The difference of opinion between Mr Holm and other phrenologists and myself, arises from one party attributing more in the formation of the human character to the original faculties of human nature, and less to the influence of circumstances; while the other places more power in the external circumstances as they may, and no doubt soon will, be applied, and less to the original germ of the natural organs of mankind. The difference is only in degree; but this, for practice, is a most important difference.

It is to me, however, satisfactory to observe, that the most intelligent and experienced among the phrenologists have gradually given more and more importance to the power of external circumstances over the natural faculties and organs of human nature, and as they advance in knowledge they will discover the necessity for allowing much more to the almost overwhelming influence of external circumstances over all the propensities, faculties, powers, and feelings of all human kind.

Although the blind, accidental, and, as they appear, random circumstances which existed or have arisen, in various times, in various countries, and which now exist in all countries, have had the influence to form various national and tribal characters most opposite to each other, in language, religion, laws, dispositions, habits, manners, and conduct; yet the full power which external circumstances may be made to possess, through a knowledge of the science of circumstances over human nature, no one among phrenologists appears yet to have been permitted to acquire the knowledge duly to appreciate.

The facts on this subject, without regard to religious or phrenological prejudices, appear to be these :—

1st, That human nature has been formed to possess definite organs of body and mind, and that these constitute human nature, and form the component parts of every sane and sound individual ; and that the only difference between one individual and another is in the greater or less amount of power, in quantity and quality, of these component parts.

2d, That these organs, consisting of physical propensities, intellectual faculties, and moral feelings, being thus differently compounded in each individual, have been formed capable of receiving impressions from external circumstances, and to be influenced by them to an extent to which no one yet knows how to assign limits.

3d, That the influence of these external circumstances may be made to act very powerfully on the germ or seed of every organ, if not upon the *quality* of the germ or seed itself ; and in such a manner as materially to influence the *quantity* and *quality*, during their growth, of all these organs until they arrive at maturity, and, to a considerable degree, even during the life of every individual.

4th, In this manner external circumstances may be now devised and arranged by society, for which it has the most ample means at its control, to train every infant, not diseased in its physical or mental organic powers, to acquire any language, a belief in any religion, to have any dispositions, habits, and manners, and to pursue any previously-decided-upon conduct that society may deem the best to have put into practice. But society cannot give genius in any particular art or science, except the natural organ of such art or science shall be favourable for its development ; although by an early and steady cultivation of these organs, under the constant direction of superior instructors, much may be done with all, except the organ should be more than ordinarily deficient.

5th, The world has been considerably improved in knowledge of the human organs and faculties by the phrenologists, and the study of Phrenology should be cultivated by every one who desires to obtain more accurate information of human and of animal nature generally ; and it would be now useful to unite the friends of Phrenology, and of the science of the influence of external circumstances, into a friendly association, to promote the improvement of human beings previous to and after their birth ; and to enable the members of both, thus united, to oppose successfully the remaining ignorance and prejudices of the present age upon these subjects.

6th, That the full happiness of human nature is not to be attained until *all* the organs which constitute human nature shall be cultivated in each individual at the proper period of life, and

which external circumstances make upon the infant, from the hour of its birth to the end of its life.

Now this has been the solid foundation on which the system of the New Moral World has been raised. It was this view of the subject that created the first ideas from which the system originated. It was this view of the subject that induced me to make the great and singularly successful experiment for so many years at New Lanark. It was this view of the subject which produced the motives which originated the first Infant School, the foundations of which were laid in 1812, and which, before the second was established in Westminster by Lord Brougham, the late Henry Hase, cashier of the Bank of England, and others of my friends, had attained so much perfection as to be the wonder, astonishment, and unlimited praise of the most intelligent of all classes of natives and foreigners; indeed of all educated or uneducated persons who visited that establishment, except the bigot, the fanatic, or the grossly superstitious, who could not approve of any measure, however beneficial in practice, that did not originate or fall in with their own sectarian notions, or erroneous, inexperienced, and confined views of human nature.

The difference of opinion between Mr Holm and other phrenologists and myself, arises from one party attributing more in the formation of the human character to the original faculties of human nature, and less to the influence of circumstances; while the other places more power in the external circumstances as they may, and no doubt soon will, be applied, and less to the original germ of the natural organs of mankind. The difference is only in degree; but this, for practice, is a most important difference.

It is to me, however, satisfactory to observe, that the most intelligent and experienced among the phrenologists have gradually given more and more importance to the power of external circumstances over the natural faculties and organs of human nature, and as they advance in knowledge they will discover the necessity for allowing much more to the almost overwhelming influence of external circumstances over all the propensities, faculties, powers, and feelings of all human kind.

Although the blind, accidental, and, as they appear, random circumstances which existed or have arisen, in various times, in various countries, and which now exist in all countries, have had the influence to form various national and tribal characters most opposite to each other, in language, religion, laws, dispositions, habits, manners, and conduct; yet the full power which external circumstances may be made to possess, through a knowledge of the science of circumstances over human nature, no one among phrenologists appears yet to have been permitted to acquire the knowledge duly to appreciate.

The facts on this subject, without regard to religious or phrenological prejudices, appear to be these :—

1st, That human nature has been formed to possess definite organs of body and mind, and that these constitute human nature, and form the component parts of every sane and sound individual; and that the only difference between one individual and another is in the greater or less amount of power, in quantity and quality, of these component parts.

2d, That these organs, consisting of physical propensities, intellectual faculties, and moral feelings, being thus differently compounded in each individual, have been formed capable of receiving impressions from external circumstances, and to be influenced by them to an extent to which no one yet knows how to assign limits.

3d, That the influence of these external circumstances may be made to act very powerfully on the germ or seed of every organ, if not upon the *quality* of the germ or seed itself; and in such a manner as materially to influence the *quantity* and *quality*, during their growth, of all these organs until they arrive at maturity, and, to a considerable degree, even during the life of every individual.

4th, In this manner external circumstances may be now devised and arranged by society, for which it has the most ample means at its control, to train every infant, not diseased in its physical or mental organic powers, to acquire any language, a belief in any religion, to have any dispositions, habits, and manners, and to pursue any previously-decided-upon conduct that society may deem the best to have put into practice. But society cannot give genius in any particular art or science, except the natural organ of such art or science shall be favourable for its development; although by an early and steady cultivation of these organs, under the constant direction of superior instructors, much may be done with all, except the organ should be more than ordinarily deficient.

5th, The world has been considerably improved in knowledge of the human organs and faculties by the phrenologists, and the study of Phrenology should be cultivated by every one who desires to obtain more accurate information of human and of animal nature generally; and it would be now useful to unite the friends of Phrenology, and of the science of the influence of external circumstances, into a friendly association, to promote the improvement of human beings previous to and after their birth; and to enable the members of both, thus united, to oppose successfully the remaining ignorance and prejudices of the present age upon these subjects.

6th, That the full happiness of human nature is not to be attained until *all* the organs which constitute human nature shall be cultivated in each individual at the proper period of life, and

shall be afterwards regularly exercised to the point of temperance in each individual.

7th, That the present irrational system of society will not admit of this improvement in human life and happiness : and that, therefore, a change from the present old, ignorant, immoral world, is, by the natural course of events effected by the Great Power of the universe, now urgently required ; and all things seem to be preparing for the commencement of a New Moral World, founded on truth, and to be conducted with knowledge, equity, and justice.

Let, therefore, the advocates of the science of circumstances acquire more knowledge of Phrenology, and the promoters of the study of Phrenology make themselves better acquainted with the yet almost unknown powers which the science of circumstances will develop to mankind. There is no necessity for contests of opinion between these parties, but much for union and harmony.

REPLY BY MR J. D. HOLM.

The human animal is the ruler and subjugator of all other animals. By what means is he thus powerful ? By means of the various moral and mental faculties with which Nature has endowed him ; for his physical powers as regards strength, or swiftness, or range of motion, are inferior to those of most of the lower animals. For the subjection of some animals, Secretiveness was necessary ; for others, Combativeness, Destructiveness, and various other organs acting in combination under the general guidance of mind. The peculiar and distinctive faculties which have enabled him to assume and preserve his superiority, are the great types of his nature ; **THEY** are the base of his character, and the power of circumstances (which none but fools deny), is only a secondary power, able to modify, but not form any specific character.

We see every day children born of the same parents, treated in the same manner, subjected to exactly similar influences, exhibiting totally opposite characters ; as Shakspeare's and Spurzheim's families, out of thousands of other instances, prove : the former was one out of ten children, and the latter one out of a large family.

The Siamese twins (than whom, perhaps, no stronger instance of necessitated similarity of circumstances can be adduced), are very dissimilar characters. I have examined them both. Each has a character peculiar to himself, and so has each individual, upon which no circumstances can operate beyond a certain extent.

The vessel formed to hold a pint, can, by no circumstances (short of an entire change of its original conformation) be made to hold a quart. The quick and warm cannot be made slow

and cold, unless by operations calculated to destroy, not direct, vital power; and, of course, such operations are not included in the argument.

Place a race-horse and a dray-horse under exactly similar circumstances from birth; no human power can make them change characters, or approximate to each other in character: as impossible is it to effect such changes or assimilations in men who are naturally greatly dissimilar.

Circumstances, as a SECONDARY power, may modify character; but nature, as a PRIMARY power, will prevail over all circumstances.

Thus, then, I contradict Mr Owen's notion that phrenological organization is of less consequence than education. Education is only second to organization, but it is second.

Mr Owen's acknowledgment that Phrenology may be made a useful study, and a great aid to enable man to know himself, is a poor palliative to his assertion, that phrenologists are at this moment leading the public astray, and that all of which they are capable is to make a "shrewd guess" at the characters of individuals. I assert that the phrenologist's exposition of character is NOT conjectural. He can lay his hand upon a man's head and say with certainty (such being the case), "Sir, you have great Self-esteem, and small Conscientiousness; the one will make you think highly of any scheme merely because it is your own, and the other will prevent your being sufficiently particular as to the means by which you advance it. You have large Benevolence, but Causality and Comparison are not greatly developed; and, therefore, you do not see with sufficient clearness the scope and result of your aims."

A sudden and cursory manipulation, which is almost all that a phrenologist is ever allowed, is not sufficient to do justice to the science or the subject on which it is exercised. What artist takes a likeness at a single sitting? He may take a sketch, not more. The same remark applies to phrenologists.

Mr Owen asserts that phrenologists recognise the present state of man as his natural state, and the present condition of society as the natural and best arrangement of human affairs. Mr Owen is mistaken. Few people see more clearly than phrenologists that the present state of man is not in accordance with his nature, and that the present arrangements of society are objectionable.

That Mr Owen's plans are immutably correct is yet a problem to all but himself. I am not going to say they are not so. The best method for him will be to bring, as soon as possible, the principles of his science into actual operation. People will then have, by ocular demonstration, the means of judging how far his expectations are likely to be universally realized.

In the mean time, Phrenology will be content to go on ope-

rating that gradual change which has attended the progress of man, the change which must be consequent upon inducing individuals to look into their own organization, and their children's, and treat them according to their peculiar natures.

The present age is prolific of plans for human improvement ; but the administration of all plans must be committed to human agency. How are we to guard against their being administered corruptly ? Every projector appears much in the situation of the young mouse in the fable, who recommended a bell to be hung about Grimalkin's neck, which, by ringing whenever she moved, would infallibly give notice of her mischievous approach. This was declared, by an assembly of rats and mice, a most admirable scheme ; but for one difficulty—who was to put the bell about pussy's neck ?

Phrenology, which puts a mirror into each person's hand, by means of which he sees himself and his fellow-creatures, appears to me the only talisman, and phrenological education the only sure road to future improvement.

ARTICLE III.

COMMENTS ON MR HANCOCK'S "LETTER ON THE FUNCTIONS OF THE ORGANS OF COMPARISON AND WIT," contained in No. 45 of the Phrenological Journal. BY H. C. WATSON, F. L. S.

IN No. 45. of the Phrenological Journal, I observe a letter on the Functions of Comparison and Wit, signed "George Hancock." This gentleman treats of the functions of the organs named as being still imperfectly understood, and also as if the conjectural explanations thereof referred solely to the questions about the perception of *resemblance* and *difference* agitated by Mr Scott. Of course, Mr Hancock can write his own opinions of the views of any other persons in his own way ; but I will take the liberty of reminding him, that, in professing to treat of an agitated question *as a question of science*, it is usual for writers to assign some reason for utterly disregarding the facts or arguments of another party, tending to a different conclusion in respect of the subject under consideration. If Mr Hancock feels as much interested in the progress and accuracy of phrenological science as he professes to be, he can scarcely be ignorant that M. Schwartz of Stockholm, and the writer of this, have each suggested explanations as to the functions of Wit and Comparison, essentially different from those either of Spurzheim or Mr Scott. And with due deference be it written, that none of the others, including Mr Hancock himself, has cited

so many facts and cases to illustrate and support his own views as I have done. On what grounds are these rejected? Looking to the wonted customs of writers on science, it ought to have been unnecessary for me to put such a query, before proceeding to examine the suggestions of Mr Hancock, which I feel in some measure called on to do, having published such very different conclusions on the same point, and certainly not yet abandoned them.

My reasons for rejecting the views both of Spurzheim and Mr Scott, will be found briefly noticed in *Combe's System of Phrenology*, 3d edition; and more fully explained in the *Phrenological Journal*, vol. vi. p. 383, and p. 451. It is needless here to repeat them. But I shall take the liberty of commenting on some of the points in Mr Hancock's letter, in the order of their occurrence, premising that most of his arguments are answered by anticipation in the papers referred to.

It appears to me that Mr Hancock has expressed himself very happily in suggesting, "that a small organ of Colour does not see a resemblance between colours which a more powerful organ perceives to be different; neither does a feeble organ of Tune perceive harmony where a larger organ discovers discord. The feeble organs, in both cases, only *do not perceive differences*, which is a very different thing from perceiving resemblances." But in his explanation by a query, "for how can any organ, whether large or small, *perceive* resemblances which do not in fact exist?" he surely assumes what no one ever intended to say. Neither Spurzheim nor Combe could commit the absurdity of saying that an organ *perceived what did not exist*.

Mr Hancock admits that organs perceive resemblances and differences between the things or qualities of which they are severally cognizant. "But," he says, "it does not therefore appear to me to be a very legitimate conclusion, that because each intellectual organ perceives both resemblances and differences existing between the peculiar qualities of which such organ is alone fitted to take cognizance, another organ, *which is known to take cognizance of resemblances existing between qualities of which it takes no cognizance*, but concerning which other organs are alone conversant, should be the same organ as that which takes cognizance of differences between them." This is fairly reasoned from the assumption, the type of which is altered to italics (by myself, not in the original); but this assumption is utterly unproved, if my construction of the words be correct. An illustration will explain this. A chestnut horse does not resemble a chestnut; but the *colour* of such a horse resembles the *colour* of a chestnut. The organ of Colour perceives the colours, and compares the colours; but it *does not compare the horse and chestnut*. So, if for a moment we assume that the

organ called Comparison, does perceive conditions, we then say that it also compares those conditions, without at all perceiving resemblance or difference between the things existing in such conditions. Here lies the essential difference; and here it is that persons probably err, who say Comparison perceives resemblances between things or qualities of which *other* organs are cognizant. To me it appears that it is not between such things or qualities, but between something appertaining to such; which *SOMETHING* it is the function of Comparison to take cognizance of, whether singly or compared. In my eyes, it seems wonderfully absurd to assert, on any evidence yet adduced, that the organ of Comparison actually and literally compares a colour to a sound; but there may be something appertaining to the colour scarlet and the trumpet's sound, which is perceived and compared by that organ.

Mr Hancock next advances illustrative arguments founded on his own ready perception of resemblances, where his brother traces only differences. As arguments these will fall to the ground, unless the similitude and dissimilitude be altogether in the same thing, quality, state, or whatever else. From Mr Hancock's words I suspect such not to be the case. I shall beg leave to illustrate this by a story, which is also applicable to what is said in the preceding paragraph. "How exactly alike," one day exclaimed Mr Form, "are those four things; they are perfect cubes!" "True," said Mr Size, "each of them exactly six inches on every side." "Oh! you are altogether mistaken," cried Mr Colour, "they are by no means all alike; they match only in pairs; two of them are red, the other two are green." Whereupon Mr Size and Mr Colour had a vehement dispute about the accuracy of Mr Form's remark, each accusing the other of obstinacy and incapacity. At length they agreed to refer the matter in dispute to Mr Individuality, renowned for his great store of learning and accuracy of observation. Mr Individuality speedily pronounced judgment, and displeased both by saying that neither was correct, for all four objects differed, one being an iron-weight, the second a wooden-box, the third a lump of soap, the fourth a piece of glass. This judgment was confirmed by Mr Weight, who found that the first was many times heavier than the second, while the other two had different and intermediate gravities. Mr Size and Mr Colour remained unconvinced, and steadily maintained the accuracy of their own respective judgments. It is presumed that Mr Hancock will allow all these disputants and judges to have been in part correct. Size, perceiving and comparing dimensions, found only likeness; Weight, perceiving and comparing gravity, found only difference. So, in two points or things presented to the mind, the organ of Comparison may perceive something com-

mon to both, while that of Wit detects something in each not shared by the other; or the converse may hold, Wit taking cognizance of something that is common, while Comparison sees something peculiar. This is not demonstrated; but I apprehend that all the facts admit of such an explanation, and that analogy is wholly in favour of it.

In the illustration, taken from the silly arguments of the opposers of Phrenology, about Benevolence and Destructiveness neutralizing each other, as acid and alkali, Mr Hancock appears almost gliding into the same error he had well pointed out in respect to the perception of resemblance and non-perception of difference; for he speaks of "an active organ of Comparison inducing a habit which inclines the individual to infer identity in all cases in which difference is not perceived." Now, according to Mr Hancock's own views, the active organ of Comparison should be peculiarly accurate in reading resemblances, and not be inclined to *infer* them merely.

My papers before referred to, have furnished the reply to Mr Hancock's queries regarding the more important uses of Comparison and Wit, "than that of merely giving an ornament and a charm to conversation." As to the excitement of laughter by certain styles of wit, I feel disposed to say that it is always in connection with some excitement of the animal organs, if not altogether dependent thereon. The most highly intellectual and moral minds are little prone to laughter, and persons thus endowed rarely or never give "a hearty laugh." I quite agree with Mr Hancock, that the organ called Wit is not the "only organ by means of which the feeling which accompanies that perception" (the perception of wit) "is capable of being excited." I agree with him, from the fact that nine in ten of the witty members of society have Individuality or Eventuality, and often Language and Comparison, better developed than Wit. No class of persons in England is so noted for wit as that of the bar. The prevailing development of successful lawyers is in Individuality, Eventuality, and Language.

Lastly, with regard to Mr Hancock's name of *assimilative-ness*—it is quite inadmissible, being formed of a term already applied to science, and used nearly in its popular sense, which is not that of resemblance simply. It implies the conversion of one thing into another. Animals convert or assimilate their food into parts of their own structure. Until some definite result is arrived at, the old name of Comparison ought to continue; another might mislead as much.

Before concluding, I beg to express to Mr Hancock an assurance that no personal attack on himself is in any way intended by the comments on his letter, although the necessary intrusion of some egotism in my first paragraph might possibly suggest

such an idea. It matters not to others who is right or who is wrong, so that truth be at length elicited by the conflict of opinion and argument. An earnest desire that the definitions in Phrenology should assume the precision found in those of other sciences, induces me to watch for whatever can throw light on the essential functions of the organs, very few of which can be regarded as fully ascertained. Phrenology cannot become a mature science until we use exact terms and exact definitions.

HEWETT COTTELL WATSON.

THAMES DITTON, *September 2. 1835.*

ARTICLE IV.

ON THE USES AND MODES OF ACTIVITY OF DESTRUCTIVENESS. By Mr ROBERT COX. (Concluded from p. 424.)

HITHERTO we have considered only those emotions and actions which arise from Destructiveness when roused by disagreeable affections of the other organs. Destructiveness, we have seen, by starting into activity whenever any faculty suffers pain, is of eminent utility as an inciter to self-defence—as the source of an emotion which terrifies unprincipled men from infringing upon our rights and enjoyments. Such, in fact, appears to be the leading object for which we have been endowed with this propensity; and such is almost exclusively the purpose which, in well-regulated minds, it actually serves.

“ Ev’n the good patient man, whose reason rules,
Rous’d by bold insult, and injurious rage,
With sharp and sudden check th’ astonish’d sons
Of violence confounds; firm as his cause,
His bolder heart; in awful justice clad;
His eyes effulging a peculiar fire:
And, as he charges through the prostrate war,
His keen arm teaches faithless men, no more
To dare the sacred vengeance of the just.” *

That there exist, however, even in the most civilized countries of Europe, many persons in whom the faculty, from the disproportionate size of its organ, is naturally so active and energetic that no outward stimulus is necessary to bring it into mischievous exercise, is a fact which, however lamentable, is too notorious to be denied. In such cases there is a tendency, not merely to resent injuries sustained, but to inflict them through pure love of mischief—to curse, defame, torment, mutilate, kill, deface, or destroy. However revolting this doctrine may appear, every one who knows human nature must bear witness to its truth. “ Observe,” says Lord Kames, “ the harsh usage

* Thomson’s *Britannia*, v. 156–164.

that tame birds receive from children, without any apparent cause; the neck twisted about, feathers plucked off, the eye thrust out with a bodkin; a baby thrown out at a window or torn to pieces. There is nothing more common than flat stones that cover the parapets of a bridge thrown down, the head of a young tree cut off, or an old tree barked. This odious principle," continues his Lordship, "is carefully disguised after the first dawn of reason, and is indulged only against enemies, because then it appears innocent."* Happy would it be if this concluding remark were true to the letter—if, after the dawn of reason, the propensity were *always* disguised, and its operations directed against enemies alone. But in the wanton cruelties which the history of the world in every age so largely exhibits, there is incontestible evidence that the fact is deplorably otherwise. Of how many horrible practices have not the rulers of mankind, for example, been guilty!—

"What studied torments, tyrant, hast for me?
What wheels? racks? fires? What flaying? boiling? burning
In leads or oils? What old or newer torture
Must I receive?"†

Nor is man in private life less chargeable with following the suggestions of an unbridled Destructiveness:—

"Witness at his foot
The spaniel dying for some venial fault,
Under dissection of the knotted scourge;
Witness the patient ox, with stripes and yells
Driv'n to the slaughter, goaded, as he runs,
To madness; while the savage at his heels
Laughs at the frantic sufferer's fury, spent
Upon the guiltless passenger o'erthrown."‡

In one of Montaigne's essays, there is a striking passage on the height to which the passion for destruction sometimes rises. "I could scarcely persuade myself," says he, in allusion to the cruelties practised during the French civil wars of the sixteenth century, "I could scarcely persuade myself, before I saw it with my eyes, that there could be found out souls so cruel and fell, who, for the sole pleasure of murder, would hack and lop off the limbs of others, and sharpen their wits to invent unusual torments and new kinds of death, without hatred, without profit, and for no other end but only to enjoy the pleasant spectacle of the gestures and motions, the lamentable groans and cries, of a man in anguish."§

There are on record many cases of murder and incendiarism committed without any external motive whatever. Two Ger-

* Sketches, B. ii. Sk. 1.

† Winter's Tale, Act iii. Sc. 2.

‡ Cowper's Task, B. vi.

§ Essays, book ii. chap. xi. p. 160. Cotton's Transl. London, 1685.

man women, Gottfried* and Zwanziger, † were executed a few years ago for poisoning a great number of their relations and friends; the latter exclaiming, after she was condemned, that her death was a fortunate thing for others, as she felt that she could not have left off poisoning had she lived. Dr Gall speaks of an old fiddler who murdered thirty-four persons without any malicious or furtive intent, but for the mere pleasure of killing. ‡ He mentions also a Dutch robber who used to throw people into the canals, purely with the view of enjoying the spectacle of their dying struggles. § Mr Schiotz, a Danish magistrate and phrenologist, reports the case of a boy who was brought before him for setting fire to a house belonging to a neighbour with whom he had always been on good terms. "At the sight of the fire," says Mr S., "he ran to his mother and told her of it, but without naming himself as the perpetrator. To the question, Why he had committed the crime? he answered, That *he did not know*. He has always been inclined to do mischief; has often spoiled the materials on the field; has broken the window-glasses in many houses, &c. &c., at all times the property of people who never had offended him." M. Schiotz states that the boy's "organ of Benevolence was so small, that the cranium at that place formed a concavity so considerable, that it surprised every one who saw him, and bore the appearance of having been produced by external injury; yet, according to the relation of his parents, no such injury had ever been sustained. Destructiveness, on the other hand, was extremely great; it projected on both sides beyond the ears. The forehead was low." || In the head of the woman Gottfried, of which the Phrenological Society possesses a cast, the organ of Destructiveness is enormously developed, while that of Benevolence is very deficient.

It is rare that Destructiveness acts so powerfully as in the foregoing cases, when no disease is present; but among the insane such manifestations are of very frequent occurrence, and indeed are mentioned in almost every treatise on mental derangement. One writer, for instance, reports the case of a servant girl in the country, happy in her situation, and liked by her master and mistress, but who, one day, when making a toast for the tea, was suddenly seized with a propensity to set fire to the barn-yard, which she instantly went out and did. ¶ For this insane act, the poor girl was executed. Sometimes Destructiveness is the only organ diseased—Benevolence, Conscientiousness, Adhesiveness, and the intellect being left unimpaired; in which

* Phren. Journ. vol. vii. p. 500. See another case, *ibid.* p. 498.

† Foreign Quarterly Review, No. xvi. pp. 269-275.

‡ Gall, iv. 90.

§ *Ibid.* p. 93. See also p. 170.

|| Phren. Journ. viii. 63. Two similar cases are mentioned by Gall, i. 430; iii. 168-169.

¶ Marshal on the Morbid Anatomy of the Brain, p. 275.

case the patient earnestly calls out to his friends to save themselves from his fury by flight, or entreats them to bind him when the paroxysm is felt approaching. "Je suis entraîné," exclaimed a French murderer mentioned by Gall, "par une force irrésistible à répandre le sang de mes semblables."*

Neither in destructive insanity, nor in the motive which actuated Gottfried, Zwanziger, and the Danish boy, does any trace of anger, jealousy, envy, or hatred, appear; for these emotions (which are evidently *compounds* of Destructiveness with Self-esteem or some other faculty disagreeably excited) of course can have no existence where Destructiveness alone is in action. With respect to the origin of anger, some confusion has prevailed among phrenologists. By Dr Spurzheim† and Dr Caldwell‡ it seems to be regarded as an affection of Combaticiveness; but this opinion is overthrown by the fact that courage, the universally admitted function of Combaticiveness, so far from keeping pace with irascibility, is often very deficient where the latter abounds, whereas the tendency to injure is a never-failing attendant of wrath. Others have argued, that no faculty except Destructiveness is concerned in the production of anger: were this the fact, however, the emotion ought uniformly to be felt when Destructiveness is much excited, whether that excitement be produced through the medium of other organs painfully affected, or by the inflammation or very great development of Destructiveness itself. There is neither proof nor probability that this organ, rendered active by *one* cause, gives birth to an emotion different from that accompanying *the same activity* produced by *another* cause.

When any propensity is powerful and vivacious, it not only gives a desire to act in a certain way, but causes the individual to take a deep interest in such actions, and to derive pleasure from seeing them, or reading about them, performed by others. He who has Combaticiveness large, delights in witnessing contention, and reads with pleasure a well-written narrative of daring adventure; the secretive man studies with eagerness a history of the intrigues and machinations of crafty statesmen; and he who has great Locality, is fond of perusing accounts of voyages and travels. In the same way, persons highly endowed with Destructiveness, but whose morality, intellect, or Love of

* Gall, iii. 174. In this and another case noticed at p. 177 of the same volume, however, it is not evident that disease was the cause of this "irresistible temptation to kill and shed blood;" the size of the organ having been in both heads enormous. Many additional cases of destructive insanity will be found in Gall, i. 399, 417-423, 447-457; ii. 470; iv. 99-110, 170: Dr Combe on Mental Derangement, p. 258: Simpson on Popular Education, App. No. II., and Phren. Jour. i. 36; viii. 144.

† Phil. Prin. of Phren. pp. 37, 53.

‡ Phren. Jour. vol. vii. p. 502.

Approbation, is too strong to allow them to be personally the inflictors of suffering or death, find pleasure in witnessing bull-fights, military floggings, and executions of criminals. "Nature," says Montaigne, "has herself, I doubt, imprinted in man a kind of instinct to inhumanity : nobody takes pleasure in seeing beasts play and caress one another, but every one is delighted with seeing them dismember and tear one another to pieces."* Professor Bruggmanus of Leyden told Gall and Spurzheim of a Dutch priest, whose desire to witness slaughter was so great that he became chaplain of a regiment, solely that he might have an opportunity of seeing men destroyed in battle. To gratify the propensity still farther, he kept in his house a number of domestic animals, as dogs, cats, and the like, that he might have the pleasure of killing their young with his own hands. He also slaughtered the animals for his kitchen, and was acquainted with all the hangmen of the country, who sent him regular notice of each execution ; and he did not grudge to travel on foot for several days to be a spectator of the scene.† This sort of disposition is alluded to by Sir Walter Scott, in *Quentin Durward*, where he speaks of the existence of "men of undoubted benevolence of character, whose principal delight it is to see a miserable criminal, degraded alike by his previous crimes and the sentence which he has incurred, conclude a vicious and wretched life by an ignominious and cruel death." People whose Destructiveness is powerful, are generally fond of witnessing tragedy ; and, if they have a taste for scenery, they may probably be found to prefer such as partakes of the *dreary sublime*—that, namely, which is characterised by an aspect of desolation. Love of the *terrible sublime* has with great shew of reason been conjectured to arise from a combination of Ideality with Cautiousness.‡

When Destructiveness is disproportionately vigorous in a clergyman, it gives rise to a style of religious instruction by no means accordant with the mild and peaceful spirit of Christianity. Of this class of preachers a vivid and striking picture has been drawn by Dr Caldwell, in his "New Views of Penitentiary Discipline." After describing what a Christian minister *ought* to be, he proceeds thus:—"How different is this, both in appearance and result, from that miserable substitute for religious and moral teaching,—that revolting caricature of piety, whining, coarse, obstreperous, and denouncing,—which so often assails us in places of worship, and which has its source as exclusively in the animal organs, as the uproar of the bacchanalian, the shout

* *Essays*, b. ii. ch. 11. p. 162.

† Gall sur les Fonctions des Cerveau, iv. 88.

‡ Combe's System of Phrenology, 3d edition, p. 330.

of battle, or the howling of wolves ! This indecent storminess of instruction affects alone the animal compartment of the brain, because, as just stated, it is itself grossly animal ; and we venture to assert, that no teacher or minister ever practised it, who was himself largely developed in his moral and reflecting compartments ; we mean in whom those compartments fairly predominated, and gave character to the individual. On the truth of this we would be willing to peril the fate of Phrenology. It is a cast of pulpit-pugilists alone, with heads of the true ruffian mould, or nearly approaching it, that deal in nothing but discourses of terror ; who, in sermonizing or otherwise teaching, exercise their combative and destructive faculties to drive their flocks into the pale of *their* religion, precisely as they would employ a whip or a goad to drive sheep into a fold, or black cattle into their stalls. Terror is their chief, if not their only instrument of reform ; and a worse can scarcely be imagined. Their appeal is to Cautiousness, the organ of the craven passion of fear, whose influence never infused morality or religion into any one, and never can. Their plea of conversion and worship is not gratitude for existence and all its enjoyments, nor yet the love of moral purity and holiness, but the dread of punishment. They would frighten sinners into heaven, as a mere refuge from a place of torment."

In addition to the uses of Destructiveness treated of in the previous portion of this essay, another important end which it serves yet remains to be illustrated.

In surveying the constitution of man, and its relations to the external world, certain modes of action are perceived to be indispensable conditions of our welfare and happiness. It is necessary, for example, to supply the stomach with food ; to build houses, and fabricate clothing and implements ; to watch over the infancy of every individual with patient assiduity ; to associate with our fellows for mutual assistance and protection ; and to accumulate the produce of industry so as to secure ourselves from want. Now, to the performance of these and similar actions, two classes of motives may be conceived—first, the intellect, contemplating the remote advantages which ensue from performance, and the evils necessarily attending neglect ; and, secondly, special faculties urging to, and giving pleasure in, the performance itself. It is obvious, however, that had man been endowed with intellect alone, his ignorance at the beginning of his career would have rendered the perception of distant results impossible, and the duties enumerated must have been so generally neglected, that the race could never have emerged from barbarism ; and even if we suppose them to have possessed (what even now they are far from possessing) an amount of knowledge sufficient

for the purpose, they would have acted solely with the aim of securing the ultimate good, and every intermediate step would have been regarded as an insipid or irksome task. To avoid this result, the Creator has wisely and bountifully furnished us with propensities directly urging us to the performance of our indispensable duties, and giving rise, at the same time, to endless gratification in executing the bare means of attaining our objects. Alimentiveness renders eating very agreeable for its own sake; Philoprogenitiveness is the source of intense delight in the rearing of children; Constructiveness gives us pleasure in fashioning rude materials into houses, clothing, tools, ornaments, and other useful articles; Acquisitiveness renders it agreeable to store up and take care of wealth, without any view to its utility; Order makes cleanliness pleasant even to those who are ignorant of its conduciveness to health; and Self-Esteem derives from the possession of authority, and from the deference of inferiors, an amount of happiness often more than adequate to counterbalance the trouble which necessarily accompanies the duties of a governor or superintendent.—Let these observations be now applied to Destructiveness.

Many operations which imply destruction are indispensable in the business of life. We must kill animals for food and commercial purposes—rid ourselves of noxious vermin—perform surgical operations—destroy weeds and many unsightly and unwholesome objects—and stimulate by chastisement animals useful to man, but insensible to higher motives. Even in manufacturing processes, fabrication and destruction generally go hand in hand. Now, I conceive that Destructiveness has exactly the same relation to such actions that Alimentiveness has to eating, Acquisitiveness to hoarding, Constructiveness to building, and Self-Esteem to the exercise of authority; that is to say, it urges to, and gives us positive gratification in performing, acts which in themselves are only the *means* of producing useful or indispensable results. And moreover, just as Combativeness gives pleasure in witnessing contention, so does Destructiveness inspire a sort of placid gratification when we behold the decay and perishing of so many objects around us. Had Benevolence been implanted in the mind without Destructiveness, the pain occasioned to it by the suffering which we are frequently compelled to witness—by “the wrong and outrage with which earth is filled”—would have been altogether unbalanced; whereas, by giving us Destructiveness, Nature, as Mr Combe well observes,* “has steeled our minds so far as to fit us for our condition, and to render scenes which our situation constrains us to witness not insupportable.”

* System of Phrenology, 3d edit. p. 172.

ARTICLE V.

JOURNAL DE LA SOCIÉTÉ PHRÉNOLOGIQUE DE PARIS.
April and July 1835.

THE April Number of the French Journal makes a very respectable appearance, and contains articles, of more or less importance, by Fossati, Voisin, Richard, the celebrated Andral, Casimir Broussias, Imbert, Rolandis of Turin, and Duchesne. One of the most remarkable is a letter dated Vienna, 1st October 1798, in which Dr Gall gives his friend Retzer an outline of the work he was then preparing *on the functions of the brain, and the possibility of discovering certain talents and dispositions by the configuration of the head and skull*. Dr Gall there specifies very exactly the extent and results of his researches and discoveries up to that time, and expounds the great principles which he afterwards so successfully established in his large work. The letter thus becomes a sort of historical document, and we are indebted to Dr Fossati for having rescued it from oblivion, by translating and publishing it in the French Journal. In a communication addressed to Dr Elliotson of London, and prefixed to the letter of Dr Gall, Dr Fossati remarks that this letter is precious as affording evidence of Gall alone being the discoverer of Phrenology, its date being two years prior to the time at which Spurzheim first became one of his hearers. Fossati adds, that he insists upon this point because several phrenologists who have received their knowledge from Spurzheim *give him a great share in the discovery, and even sometimes place him above Gall*—which, he says, they will now no longer be able to do.

With all due deference to Dr Fossati, we consider such a commentary from him as neither more nor less than pure *treadle*. He knows perfectly well that Spurzheim himself, in his various publications and lectures, was scrupulous in giving Gall the sole merit of the discovery, and in stating that he himself first became his hearer in 1800. Why, then, make such an insinuation as is implied in saying that many of those phrenologists who derived their knowledge from Spurzheim were "tempted" to ascribe higher merit to him than to Gall? *Can he point out a single phrenologist who has assigned to Spurzheim any share in the original discovery?* We have never met with such a phrenologist, nor can we conceive his existence possible. Before a man can become a *phrenologist*, he must know what Phrenology is; and before he can know what it is, he must of necessity

become acquainted with the mode of its discovery, and with the fact that to Gall alone the glory of making the discovery is due. We hope, therefore, that Dr Fossati will not again, without reason, throw out remarks of this nature, which tend only to gratify bad passions, and to prejudice in the public mind the great cause in which we are all equally interested.

The second article is an excellent translation, by M. Richard, of Mr Combe's *Outlines of Phrenology*, as originally published in the *Transactions of the Phrenological Society*. It is intended to convey to the less advanced readers a condensed view of what is known in Phrenology, and is preceded by some judicious remarks by the translator, whose contributions, by the way, indicate the possession of a philosophic understanding, and considerable acquaintance with the principles of the science.

A report on the state of the idiot children under the care of Dr Voisin, at the Hospital of Incurables in Paris, follows next in order; and its contents form an instructive commentary on the doctrine so long maintained by some philosophers, that all ideas come to us through the medium of the external senses, and are merely images, as it were, of what exists without. Dr Voisin describes the lowest class of his patients as reduced to a vegetative existence, and performing no other functions than those of digesting and breathing. "*The organs of the senses are open and well formed, but they find nothing to which to transmit the impressions of the external world; the impression is confined to the organ—to the ear or to the eye—but excites no movement in the mind; nothing seems to have any purpose to serve in their organization; every thing is vague and without aim; the eye is not fixed on its object, the ear does not listen, the hand does not stretch forth, the imperious cravings of hunger are felt in vain; food is before their eyes, but they know not how to carry it to the mouth; there is no attention, no perception:—sentiments, affections, passions, and intelligence, are alike absent, along with every other quality peculiar to man.*" Let the philosophers construct a rational creature out of such materials, and we shall at once yield to the external senses all the high prerogatives which have been claimed for them.

Dr Voisin states as an observation never before made by any author, but which seems to us a truism, "that in most idiots the manifestations which appear first are all instinctive and animal;" that, "in the development of the lateral and posterior parts of the head, nature is rarely deficient in her work; and that she has a manifest predilection for the animal faculties, as being necessary to the propagation and preservation of the living being, and therefore given to man only in common with the inferior creatures." Dr Voisin adds, "that in newly born infants the same parts are in high development, while the anterior portion

of the brain exists merely in a rudimentary state." This is so true, that we have known many parents who, in ignorance of the fact, were greatly alarmed at the unpromising proportions of the different parts of the brain in their own infants; and we have been surprised at the rapidity of the change which takes place during the first year or two, when we have measured heads with callipers at intervals of a month or six weeks.

Dr Gall has laid it down as a fact to which there is no exception, that where the brain is so small that the head does not exceed thirteen inches in its horizontal circumference, idiocy is the invariable consequence. Dr Voisin made observations to verify this assertion, and he found it substantiated by every one of his cases. In the lowest class of idiots, where the intellectual manifestations were null, the horizontal circumference, taken a little higher than the orbit, varied from eleven to thirteen inches, while the distance from the root of the nose backwards over the top of the head to the occipital spine was only between eight and nine inches. When the size varied from fourteen to seventeen inches of horizontal measurement, and eleven or twelve in the other direction, glimpses of feelings and random intellectual perceptions were observable, but without any power of attention or fixity of ideas. Lastly, when the first measurement extended to eighteen or nineteen inches, although the head was still small, the intellectual manifestations were regular enough, but deficient in intensity. In a full-sized head, the first measurement is equal to twenty-two inches, and the second to about fourteen inches. So large was the head of Spurzheim, that even on the *skull*, these two measurements amount to $22\frac{1}{2}$ and $13\frac{1}{10}$ inches respectively. Those who deny the influence of size of the brain on the manifestations of the mind, should reconcile these facts with their own views, before they denounce phrenology as at variance with nature, and maintain that, so far as vigour of mind is concerned, it is indifferent whether the head be large or small.

The next article is a discourse delivered at the annual general meeting of the Society by the celebrated pathologist and professor, Andral, in his capacity of president. In this discourse Andral endeavours to remove existing prejudices, by shewing that Gall's leading ideas are in strict harmony with the principles which have always been followed by physiologists in endeavouring to discover the functions of the bodily organs, and that their truth is established by a body of evidence, direct and indirect, which it is impossible to resist. "In what I have just said," continues the Professor, "I have only one aim, and it is to prove that the science of which Gall is the founder must henceforward be included among the grave and serious studies of physiology. The question is not now whether Gall or his

successors have committed any mistakes in determining the functions of individual portions of the brain : even although none of the organs were yet ascertained, the fundamental principles of the science would not on that account have existed the less, and sooner or later they would have led to the accumulation of facts and the filling up of details. But if Phrenology be true, do not concern yourselves about its future success, for there is no example of an important truth once fairly launched, having failed to make its way. It must, however, pay the usual tax of entry ; some one must be put to inconvenience in its progress, and few people are fond of being set aside. *It has, moreover, the great fault of being younger than those whom it pretends to enlighten ;* but let it alone, and it will soon throw all obstacles behind it with marvellous force." We recommend these remarks to the serious consideration of such medical students as are deterred from the study by the influence of our own prejudiced professors. Andral's professional reputation and labours may be put in the scale against those of any of our living teachers.

Dr Casimir Broussais' annual report of the Society's proceedings, is a very interesting document, and we wish we could extract it entire. If the Phrenological Society here were to hold a public meeting once a year, and to have a similar report read, it would be very useful in stimulating the members to exertion, and in exciting public attention to the study of Phrenology. We hope the Council of the Society will take this into its serious consideration. The chief additions made to the Parisian museum during the last season consist of the skull of a hydrocephalous idiot, a number of skulls and casts of the brains of different species of dogs, and several casts of remarkable characters presented by that indefatigable collector, M. Dumoutier. Among the latter is a cast of Lemoine, who murdered the chambermaid of Madame Dupuytren, and who combined uncontrollable passions with a taste for literature, and wrote an epistle in very tolerable verse to a friend *the evening before his execution*. The cast presents an enormous development of Destructiveness, and the animal organs in general, including Acquisitiveness, Combativeness, and Secretiveness. Self-esteem and Love of Approbation are rather deficient, and the reflecting intellect and moral sentiments much too weak to resist the force of such energetic propensities. Another cast is that of a young man, Dem——, confined in the Bicêtre, who began to steal at eight years of age to satisfy his appetite for gormandizing, idleness, and debauchery, and who was prevented by an accident from murdering his aunt for the purpose of robbing her. The great breadth at the temporal and lateral regions, or, in other words, at Acquisitiveness, Alimentiveness, Destructiveness, and Secre-

tiveness, contrasts remarkably with the shallow coronal surface, and small development of the organs of reflecting intellect.

Another cast presented to the Society was that of the young Duh——, also confined at the Bicêtre, and who is an example of one of those varieties of character which Phrenology alone can explain. Duh—— was born in easy circumstances, but his inferior feelings were cultivated by the incessant quarrelling and disorder going on around him, and the harsh treatment which he received. Soon after the death of his father, he left home in disgust; and being a regular gourmand, and fond of public amusements, he contracted an intimacy with young vagabonds like himself, thieves by profession. Stealing by day, and lying all night under the arches of the bridges, shivering from cold, dying of hunger, without clothing and without shoes—or, in other words, leading a life of wandering, privation, danger, and uncertainty—was a source of enjoyment to him; and yet he is so beset with vanity, that he would risk every thing to procure articles for the toilet, such as ear-rings, buckles, and other ornaments. When in prison, he readily adopts a more correct line of conduct, and gives great satisfaction to the authorities. It is only under temptation and the influence of bad company that he relapses. From his intelligence and general organization, Dr Broussais considers him as a reclaimable subject, and thinks the savage treatment he met with in early life is much to be blamed for his subsequent excesses. He is only seventeen years of age.

The next case is very instructive. It is that of a young man, Urbain, who was forced by harsh treatment to flee from his father's house at eight years of age, and who, at the instigation of a companion, stole some copper money on which to subsist till he could get into the navy. He was discovered and sent to the galleys for seven years, and, after various vicissitudes, was a second time imprisoned, but escaped, and subsequently was four years in the service of a blanket-manufacturer, as shopman, book-keeper, and confidential clerk, with large sums under his custody. On the 22d June every year, he carried upwards of L. 2000 in specie to the coach-office, and gave great satisfaction to his employers. Being now comfortable in circumstances, respected by those around him, and not naturally depraved, he successfully resisted these temptations. But in an evil hour he was recognised and denounced by a criminal who had been imprisoned along with him, and, to *satisfy the law*, he was immediately seized upon, disgraced, ruined, and sent back to prison. This is one of the numerous instances in which the power afforded by Phrenology, of discriminating character, would be of immense service in protecting society, preventing crime, and reforming offenders. Urbain's Acquisitiveness and Secretiveness are large, but, under proper training in early life, he would have turned out a useful and intelligent member of society.

An account then follows of two suicides, in whom the supposed organ of the Love of Life was very feebly developed, and who resorted to self-destruction as a deliverance from domestic misery. From these unpleasant cases, Dr Casimir Broussais passes to others of a different kind, and exhibits men of genius and of strong moral energies, labouring in accurate accordance with their respective combinations of organs. One deaf and dumb man travelled over Great Britain, the United States, and part of South America and of France, in his ardour to found institutions for his fellow-sufferers, and is remarkable for a talent for engraving, and for literature and languages. He possesses a broad bullet head, with full knowing organs, moderate reflection, abundance of Hope, Firmness, Ideality, and Love of Approbation, and an active temperament. Another deaf and dumb genius is next spoken of, and then several masks of musicians are introduced and commented on; but one of the most remarkable of all the cases is that of the French pilot Henin, who so generously and devotedly risked his life, in endeavouring to save the convicts and crew of the English ship *Amphitrite*, wrecked at Boulogne in September 1833, and whose services were acknowledged by a subscription at Lloyds. Firmness, Courage, Benevolence, and Love of Approbation, are very prominently developed, and equalled only by those which appear in the cast of Paillette, another Frenchman, who received the "prize of virtue" from the National Institute, for his extraordinary exertions and success in saving the lives of drowning people. The casts of Mailhe and Champollion close the list of those presented during the past season, and give evidence that the Parisian Society does not exist in vain.

The remaining articles consist of a letter by Dr Voisin, explanatory of the nature of a new educational establishment founded by him; a communication by Dr Imbert, on a supposed organ of Respirability; an account, by Dr Rolandis, of an atrocious murderer at Turin; and, lastly, a notice of the eminently benevolent Negro, Eustache, formerly mentioned as presenting an extraordinary development of the corresponding organ. In alluding, at p. 194 of our 42d Number, to the account given of him in the French Journal, No. V., we expressed a wish that farther details had been published. The present notice by M. Duchesne supplies the desideratum.

We were about to finish, when the French Journal for July came into our hands. Its contents fully sustain the high character which its later numbers have acquired for it; and we heartily congratulate the Parisian Society on the general excellence of the contributions. If our contemporary continues to improve at the same rate, he will not fail to add greatly to his circulation, as well as to his scientific reputation.

The first article is an analysis of a Memoir on the Connexion between the Physical and Moral Nature of Man, read by Professor F. J. V. Broussais, on 16th and 23d August 1834, to the Academy of Moral and Political Sciences. The Professor has boldly introduced Phrenology into his memoir, which, however, is to our taste somewhat too metaphysical. It may be necessary to inform the reader, that the Academy of Sciences is a branch of the French Institute, a committee of which, consisting of MM. Tenon, Sabatier, Portal, Pinel, and Cuvier, reported unfavourably on the anatomical discoveries of Gall and Spurzheim. This was in 1808; and, from that time, no one before M. Broussais ventured to espouse the cause of Phrenology within the walls of the Institute. The reading of the present memoir, says the journalist, ought therefore to be regarded as an epoch. "The gauntlet is thrown, and the psychologists are now bound to take it up. It has been proved that their science cannot be otherwise than incomplete; seeing that they neglect the use of materials indispensable for its formation—that it is for the most part mere hypothesis, partaking more of romance than of science—and that the only method of giving it a solid foundation and a firm superstructure is to put under contribution the facts unfolded by Phrenology. The attack is vigorous—we shall see what kind of defence will be made."

The second article is an "Essay on the Means of forwarding the Progress of Phrenology; and on the Advantages, Defects, and Abuse of Cranioscopy; by Dr Bailly of Blois." This is one of the most vigorous, clear, and instructive articles which have appeared in the French Journal, and we rejoice to find Dr Bailly so earnest in his endeavours to promote the improvement of Phrenology, and to check the rashness of those who would stretch it beyond the limits of its legitimate applications. Although the essay occupies thirty-nine pages, the subjects discussed are so important that we intend to give a translation of the whole in our next number. Dr Bailly insists much on the abuse of cranioscopy by those who regard the form and size of the brain as the sole objects to be attended to in judging of dispositions and talents, and who ignorantly imagine every part of every head to afford sufficient grounds for accurate phrenological deductions. In reprobating the abuses of cranioscopy, however, he appears to us to err on the other side, by restricting too much its uses and applications. But to this subject we shall return hereafter.

The title of article third is—"Phrenological Researches made upon a Skull formerly supposed to be that of the famous Marchioness of Brinvilliers, but which is now proved to have belonged to Madame Tiquet, another criminal, whose history is recorded in the *Causes Célèbres*. By J. A. Leroi, of Versailles." The life of the Marchioness of Brinvilliers appears from the

first volume of the *Causes Célèbres* to have been little else than a tissue of murders, drunkenness, and debauchery. She was condemned in 1676 to suffer death for her crimes, and to have her body afterwards burnt and its ashes scattered to the wind. Having observed it stated in the *Biographie Universelle*, article "Brinvilliers," that her skull was to be seen in the Museum of Versailles, M. Leroi obtained a sight of the skull, reputed to be hers from the librarian, who, however, could give him no information about its origin, or whether it was really that of Brinvilliers at all. M. Leroi, thinking that a phrenological examination of it might throw some light on the matter, proceeded to inspect it carefully. It seemed to have been artificially prepared, and to have belonged to a female from thirty-six to forty years of age. The posterior and lateral portions of the head greatly predominated over the superior and anterior, indicating an ascendancy of the animal faculties over the moral and intellectual powers. Amativeness, Love of Approbation, Secretiveness, and Destructiveness, he found very large; Philoprogenitiveness, Self-Esteem, Cautiousness, Acquisitiveness, and Firmness large; with a pretty good development of Constructiveness and Veneration. The organs of all the other affective faculties appeared to be very small; and among the intellectual organs, that of Wit was the only one whose size was remarkable. These circumstances, then, favoured the idea that the skull might have been that of Brinvilliers, or at least of some other atrocious criminal. Various considerations, however, tended to prove the inaccuracy of the common belief. In the first place, the head of Brinvilliers is known to have been very small, whereas the skull in question is of unusual size; secondly, she was fifty years of age at the time of her execution, whereas this skull appears to be that of a person between thirty and forty; and finally, as her body was burnt after the execution, it is improbable that the skull, if hers, would have been in such a perfect state of preservation. But though satisfied that it was not the skull of Brinvilliers, M. Leroi lost none of his confidence that it must nevertheless have belonged to some woman distinguished by great vices, if not for atrocious crimes. He therefore requested the librarian to make a farther search for some mark which might lead to the information wanted; and at length there was found, in a short account of various objects belonging to the institution, a notice of a head designated *Tête de Mme. Tiquet*. This was an important discovery; for M. Leroi, actuated by his strong impression that the skull was that of a criminal, lost no time in referring to the *Causes Célèbres*, where he found, what he was so anxious to obtain, the history of Madame Tiquet; and its details fully confirmed the accuracy of his deductions.

This lady was rich and beautiful, and married M. Tiquet,

a counsellor of Parliament. She had an ungovernable passion for display, inasmuch that three years after marriage, her husband was obliged to inform her that her fortune no longer permitted the indulgence of her extravagance. Thenceforth she conceived an implacable hatred against him, launched into a career of licentious gallantry, and, after failing in an attempt to poison him, got him murdered one evening as he was returning home. For this crime she was beheaded in 1699. M. Leroi enters into a comparison of her character with the development of the individual organs, and finds a close agreement between them.

A "Notice of F. A. Henri, a poet and religious madman, by M. Bernard Delafosse," is the subject of the fourth article. It is prefaced with expressions of regret that the skulls and casts to be found in phrenological collections are seldom accompanied by detailed notices respecting the organization and lives of the individuals. M. Delafosse has produced an interesting notice of this description; but our limits do not allow us to refer to it at greater length.

The next article is from the pen of Dr Bailly, and is entitled "Reply to the Memoir of M. Leuret on the Configuration of the Brain of Man and the Mammiferous Animals, read to the Academy of Medicine on 7th March 1835." This is a smart and well-merited castigation of M. Leuret, a gentleman very ignorant of Phrenology and the works of Gall, and who conceives himself to have overturned the science by deducing absurd conclusions from certain facts connected with the anatomy of the brain, and mostly stated by Dr Gall himself. Gall, it seems, though he gives many engravings of skulls, "singularly neglected the anatomical study of the convolutions;" for a reply to which "inconceivable accusation," Dr Bailly refers to Gall's large work, and to some thousands of physicians of divers countries, who, for upwards of twenty years, learned from the lectures of the founder of Phrenology the most accurate and rational anatomy of the cerebral convolutions yet known. "I affirm," he says, "without fear of contradiction, that no anatomist before Gall had ever the slightest idea of the true structure of the convolutions. This has been acknowledged by Cuvier himself, whom no one will accuse of too much partiality towards the works of Gall." After describing the form and direction of the cerebral convolutions in various animals, M. Leuret asks exultingly—"How can the phrenologist get rid of these facts? He places in the anterior region of the brain the organs which make men philosophers, savans, and artists; yet these very parts are found in the sheep, the ox, the goat, the horse, and the ass. He ascribes the sentiment of Veneration to the diverticulum at the top of the brain, although this diverticulum exists in all mam-

miferous animals." But why, asks Dr Bailly, should M. Leuret stop here? All the organs which Gall has found in the human brain are situated in *some part* of it; they are either at the top, at the back, at the side, or at the base. Now, as the brains of all animals have, like that of man, superior, anterior, lateral, and basilar regions, why does not M. Leuret follow out his principle, and conclude that every animal has the same faculties with the human race? The opinions held by phrenologists on this subject are well stated by Dr Bailly in two propositions:—"1st, As inspection of the brain teaches nothing concerning the nature of its functions, it is only by observation of the actions of an animal that we can determine with what faculties it is endowed. 2dly, When observation of the habits of an animal has proved it to possess a certain instinct or faculty, we must then compare the brains of different individuals of the same species, in order to determine the precise cerebral part with which that faculty is connected." Since, therefore, it is impossible, by merely looking at the brain, to discover the functions of its different parts, what grounds has M. Leuret for affirming that the convolution of Veneration is found in every animal? The truth is, that two brains, even supposing them perfectly equal in size, weight, volume, and external shape, may nevertheless, if they belong to animals of different species, genera, and classes, be the seat of totally different faculties,—and this although the material organization has exactly the same appearance in both. In this respect the brains of two such animals would be analogous to the optic and olfactory nerves in man or any other animal. Supposing the diameter of both nerves to be the same, and portions of equal length to be presented together, no physiologist could discover in their aspect any reason for considering one of them to have the faculty of transmitting odours but not sounds, and the other the function of conveying impressions of sounds, but not of odours. Dr Bailly well observes, that certain parts of the brain are the seat of this or that function, not because they are above or below certain other parts, nor yet because they are convolutions of this or the other shape or contour; but because they have a specific organization, whereby they are enabled to manifest a particular function—and what that function is, observation of the concomitant manifestations can alone reveal to us. The assertion, therefore, that the convolutions which render men philosophers and artists are found in brutes, is utterly absurd, and proves its author to be ignorant of the fundamental principles of Phrenology. Even although the anterior lobes of the brains of sheep and oxen resembled exactly (which in reality they do not) those of the human brain, what would this prove with respect to the functions? Absolutely nothing. The brain of the ox might have a specific organization, capable of manifesting the intelli-

gence of an ox; just as the human brain is organized to be the seat of faculties peculiar to man—in a word, just as every brain has a special constitution peculiar to the class, genus, or species of the animal to which it belongs. It is a fundamental position in Phrenology, that to arrive at any certain knowledge of the cerebral functions, we must compare the brains of animals of the same species alone; not only because the function of a region locally the same in different species may entirely differ in *quality* or *kind*, but also because, even where the function is the same in kind, its *quantity*, *force*, or *intensity*, is often different. This is obvious in the case of the external senses of different species; the acuteness of hearing or smell depending not merely on the absolute bulk of the auditory and olfactory organs, but also on their specific internal constitution. So it is also with the organs of muscular motion, the power of which, in different species of animals, is by no means in proportion to their size. Muscular strength is proportionally much greater in the smaller than in the larger animals: a flea, for instance, can draw from seventy to eighty times its own weight; whereas a horse cannot draw with ease more than three times its own weight*. “I have seen,” says Sir Gilbert Blane, “the sword of a sword-fish sticking in a plank which it had penetrated from side to side; and when it is considered that the animal was then moving through a medium even a thousand times more dense than that through which a bird cleaves its course at different heights of the atmosphere, and that this was performed in the same direction with the ship, what a conception do we form of this display of muscular power!”†

Following Dr Bailly's article is a translation, from our 21st Number, of the account of Mr Combe's visit to Richmond Lunatic Asylum, Dublin, under the title of “Application des Connaissances Phrénologiques au Diagnostic de la Folie;” and the Number concludes with a controversial letter from Dr Mège on a subject of too little general interest or importance to require particular remark.

ARTICLE VI.

CASE OF IMPAIRMENT OF THE FACULTY OF LANGUAGE,
ACCOMPANIED BY PAIN ABOVE THE EYES. By Mr WILLIAM GIBSON, Surgeon, Montrose.

LATE in the evening of the 11th May last, I was asked to see Janet Whyte, wife of a miller at Rossie Mills in this neighbour-

* Haller, Elem. Physiol. I. ix. § 2.

† On Muscular Motion. Select Dissertations, p. 281.

hood, a woman about thirty years of age, and who had recently weaned her first child. She had, I found, frequently complained of headaches during her nursing and since, and had of late lost flesh considerably. About eight o'clock that evening, she was found sitting with her hand pressed on her forehead, and partially insensible, being only able to say that she felt great pain. She was put to bed, and was much in the same state when I saw her. She still often put her hand to her head, groaned and muttered occasionally, and took no notice of what was going on around her, except in firmly resisting me in making an attempt to bleed her. The pulse was not affected, nor was there any heat of head, or of surface generally. We succeeded in forcing into her mouth a little sugar, with three drops of croton-oil upon it, of which she appeared to feel the disagreeable flavour. Next morning she was quite insensible. I then bled her freely, and gave more croton-oil, till the bowels were well acted on. She, however, remained perfectly insensible for five days; during which time leeches were applied to the head, blisters and sinapisms to the nape of the neck, spine, and lower extremities, and turpentine embrocations to the loins and epigastrium. A little tea, which she swallowed from a tea-spoon, was her sole nourishment. Gradually she began to throw off the stupor, to notice, to take nourishment, and to move about. Her speech, however, was very much affected:—At first she only uttered inarticulate sounds: then single words very indistinctly, and generally inapplicably; and, when she did begin to utter sentences, they were very unconnected and unmeaning, the different words being either wrong or strangely jumbled together. It has been very slowly that she has acquired the use of speech, and it is only now that, with difficulty, she can give an account of her feelings during her illness. She says that she was first attacked with pain in one side of the head; that it soon went to her forehead; and that then, as she expresses it, “it fell down into her *EEN*,” where it has remained more or less ever since, excepting, of course, during the five days that she was insensible. She refers the pain to a spot immediately above and behind the eyes; and, when I desire her to point out the spot, she puts her fingers beneath the superciliary ridge, presses back the eye as far as she can, and says that it is there and farther back. She complains much of her defect of speech; she says that she knows perfectly what words she ought to use, but cannot get them expressed. She has no other complaint now remaining, excepting a slight dimness of sight, which is going off gradually.

MONTROSE, 11th June 1835.

ARTICLE VII.

PHRENOLOGICAL QUACKS.*

WHILE we congratulate the lovers of truth on the spread of phrenological science, we should be wanting in our duty to the subject, were we to neglect noticing, occasionally, the obstacles which its indiscreet friends throw in the way of its progress. We speak it in kindness to those who may be the subjects of our remarks—that there are many abroad teaching the public Phrenology, and making application of its principles, who stand in eminent need of instruction themselves. They read a few pages of a work on the subject, and suddenly appear as men full of wisdom and experience. Whether they act from disinterested motives and err with regard to their abilities, or come out as earnest disciples with a view to gain, is a matter of no consequence to us. We have no hostility to either source of action, provided it be sustained by prudence, skill, and knowledge. But we cannot sanction the teaching of one, from whatever motive he may act, who has not thoroughly prepared himself for the task which he undertakes. Phrenology is still a new science; and the fact that it is so, renders the task of lecturing upon it difficult.

The most prevailing evil, however, at this time, is the practice of examining heads; not of well-chosen cases, where examinations may be of use to the science, but indiscriminately. Every head, whether common or uncommon, respectable or degraded, receives a formal judgment. Not content with satisfying a few inquirers, who may have had their curiosity excited by hearing lectures, there are individuals who make it their business, have their shops, and receive pay for their manipulations, at so much *per head*! This practice not only degrades the science, but gives rise to superficial converts, who will be likely to prove obstinate followers of the bad examples which were the means of their conviction. It turns a dignified science into a system of *legordemain*, and those who are really able to promote the true philosophy of man will be prevented from investigating the subject, on account of the repulsive appearance of its exterior.

The rule should be, *Examine no heads of living individuals of respectable standing; and the exceptions to the rule, examinations of well-marked heads, whenever it is evident that the science may be promoted by reporting them, whether in favour of, or adverse to it.* This was the rule of Spurzheim; and mo-

* From the American Annals of Phrenology, vol. ii. No. v., May 1835.

desty, to say the least, should suggest the proper course to his humble followers. That great man spoke frequently on this subject, and was decidedly opposed to the practice of which we complain. If such was the advice of one who had the advantage of a powerful mind, of deep learning, and thirty years experience, what can we say of him who, inferior in every respect, to a degree which we need not mention, still persists in giving premature opinions on heads, both privately and publicly !

But we are told that many dispute the truth of our doctrines, and set us at defiance. Let it be so. When demands are made for the proofs upon which our science stands, let them be answered by stating what *its principles are, and how sustained*—rather than in showing *what phrenologists can do*.

We would not be understood to speak against observation ; on the contrary, we recommend it. But we are decidedly opposed to that *system of observing human nature* which mistakes the means for the end of science, and which tells to the world its discoveries before they are matured.

We make the following extract from the New-York Star, not because we believe it to be true, but to show how an imperfect manipulator may be imposed upon. Whether this statement be true or false, it matters but little with us, so far as we make use of it, as we have known attempts of a similar character, which rewarded their indiscreet authors with similar results :

“ *A Professor of Phrenology placed in an awkward predicament.*—A rather laughable denouement took place, as we perceive by the Rochester Democrat, at that place a few days since. A professor, and who was literally nothing but a *professor*, who had been delivering a course of lectures, and who had been boasting of having successfully determined, while blindfolded, the character of about 1000 heads, was invited by a wag to accompany him to the jail as a proper theatre for the exercise of his talent. Accordingly, after tying his eyes with a bandage, he was led into a cell, where were four or five most exemplary and reputable citizens of the town, placed there purposely, on whom the Doctor, presuming them to be felons, pronounced, of course, very learnedly, touching their extensive protuberances of Combativeness, Acquisitiveness, &c. What was his astonishment afterwards to learn, on the removal of the bandage, the trick that had been imposed upon him. It was considered by the public of Rochester, a complete ‘floozer,’ and the Doctor was looked upon as ‘used up.’ When empirics and impostors, for the sake of gulling the public, and fleecing their pockets, meddle with ‘edge tools’ they don’t understand, they deserve to be cut and marked also.”

In making these remarks, we allude to no particular individual, but to many of whom we have heard. We respect their

motives, but we protest against their practices. We entreat them to desist, and to aid in promoting Phrenology in a way more in accordance with scientific taste.

ARTICLE VIII.

MR COMBE'S VISIT TO NEWCASTLE.

HAVING received an invitation from the Literary and Philosophical Society of Newcastle-upon-Tyne to lecture on Phrenology in that town, Mr Combe commenced a course of sixteen lectures, on the evening of Monday, 5th October 1835, and continued to lecture four evenings each week till the end of the month. The lecture-room of the Society, which is said to contain 300 persons, was crowded to excess. At the close of the lectures, Mr Combe received from his audience orders for Mr O'Neil, figure-caster, for upwards of 130 casts of marked busts, and of marked skulls and brains. He gave an extra lecture on Education in the Music Hall, for the purpose of raising funds to found a Phrenological Society. It was attended by 452 individuals, and the sum drawn at the door enabled him to present the Society with the whole of Mr O'Neil's collection of casts, and a small surplus in money for the purchase of books. During his stay, Mr Combe visited several institutions, of his observations at which an account is subjoined.

1. NEWCASTLE LUNATIC ASYLUM.

The Lunatic Asylum is a private institution, licensed to Dr Smith, who professed himself entirely unacquainted with Phrenology. It is situated on rising ground at the west end of the town, and commands a view of the beautiful vale of Ravensworth, and hills adjacent, on the south side of the Tyne.

In this asylum there are three classes of patients of each sex, a pauper, middle, and higher class. Each class is distinct, being furnished with day-rooms, sleeping-gallery, airing-ground, &c. The six airing-grounds of the asylum are open to the patients from morning till dusk in fine weather: there is also a large garden belonging to the institution, where the better classes exercise, and the pauper men also labour in digging, trenching, wheeling, &c. under the eye of the gardener. The asylum is kept in the highest state of cleanliness and ventilation, and every attention which the locality and nature of the building will allow, is paid to the comfort of the patients.

Mr Mackintosh is the surgeon-superintendent, who resides in the asylum. There are a matron, four male attendants, and five

female. The servants seemed particularly humane and respectable.

Mr Combe inspected the asylum on 16th October, and was permitted to examine the heads of a few of the pauper patients: *the higher classes of patients are never seen but by their friends.* In the following cases the form of the insanity appeared clearly related to the predominance of certain organs in the brain. The remarks were furnished by Mr Mackintosh, and were written down before Mr Combe's arrival.

Men.

R. W.—*Mr Combe* pointed out that the intellectual organs are small, and that Self-Esteem and Love of Approbation are greatly predominant.—*Remarks by Mr Mackintosh*: "Monomania, religious—ruling hallucination he is Christ."

J. N.—*Mr Combe*: The animal organs are large; Cautiousness and Destructiveness are predominant; Hope small, and coronal region in general flat and deficient.—*Remarks by Mr Mackintosh*: "Suicidal—great misery—hypochondriacal fancies predominate—a bad character."

L. J.—*Mr Combe*: Acquisitiveness is enormously large in left hemisphere, and large in right.—*Remarks by Mr Mackintosh*: "Monomania, wealth."

R. B.—*Mr Combe*: Love of Approbation is predominantly large.—*Remarks by Mr Mackintosh*: "Monomania, pride."—On inquiry, Mr Combe was satisfied that the characteristic feature was vanity. Pride and vanity are frequently confounded by persons who are not aware of their different origins.

J. M.—*Mr Combe*: The temperament is bilious, nervous, and lymphatic. The intellectual organs are fully developed; Veneration, Firmness, Self-Esteem, and Concentrativeness, are all very large, particularly Veneration and Concentrativeness.—*Remarks by Mr Mackintosh*: "Monomania—the Messiah—a Jew by proselytism—England to be subdued by the Jews—he their leader—much bloodshed—perfectly sane and tractable on all other subjects."

C. S.—*Mr Combe*: The intellectual organs are large, particularly in the superciliary ridge. The organ of Number is predominantly large, strikingly depressing the external angle of the eye.—*Remarks by Mr Mackintosh*: "Dementia—love of arithmetic and accounts—perpetually employed in figures."—When his hands were confined, he used the tip of his tongue and saliva to write figures on the walls. It bore marks of excoriation from this practice when Mr Combe saw him.

Women.

M. D.—*Mr Combe*: Cautiousness and Destructiveness are excessively large; Hope extremely small; the coronal region in general deficient.—*Remarks by Mr Mackintosh*: "Great misery—suicidal monomania."

E. H.—*Mr Combe*: Wonder predominantly large in left hemisphere, and large in right.—*Remark by Mr Mackintosh*: "Spiritual influences."

Every phrenologist who is acquainted with the effects of the combinations of the organs, and of disease, on their manifestations, will perceive that in all these cases the form of the disease bore an obvious relation to the organs which predominated in excess in the brain.

These were the leading cases of strongly marked peculiar hallucinations. Some of the other patients had become insane from injuries of the brain, such as blows and concussion; others manifested general dementia without particular hallucinations, and Mr Combe explained that in such cases it was not to be expected that the *form* of the brain should afford an index to the features of the disease.

The foregoing report was submitted by Mr Combe to the perusal of Dr Smith and Mr Mackintosh, and it met their approbation. Mr Mackintosh expressed his regret that he had not made his notes more full, but at the time when he wrote them he had no idea of their being intended for publication.

2. DUNSTANE LODGE ASYLUM.

On 21st October 1835, Mr Combe, accompanied by Dr D. B. White, Mr T. M. Greenhow, surgeon, Mr William Hardcastle, surgeon, Mr W. A. Mitchell, editor of *The Tyne Mercury*, Mr William Hutton, and Captain Hoske, visited the Asylum kept by Mr Wilkinson at Dunstane Lodge, two and a half miles from Newcastle. Mr Wilkinson is not a phrenologist. Mr Combe explained that, in cases of decided monomania, the character of the insanity generally has a perceptible relation to the development of the brain; and with the view of shewing that this is the case, he proposed to examine the heads of a few of these patients, and to write down his observations on them before any information was given of the particular affections under which each laboured. In pursuance of this purpose, the following patients were introduced, examined, and commented on.

Patient, J. F.—*Mr Combe's Observations*: The organs of Self-Esteem and Firmness are predominant; but those of Wonder, Secretiveness, and Acquisitiveness, are also large. The character of the insanity will be self-esteem, and probably cun-

at chapel or church, where it can with safety be adopted. I am, &c.

“JOHN ETERIDGE WILKINSON,
Superintendent to the Asylum.

“N.B.—The female department is superintended by Mrs W., and skilful persons sent when required to conduct patients to the asylum.”

3. NEWCASTLE JAIL.

On Wednesday 28th October, Mr Combe, accompanied by the following gentlemen, visited the jail: viz. Dr George Fife, assistant-surgeon to the jail (who is not a phrenologist); Benjamin Sorabie, Esq., alderman; Dr D. B. White; Mr T. M. Greenhow, surgeon; Mr John Baird, surgeon; Mr George C. Atkinson; Mr Edward Richardson; Mr Thomas Richardson; Mr Wm. Hutton; and Captain Hooke.

Mr Combe mentioned, that his chief object was to shew to such of the gentlemen present as had attended his lectures in Newcastle the reality of the fact which he had frequently stated, that there is a marked difference between the development of brain in men of virtuous dispositions, and its development in decidedly vicious characters, such as criminals usually are; and that the moral organs generally are larger in proportion to the organs of the animal propensities, in the former than in the latter: and he requested that a few striking cases of crime might be presented, and that the heads of the criminals should be compared with those of any of the gentlemen present indiscriminately.

This was done; and Dr Fife suggested that it would be further desirable that Mr Combe should write down his own remarks on the cases, before any account of them was given, while he himself should, at the other side of the table, write down an account of their characters according to his knowledge of them, and that the two statements should then be compared. Mr Combe agreed to this request; and the following individuals were examined.

P. S., aged about 20.—*Mr Combe* wrote as follows: Anterior lobe well developed; intellectual powers are considerable. The organ of Imitation is large, also Secretiveness; Acquisitiveness is rather large. The most defective organ is Conscientiousness. Benevolence and Veneration are large. The lower animal organs are not inordinate. My inference is, that this boy is not accused of violence; his dispositions are not ferocious, or cruel, or violent; he has a talent for deception, and a desire for property not regulated by justice. His desires may have appeared in swindling. It is most probable that he has

Patient, H. C.—*Mr Combe's Observations*: He has large Combativeness, and enormous Self-Esteem; his Firmness is very large, and also Philoprogenitiveness; Imitation and Intellect are large. He will manifest extreme conceit of himself, with great determination. He will possess a great tendency to make provoking pretensions, and to oppose. He will have a great talent for imitation, and strong powers of natural language. —*Mr Wilkinson's Remarks*: This exactly describes the character. He believes himself to be a king; he is prone to imitate; he is opinionative, and fond of children.

Mr Combe was gratified by Mr Wilkinson's attention, and requested him to furnish a brief description of his establishment and plan of treatment. In consequence, he addressed to Mr Combe the following letter; the particulars of which, in so far as a casual visit could enable him to judge, he is happy to confirm.

“ DUNSTANE LODGE ASYLUM,
26th October 1835.

“ DEAR SIR,—In answer to your polite note respecting my Institution, I beg to hand you the following short account of it.

“ Dunstane Lodge is situated in the county of Durham, three miles from Newcastle, and upon the banks of the river Tyne. The situation is healthy, cheerful, and sufficiently retired; the gardens extensive; the apartments spacious, well ventilated, and fitted up in the most commodious manner; and attached to the asylum is a small farm of fifty acres, for the exercise and amusement of the patients.

“ The design and object of the institution has ever been to offer the advantages of air and exercise, combined with various sources of amusement and healthy gratification, and at the same time to avoid as much as possible every appearance of restraint; to secure to the patient a place of safety conducted on the most humane principles, combining, by proper classification and convenience, the necessary security of an asylum with all the domestic comforts of a private dwelling. Every opportunity is embraced which can have a tendency to impart pleasure and contentment, to divert the mind, to awaken and win the attention and affection, to employ the time of the patients as is most agreeable to them, and to show that their sufferings receive sympathy and commiseration from those under whose care they are placed. I may here add, that, having seen the bad effects of divine service being performed to lunatics generally, I have not adopted it; but religious instruction is afforded in all cases where necessary, and permission to attend divine service either

at chapel or church, where it can with safety be adopted: I am, &c.

“JOHN ETERIDGE WILKINSON,
Superintendent to the Asylum.”

“N.B.—The female department is superintended by Mrs W., and skilful persons sent when required to conduct patients to the asylum.”

3. NEWCASTLE JAIL.

On Wednesday 28th October, Mr Combe, accompanied by the following gentlemen, visited the jail: viz. Dr George Fife, assistant-surgeon to the jail (who is not a phrenologist); Benjamin Sorabie, Esq., alderman; Dr D. B. White; Mr T. M. Greenhow, surgeon; Mr John Baird, surgeon; Mr George C. Atkinson; Mr Edward Richardson; Mr Thomas Richardson; Mr Wm. Hutton; and Captain Hooke.

Mr Combe mentioned, that his chief object was to shew to such of the gentlemen present as had attended his lectures in Newcastle the reality of the fact which he had frequently stated, that there is a marked difference between the development of brain in men of virtuous dispositions, and its development in decidedly vicious characters, such as criminals usually are; and that the moral organs generally are larger in proportion to the organs of the animal propensities, in the former than in the latter: and he requested that a few striking cases of crime might be presented, and that the heads of the criminals should be compared with those of any of the gentlemen present indiscriminately.

This was done; and Dr Fife suggested that it would be further desirable that Mr Combe should write down his own remarks on the cases, before any account of them was given, while he himself should, at the other side of the table, write down an account of their characters according to his knowledge of them; and that the two statements should then be compared. Mr Combe agreed to this request; and the following individuals were examined.

P. S., aged about 20.—*Mr Combe wrote as follows:* Anterior lobe well developed; intellectual powers are considerable. The organ of Imitation is large, also Secretiveness; Acquisitiveness is rather large. The most defective organ is Conscientiousness. Benevolence and Veneration are large. The lower animal organs are not inordinate. My inference is, that this boy is not accused of violence; his dispositions are not ferocious, or cruel, or violent; he has a talent for deception, and a desire for property not regulated by justice. His desires may have appeared in swindling or theft. It is most probable that he has

swindled: he has the combination which contributes to the talent of an actor.—*Dr Fife's Remarks*: A confirmed thief; he has been twice convicted of theft. He has never shewn brutality; but he has no sense of honesty. He has frequently attempted to impose on Dr Fife; he has considerable intellectual talent; he has attended school, and is quick and apt; he has a talent for imitation.

T. S., age 18.—*Mr Combe* wrote: Destructiveness is very large; Combativeness, Secretiveness, and Acquisitiveness, are large; intellectual organs fairly developed; Amativeness is large; Conscientiousness rather moderate; Benevolence is full; and Veneration rather large. This boy is considerably different from the last. He is more violent in his dispositions; he has probably been committed for assault connected with women. He has also large Secretiveness and Acquisitiveness, and may have stolen; although I think this less probable. He has fair intellectual talents, and is an improveable subject.—*Dr Fife's Remarks*: Crime, rape.† * * * * No striking features in his general character; mild disposition; has never shewn actual vice.

J. W., aged 73.—*Mr Combe's Observations*: The coronal region is very defective; Veneration and Firmness are the best developed; but all are deficient. Cautiousness is enormously large; the organ of Combativeness is considerable, and Amativeness is large; there are no other leading organs of the propensities inordinate in development; the intellect is very moderate. I would have expected to find this case in a lunatic asylum rather than in a jail; and I cannot fix upon any particular feature of crime. His moral dispositions generally are very defective; but he has much caution. Except in connection with his Amativeness and Combativeness, I cannot specify the precise crime of which he has been convicted. Great deficiency in the moral organs is the characteristic feature, which leaves the lower propensities to act without control.—*Dr Fife's Remarks*: A thief; void of every principle of honesty; obstinate; insolent; ungrateful for any kindness. In short, one of the most depraved characters with which I have ever been acquainted.—*Note by Mr Combe*: I have long maintained, that where the moral organs are extremely deficient, as in this case, the individual is a moral lunatic, and ought to be treated as such. Individuals in whom one organ is so large as Cautiousness is in this old man, and in whom the regulating organs of the moral sentiments are so deficient, are liable to fall into into insanity, if strongly excited, owing to the disproportion in their cerebral organs. It is common to meet with such cases in lunatic asylums; and as the criminal law has gone on punishing

† The particular observations are not proper for publication.

this individual during a long life (for he has been twice transported), and met with no success in reclaiming him, but left him in jail, under sentence for theft, at seventy years of age, I consider these facts a strong confirmation of my opinion that he ought to have been treated as a moral patient from the first.

ARTICLE IX.

DR SPURZHEIM AND THE EDINBURGH REVIEWER.

IN vol. viii. p. 263, we quoted from Mr Carmichael's Memoir of Dr Spurzheim, a letter written by Dr S. in the year 1815, giving an account of his meeting with Dr John Gordon, the author of the well-known scurrilous article against Phrenology in the 49th Number of the Edinburgh Review. We lately conversed with a gentleman who acted in 1815 as Dr Gordon's anatomical assistant, and were assured by him that Spurzheim's letter is a most faithful narrative of what passed in the lecture-room of Dr Gordon, whose mortification, he added, was abundantly apparent. So beautiful and satisfactory were the demonstrations of Dr Spurzheim, that our informant, though Gordon's own assistant, could not refrain from loudly testifying his applause. We have lately observed in the Medico-Chirurgical Journal and Review for May 1817 (vol. iii. p. 425), a spirited defence of Dr Spurzheim, probably the first which appeared in any medical periodical of Britain. It confirms the statements in Spurzheim's letter, and as it will doubtless be acceptable to many of our readers, we here reprint it entire.

" To the Editors of the Medico-Chirurgical Journal and Review.

————— ' Hic murus aheneus esto,
Nil conscire sibi, nulla pallescere culpa.' HON.

" GENTLEMEN,—The peculiar views which Dr Spurzheim entertains, with regard to the Anatomy and Physiology of the Brain and Nervous System, having engaged a considerable share of attention throughout Europe, the injurious treatment which he has met with in this city, instead of being a circumstance of local or temporary concern, will in all probability be, ere long, commented upon in other countries, so as to reflect ultimately much discredit on our national character for science as well as for hospitality. This weighty consideration, together with an innate love of justice, has prompted me to put forth a short outline of facts to the public; and I really do not know

so fit a medium for such a statement, as the spirited and independent Journal of which you are the directors.

"As I mean to state nothing save that of which I am perfectly certain from my own personal knowledge, I shall confine myself to a history of Dr Spurzheim's proceedings since his arrival in this city, which was about the end of last June. Previous to his coming hither, the scope of his investigations had been misrepresented, his anatomical views contradicted, and his physiological doctrines derided, by an anonymous writer in the *Edinburgh Review* for June 1815, who, regardless of the decorum due to science, '*conscientiously*' mingled detraction with criticism, and traduced the moral character of him whose system he was endeavouring to impugn. The lovers of learning were grieved to find, that a review, whose pages are generally distinguished no less by profound views than by elegance of composition, should contain any thing so petulant, shallow, and dogmatical, as the article in question. If this critic be assailed by his own weapons, we shall find him by no means invulnerable. Throughout the whole article, we observe a constant substitution of contradiction for proof, sneering for argument, and ridicule for reasoning; and as for the style, it is studded with quaintness, colloquial idioms, and puny witticisms, all in the very spirit of bad taste. I cannot better sum up my opinion of this writer, than in the words which the uncourtly *Tacitus*, speaking of the faded eloquence of Ancient Rome, applied to one of the public declaimers of his time: '*Omissa modestia ac pudore verborum, ipsis etiam quibus utitur armis incompositus, et studio feriendi plerumque detectus, non pugnat sed rixatur.*'"

"Dr Spurzheim sank not under this cruelty of criticism, which he bore with a serenity of deportment worthy a man of science. On the contrary, his moral character appeared more bright in the eyes of those who knew him, simply from being contrasted with the foulness of the epithets that had been thrown upon it. He came to Edinburgh, therefore, not to indulge feelings of personal irritation, but in a spirit of meekness, anxious to find out his opponent, for no other purpose than that he might convince him, by ocular demonstration, of that peculiar structure of the brain which he had described in his works and plates.

"I had the good fortune to be present at his first demonstration, which took place before a considerable number of eminent anatomists; the person also was there, whom rumour

* "*De causis corruptæ eloquentiæ.*—It would be well if some *Reviewers*, before proceeding to the execution of their office, would consult the *Essay* just referred to. It would, perhaps, teach them to distinguish true from false taste in composition.

alleges to be the author of the offensive article in the *Review*. I marked the conduct of that individual, and if the outward deportment could be viewed as an indication of what was passing in the mind, he was certainly labouring under suppressed emotion; and more than once he tried to disembarass himself by pulling from his pocket and reading, or pretending to read, the superscription of a letter. He generally contented himself with distant hurried glances at what was demonstrated, and upon the whole, seemed both uneasy and inattentive.

"I am the more minute as to those facts, because he has since alluded to this demonstration, as being by no means satisfactory; he was probably, however, the only individual to whom it was *not* satisfactory.

"It is unpleasant to be obliged to comment thus on the conduct of any individual; and although, in the present case, such a mode of proceeding is strictly retributive, I would rather have abstained from doing it, had not both the first and second demonstrations been lately mentioned *in print* by the individual in question; but after all, where is the unfairness? '*Quis tulerit Gracchos de seditione querentes?*'—Surely, he who wrote the above-mentioned article in the *Edinburgh Review*, ought to be the last to complain of unfair personalities.

"On a subsequent occasion, Dr Spurzheim, with his usual readiness, demonstrated the brain to about two hundred spectators, among whom were several of the medical professors, and other competent judges. It was previously concerted that his opponent should ask him questions; and by so doing, it was hoped to give him and his doctrines a public and final overthrow. The scene was most interesting to the audience. Dr Spurzheim, in his usual masterly manner, proceeded in the demonstration, and, like the 'admirable Crichton,' sustained for upwards of *four hours and a half*, and in a language which was foreign to him, a public disputation with his adversary, explaining himself in terms at once philosophical and perspicuous, and very successfully and coolly ridding himself of the disingenuous cavilling about words with which it was sought to embarrass him. During this public disputation, it is pretty generally admitted, that there was, in one quarter, a right plentiful lack of temper, as well as of argument; and that had *Rare Ben Johnson* been alive to witness the scene, he might have found hints for improving one of his best characters, viz. that of the 'Angry Boy' in the 'Alchymist.'

"I am thus particular in my statement, because attempts have been made to misrepresent the feelings and judgment of the audience, which were unquestionably in favour of Dr Spurzheim, in the proportion of at least twenty to one. It would have been too much to expect *perfect* unanimity on a

question and an occasion of this sort ; for little does he know of human nature, who is not aware what erroneous impressions on ' the mind's eye ' the *mirage* of prejudice and predilection now and then produces.

" Since this notable occasion, Dr Spurzheim has dissected the brain before the Royal Physical Society, and repeatedly to mixed audiences ; and it is but bare truth to say, that I do not know any man of sense or candour who does not bow to the correctness of his pathological views, and admire the beautiful accuracy of his demonstrations. It has long been customary in anatomy for the names of individuals to be handed down to posterity, in connection with those parts of our frame which they were the first to discover, or accurately to describe ; in this view, I will venture to allege, that Dr Spurzheim has done more to deserve the meed of this sort of immortality than perhaps any living anatomist, whatever be his name or fame.

" Had Dr Spurzheim's persecution ceased here, I should not, in all probability, have troubled you with this statement ; but within these few months an expensive pamphlet has appeared, the cumbrous materials of which have been raked out of old anatomical books, for the obvious purpose of depriving this meritorious gentleman of the rank he holds as a discoverer, and of implicating his moral character for candour and good faith. At page 43 of this pamphlet, the writer is pleased to aver, that the spectators of Dr Spurzheim's demonstrations were incompetent to judge of what was shewn them. This proves that the author's modesty is on a level with his other powers. The passage, however, comes in very happily to enliven the dryness of his other matter ; for doubtless, it is one which must relax the frown of criticism, and sheath all its acrimony in irrepressible laughter.

" I would be strongly tempted to enter at large into the demerits of this performance, had I not already occupied so large a space of your Journal ; this being the case, I must be content to conclude with two or three general reflections.

" It must be admitted by all, that our knowledge of the physiology and pathology of the brain is yet in its very infancy. Why then persecute Dr Spurzheim for attempting to elucidate this science ? Until his investigations, no advance had been made in this department of knowledge for many years ; because the despair of medical philosophers has set it aside amongst the arcana of Nature. Any step forward must therefore be an advantage ; for, as Mr Burke has well observed, ' Science is never more apt to become corrupt than when it is allowed to stagnate.'

"I am the last that would propose to bridle discussions in matters of science; on the contrary, let it be free as the winds of heaven. But every man of feeling would surely wish to draw with me a line of distinction between legitimate, temperate criticism, and coarse *brochures*, undertaken in malevolence, and executed in imperfect mechanical views of the subject agitated.

"In the above observations I have adhered rigidly to the truth. I trust I have as high a sense of the 'nil nisi verum' as any man breathing; and besides, respect for your independent Journal would not permit me to make it the vehicle of wilful falsehood.

"I conclude by saying, that I have no connection with Dr Spurzheim, and that he knows nothing of my having taken this step. To my respect, as to that of every other man, he is entitled by his superior talents, as well as his excellent and amiable character; but upon me he has no peculiar claim, save that which I am ever ready to allow to injured merit. I am, &c.

VERIDICUS.

EDINBURGH, 1817.

"Anonymous strictures on anonymous writings are fair. But Veridicus is known to us; and his character is beyond suspicion of misrepresentation. In these islands we hope and trust that the STRANGER's cause will never want an advocate. While the MEDICO-CHIRURGICAL JOURNAL exists, the advocate of injured merit shall never want a medium of conveying his sentiments to the public ear.

"Hanc veniam petimus damusque vicissim."

"EDITORS."

In the fourth volume of the same Journal, pp. 53 and 117, will be found an able review of the controversy between Dr Spurzheim and Dr Gordon, comprehending an account of Gall and Spurzheim's chief anatomical discoveries. Here, also, Dr Gordon's delinquencies are unsparingly treated, and the excellence and conclusiveness of his antagonist's dissections of the brain stoutly maintained. "We have not taken our notions," says the writer, "from hearsay or verbal descriptions, but have several times witnessed, with the closest attention, Dr Spurzheim's demonstrations of the *recent unprepared* brain, and can vouch for the truly satisfactory, as well as able, manner in which they are performed. We have also repeated, in private, the dissections after his manner; and the result has been a belief of their entire correctness." The reviewer denounces the conduct of Dr Gordon as "most illiberal and most unscience-like;"

and adds,—“ We have heard, on this point, many particulars recited, which we were slow to believe, until they came to us from quarters which imply the impossibility of misrepresentation. These, however, we forbear to communicate to our readers, because we have a true respect for the literary character, however abused, and are ever more ready to conceal and compassionate its frailties and aberrations, than to exaggerate and expose them. Dr Spurzheim may, however, abstain from publishing any future remarks; he may well rest satisfied with the approbation of his labours which many eminent anatomists and pathologists have shewn. Dr Parry* is with him, if Dr Gordon is against him; and doubtless, might we venture an opinion, ‘ *L’un vaut bien l’autre*.’ ”

The reviewer concludes with a few remarks on the *physiological* opinions of Gall and Spurzheim; to-wit, that, in accordance with the views of “ every *enlightened* physiologist of the present day,” the brain is the organ of the mind, and that each mental power has a portion of the brain appropriated to its peculiar manifestation. “ They believe,” says he, “ that though the cerebral substance is unique, each portion of it exercises a special function, in the same manner as there is one nervous fasciculus for sight, another for hearing, smelling, &c., though all these fasciculi consist, as far as we can judge, of similar nervous matter. Thus explained, the scope of their inquiries is perfectly legitimate; but,” adds the reviewer with philosophical caution, “ that they have already succeeded in ascertaining what particular portions of brain are destined to the manifestation of particular faculties, passions, or feelings, is to us by no means proved. To use a familiar form of speech, ‘ it is too good news to be true!’ Their opinions, though illustrated with great force and acuteness of observation, have not yet received the sanction of general experience; and although, solely for the latter reason, it would be unwise to deride or reject them altogether, yet we must suspend our opinion, not from any want of respect for Drs G. and S.’s talents or veracity as observers of nature, but until inductions are multiplied *by others*, so as to produce greater probability, if indeed this can ever be the case.”

Our readers are aware that since the year 1817, when this sentence was published, the conductors of the Medico-Chirurgical Review have taken many opportunities of expressing their belief in the leading details of Phrenology, and in the great importance of the study to medical men as well as to the public at large.

* See Elements of Pathology and Therapeutics, p. 225, et seq.

ARTICLE X.

OBSERVATIONS ON RELIGIOUS FANATICISM; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWN, Esq., Medical Superintendent of that Institution. (Continued from p. 302.)

CASE III.—J. G. ET. 45.

Dimensions of the Head.

		Inches.
From Individuality	to Philoprogenitiveness,	7 $\frac{1}{2}$
... Ear	to Individuality,	4 $\frac{1}{2}$
... ..	to Philoprogenitiveness,	4 $\frac{1}{2}$
... Cautiousness	to Cautiousness,	5
... Secretiveness	to Secretiveness,	5 $\frac{1}{2}$
... Destructiveness	to Destructiveness,	5 $\frac{1}{2}$
... Combativeness	to Combativeness,	4 $\frac{1}{2}$
... Ear	to Concentrativeness,	4 $\frac{1}{2}$
... ..	to Self-Esteem,	5
... ..	to Firmness,	5
... ..	to Veneration,	5 $\frac{1}{2}$
... ..	to Benevolence,	5
... ..	to Comparison,	4 $\frac{1}{2}$

Predominating Organs.—Secretiveness, Destructiveness, Self-Esteem, Veneration, and Benevolence.

ALTHOUGH reported to have been insane only for two years, the malady of J. G. must have been of much longer duration than is supposed; for she affirms, that, while a girl at school, she had constant intercourse with spirits at the burnside; that she was subsequently acquainted with her glorious elevation, and predicted many things which have since taken place,—among others, the restoration of a sister to health, while labouring under what was deemed to be a fatal disease; and that she performed many miracles, which it is now inexpedient to continue. Her Veneration and Self-esteem are very large; and, in obedience to the law which it is one of our designs to illustrate, all her hallucinations emanate from these sources. They are the diseased suggestions of fanaticism and pride. She not merely entertains notions altogether erroneous and preposterous, but identifies herself with these errors. She is the heroine of her own story; proclaims her greatness, power, and wisdom; and cherishes a sort of balanced feeling between respect for, and jealousy of, all persons endowed with authority, civil or ecclesiastical. Thus, in announcing that she is the Saviour,—that she bruised the head of the serpent, died on the cross, triumphed over death and the grave,—she becomes highly incensed if any doubt is expressed as to her pretensions, and challenges all men, but especially the clergymen (for whom she at the same time ma-

nifests great reverence), to disprove the truth of her assertions. From the same combination, in her most impassioned moments of spiritual exaltation, she can be subdued and quieted by the exercise of authority. This maniacal pride and religious zeal have prompted her to make proselytes; nay, she appears to have convinced one woman of her sanctity and divine origin. She takes many of her companions under her protection; promising them the highest, second, or third place in the kingdom of heaven, as the case may be: she attempts to bribe me by similar offers to comply with her desires; and, while she receives the chaplain with a condescending and patronising air, she listens to him with profound attention, and applauds him when he has concluded, claiming him as one of her own priests and pioneers. To strangers there appears a striking and melancholy contrast between the almighty power which she boasts of possessing, and the strict confinement in which she is placed and the glaring marks of misery by which she is surrounded. This contrast seems frequently to impress and annoy her own mind; but she endeavours to escape from the dilemma, by affirming that she is there *for a purpose*, and by quoting such passages from Scripture as relate to the Messiah's poverty and persecutions. It was prophesied, she says, that she would not have where to lay her head. She gets rid of the difficulty of the demand upon her for some miraculous evidence of her power, by asserting that "she refrains from exerting it." But when pressed upon this subject, she recounts an interview with Satan. His object was to induce her to worship him; and the bribes offered were precisely similar to those mentioned in the Gospel. She alleges that at the time of her fast and temptation, she was Jesus Christ, but that now she is an incarnation of the Father. Upon all occasions her delusions are in keeping; they correspond and harmonise with each other, and with the premises which she has assumed.

She has a very well-developed Language, and is endowed with an astonishing volubility of speech, which, when she is excited, amounts to eloquence, interspersed as it is with copious misapplications of the Revelations and of Isaiah. A large Secretiveness and deficient Conscientiousness render her mendacious to such an extent, that her word cannot be trusted respecting the most trivial occurrence. Her paroxysms of excitement are not periodical, but generally originate in some contradiction she has received in the exposure of a falsehood, or the discovery of her intrigues—and these are numerous—among her fellow lunatics. Under such circumstances, or when strangers who, attracted by the rapidity of her utterance and the animation of her manner, after listening to her harangues attempt to refute her allegations,—her exasperated Self-Esteem and Destructiveness burst forth in denunciations of wo and destruction

upon her persecutors, and in curses both loud and deep. Did she possess temporal power in addition to that which she arrogates to herself, her authority would without doubt be vindicated, and her creed propagated, at the point of the sword. Her intellect appears to be unimpaired upon all other topics: she is, in fact, shrewd, sensible, and observant; understands all household duties and employments well, and performs them admirably. She is remarkably kind to the other patients; but the very Benevolence which constitutes her a fostering friend to all around, renders her liberation impossible; since, claiming the whole world as her own, decreeing an end to every artificial distinction of society, and anxious to dispense her benefits and favours to all, she would squander the most ample fortune in a few months. An example of her inclinations in this respect was afforded by the delight with which she distributed her husband's goods and chattels to every one who paid or pretended to pay reverence to her sacred character.*

This relation cannot fail to suggest to those familiar with church history the events which preceded and produced the memorable siege of Munster, a siege maintained by a garrison of maniacs against the armies of the empire.† Heated but not purified by the ordeal of the Reformation, the peasantry of Westphalia, in concert with such of the inhabitants as favoured their projects, seized upon the public works of Munster, expelled the adverse party, and proclaimed the commencement of the kingdom of Christ, by careering frantically through the streets with drawn swords, and howling, "Repent and be baptized." These insurgents against reason and their liege-lord, were associated by holding certain tenets in common, such as belief in the prophetic or divine nature of their instigators, and in their own immortality; and were animated by a wild and frenzied fanaticism, remarkable for intensity, permanency, and its pervading thousands of men previously sedate and rational. They were led to conquest, and governed during the brief ascendancy which followed, by a baker and a tailor, whom they first regarded and revered as prophets, next elected as sovereigns, and ultimately acknowledged as incarnations of Divinity. These worthies regulated their empire by exhortations, revelations, warnings, and calls. A community of property existed, but

* Hume states in his Appendix, No. IV., that, in the comparatively tolerant reign of James I., bigotry, with the indiscriminating fury of the element by which its vengeance used to be inflicted, not satisfied with condemning several Arians to the flames as heretics, destroyed a miserable madman who imagined himself the Holy Ghost. What might have been the fate of J. G. in such orthodox times it is not difficult to conjecture.

† See Mosheim, and Robertson's Hist. of Charles V. vol. iii. p. 73-86.

with its gradations of rank—measured, however, by the degrees of religious regeneration. Associated with this pious enthusiasm were the grossest immorality and debauchery. These formed parts of the system. No madhouse ever presented scenes so wild and revolting as this independent state. The nights were spent in vigils and wrestling with spirits; the days in prayers and prelections which would have been blasphemous among rational beings, and in recounting dreams and portents and experiences. The home of every subject became a shrine at once of licentiousness and of the most extravagant devotion; the streets resounded with shrieks and impure songs, mingled with hallelujahs; and the priests or devotees of this new revelation paraded naked through the town, flourishing their arms, and in this fashion worshipping God. Withal, great prudence and judgment are said to have mingled with these extravagancies. In whatever light their creed and its effects may be viewed, every praise is due to the care and wisdom displayed by these self-styled “occupants of the throne of David,” in fortifying the city, in supplying it with provisions, in obtaining reinforcements, and in defending it against troops of high discipline and courage. Insane upon every point connected with their moral destiny,—with Wonder, Veneration, Hope, and the lower propensities, in a state of violent excitement,—their ordinary judgment, intellect directed to self-preservation and the common concerns of life, did not desert them; on the contrary, it stood them in such good stead, that their defeat and destruction are to be traced rather to treachery than to incompetency in military affairs. Trusting to their celestial nature and invulnerability, numbers perished during the siege, while displaying the most striking heroism, in the conviction that the strength of a single arm would put armies to flight, and miraculously vindicate the cause of religion. Their malady proved to be incurable; for such as escaped the carnage remained steadfast in the hallucinations which they had so long cherished.

There is to be found, in the history of our own country, an instance of an individual who exercised a gigantic moral force over the minds of thousands; whose influence is still felt in the most civilized countries of the world; and who, in many respects, closely resembled my patient. I speak of George Fox, the founder of the Quakers. This celebrated man, at the period of what is technically called his regeneration, was, by the shewing of some of his most distinguished disciples,* in every way worthy of a strait jacket. A dose of calomel is a wonderful enemy to inspiration; and had that been timeously administered, a good cobbler would not have been spoiled, and the Society of

* See William Howitt, in Tait's Edinburgh Magazine, October 1834.

Friends would never have been heard of. For that Society as at present constituted, as recognising justice and mercy as their cardinal virtues, I entertain perfect respect: these animadversions are directed solely to what may be styled the *hot stage* of the religious fever in which their founder passed the early part of his career.

Prepared by living in an age of great fanaticism, by solitary musing, and above all, perhaps, by a highly excitable and excited temperament, Fox became so infatuated, that, conceiving himself endowed with supernatural powers, he commanded a withered arm to become as it once had been; he declared that all knowledge and power were conceded to him,—in fact, that he was a proxy of Almighty greatness, but that he “refrained from exercising it.” And although he confessed that it was inexpedient for him to exercise these gifts, he felt it incumbent to denounce the city of Lichfield, and was much puzzled when no great calamity followed. With what this justly celebrated innovator became when this morbid fervour subsided, we have nothing further to do than to remark that *he* recovered, which my patient has not.

By advancing one step further in the investigation of the religious diseases commemorated by history, but not acknowledged to be such, we light upon the exact features of the case under discussion. About a century ago there appeared in Germany* a fanatic, who proclaimed himself the Messiah, endowed with a plenitude of power to save or to condemn. He denounced all priests as impostors and traitors engaged in a conspiracy against his divine authority. Of this league he declared the King of Prussia, an emissary of Satan or Satan himself, to be the head. To destroy this and all other machinations, to purify from sin, to diffuse peace and happiness, and to establish a harmony of faith, were the objects of his mission. As the best evidence of his own immortality, he asserted that his adherents never died. This man obtained great numbers of respectable individuals as converts. From these he demanded a seraglio, and seven fathers offered up their daughters on the shrine of their idolatry. The non-fulfilment of his promises,—his misfortunes,—his imprisonment, during which an occasional whipping was administered, to remind him of his mortality,—and, after twenty-nine years, his death,—all failed to undeceive these faithful adherents.

We now pass to fanaticism under a new aspect, and of a less remote date.

The papal armoury was even in the last century emptied of

* See Memoirs of the Margravine of Anspach.

all other weapons save bulls, exhortations, and excommunications. Some of these have proved nearly as formidable in perpetuating fanaticism, and equally fertile in multiplying sources of discord, as when they were proclaimed by the sound of trump, and enforced by mailed squadrons. At a period when the catholic world was agitated and broken up into contending parties by the discussions pending between the Jesuits and the Jansenists, and when every bosom was inflamed by sectarian hatred, and prepared to receive the spark, a bull was issued; and, like a torch tossed amidst combustible matters, acting upon minds so disposed, converted the church into a vast scene of mutual destruction and desolation.* The object of the bull was, by exposing and correcting error, to pacify—its consequence was, by exciting triumph in one set of belligerents, and disappointment and disobedience in another, to irritate and exasperate.† The polemical aspect of the controversy between the Jesuits and Jansenists depended upon the questions of divine grace and predestination; but in all probability the real point at issue was the supremacy of the parties engaged.‡ The great umpire decided the contest, as far as his fiat could control or direct the onward course of events, in favour of the Jesuits,—by condemning the works and propositions of their adversaries,—by affirming that man is imbued with the hereditary tendency to crime, but not with the inherited taint of its commission—that there do exist in man energies of virtue which it is in his power to exert, &c. The Jansenists, averse to the crime of schism, in place of separating themselves, as the custom now is, from the parent church, adopted the delicate alternative of disputing the authority of the Pope, by appealing to a general council. At this stage of the struggle the Jesuits are stated to have had numbers, genius, learning, and political enthusiasm on their side. Their opponents founded their claims upon the austerity and rigorism of their morals, and the purity of the doctrine which they preached. They were the evangelicals of the day. They were, however, in a minority; they were by ban proscribed, and, as a moral sequence, persecuted. Persecution is often a profitable fate for an obscure sect. It gives an artificial distinction; it attracts attention; it engenders sympathy and pity. So it proved in this case. The eye of charity was opened, and through its tears it saw piety, and virtue, and wisdom: for, while these qualities are palpable, the opinions from which they spring, or upon which they are engrafted, are invisible abstractions. Myriads of friends, followers, and supporters, arose wherever the disciples of Jansenius ministered or opposed a front to the storm of religious tyranny. At this remarkable conjuncture Abbé

* The bull "Unigenitus."—*Mosheim*, Appendix, Cent. xviii.

† Pascal, "Lettres Provinciales," *passim*.

Paris lived and died ; for the latter event is almost of as much importance as his high birth, the gloomy superstition and barbarous penance which characterized his course of life, or the agonies of starvation which signalized its close. Sceptics have suggested that the prominent part which this individual, or rather his tomb, bore in the religious history of the time, and especially in redeeming the fallen fortunes of the body of which he was a member, cannot be held to be a mere coincidence. The singular events which succeeded his death, and the political use to which they were applied, have led to the suspicion that they formed part of a most ingenious system of fraud, which at last deceived even its authors into a belief that they were aided by, if not acting under, the influence of a supernatural power. The solution of this problem does not fall upon us : the sincerity of the subjects of the experiment, or of the victims of the delusion, if such it was, cannot be doubted. Still it is but fair to state that no evidence exists to shew that any imposition was practised.

The grave of Abbé Paris at St Médard, or its immediate vicinity, was the principal scene of the miracles which came so opportunely to vindicate the drooping cause of the Jansenists. To this holy spot crowded the rich and the wretched, the educated and the ignorant, the debilitated and the diseased ; and upon all, we are informed, new physical powers were conferred and physical changes impressed.* Nothing was requisite but proximity to the medicinal relics,—vows, prayers, enthusiastic hope, and religious reliance upon the competency of the means adopted. The progress of regeneration was announced by some strong internal emotion, the most violent convulsions, or exquisite pain ; and upon the cessation of these symptoms, maladies of the longest duration and most inveterate and incurable kind were found to have disappeared. What had baffled the skill of the most experienced physicians for years, was removed in an instant ; and the sickly and shattered frame, after being torn by a convulsive struggle, rose up strong and healthy.

Hope is not too scrutinizing into the grounds of her anticipations, and imposture and ignorance employing credulity as the agent of their operations, have effected results, in the treatment of disease for example, of the most wonderful character, and which the most enlightened benevolence had not dared to attempt, or had failed to accomplish. Superstitious credulity is perhaps the most favourable condition upon which quackery can achieve its wonders. It has been graphically said of the approach of a friend, "His very step has music in't." If there be pleasure in listening to the step of a trusted friend, there is assuredly hope, and confidence, and restoration, in the sound of

* The miracles were performed between the years 1724 and 1736.—*Dict. des Sciences Med.* vol. vi. Pp. 216-238.

that of a trusted physician. The presence of experience and scientific knowledge inspires a confidence and expectation proportioned to the amount of these qualities, or the estimate which has been formed of them. The greater the real or imaginary powers of the prescriber, accordingly, the more numerous are the chances that the prescription will prove efficacious. The remedy does not of course acquire new or specific energy, but the faith in which it is taken communicates that tone to the mind—that vigour to the nervous functions—which it is always a grand object in medicine to impart. These observations have not been introduced with the presumptuous view of explaining the facts under discussion, but simply to suggest the principle upon which cures nearly as extraordinary, but effected in circumstances totally different, have been accounted for.

The only condition annexed to a pilgrimage, in order to render it successful, was zeal; and to some minds it will prove consolatory to see so much manifested, even in a questionable cause; for not less than eight hundred cures took place at the tomb, exclusive of those which are stated to have occurred at a distance. It must be concluded, that all who visited this shrine of Hygiène were, or supposed themselves to be, cured, and that those who went to sneer remained to pray; for no failures or disappointments have been recorded. No doubt can reasonably be entertained of the truth of these relations, at least respecting the visible effects;* and upon the same evidence depend the accounts we possess of the formula of the cathasthenic exercise, by which relief was afforded to those in the agonies of the convulsion. This consisted in the infliction of repeated and tremendous blows on the body, by means of ponderous mallets or bars of iron, or some weapon of a similar description. The degree of alleviation was proportioned to the severity of the stroke, and accordingly the sinewy artizan was the most approved exorcist. Young women, under the excitement, or rather intoxication, of pious confidence, submitted to this discipline not only with impunity, but with pleasurable sensations. They are described as leaning against a wall, and receiving on the bare bosom or epigastrium upwards of an hundred blows from a hammer weighing thirty pounds, wielded by a robust and willing operator—blows which, when directed against the wall, crumbled it to powder. The cries of an individual so treated were, “Strike me forcibly, or I die!” The devices resorted to in order to press, bruise, and beat the body, were infinite. We are inclined to conclude that there is exaggeration in this description; but, after every legitimate deduction, there appears to have been an immunity from pain, and exemption from the effects of physical

* Dr Campbell, in his reply to Hume (vol. i. sect. 5, p. 241), controverts the cures, while he appears to admit the convulsions produced at St Medard.

impressions, altogether inexplicable. It is certain that martyrs, and many with no claim to the title, have ceased to feel pain, and even experienced pleasure, while put to the torture, or expiring amidst the flames; it is certain that wine, anger, fanaticism, or any powerful and engrossing stimulus, has rendered, or at least often renders, the system insensible to pain, and endows it with what seems superhuman strength: but that any of these causes could confer so complete an independence of external agents remained to be established by the convulsionists of St Medard.

Although an epileptic state attended the greatest number of cases, many other indications of constitutional disturbance were remarked. Some individuals barked like dogs, others imitated the cry of cats, a third party swallowed live coals, while a fourth prophesied and said mass.* The hostile and now discomfited body of priests, the Jesuits, treated—for, whatever might be their conviction, it was clearly their interest to treat—these phenomena as gross delusions. But the great body of Frenchmen, and perhaps what is styled the religious public in all Catholic countries, esteemed Paris as a glorified saint, and the multitudes who were convulsed at his grave as devout persons especially favoured by Heaven through his instrumentality. All the circumstances may now be called the work of imagination; and, after divesting them of their miraculous character, it may now be granted that, acting under a certain strong moral impression, persons susceptible from constitution were affected with convulsions, acquired immense muscular strength and insensibility to pain, and derived great benefit to their health on visiting this tomb. Or the subject may be summarily dismissed, by declaring these manifestations to be those of lunacy, instead of proofs of divine interposition. Whatever opinion may be adopted, the lapse of a century has undoubtedly changed the medium through which such events are viewed. It would then have been as great a departure from sound sense and sound religion to impugn their divine origin and miraculous character, as it would now be to hold an opposite course. Phenomena precisely similar to those which have been described, characterised the “dancing mania” which desolated and disgraced the population of the middle countries of Continental Europe during the fourteenth century.† The dancers fell, shrieked, were convulsed, saw visions, and were insensible to external impressions. The only element in which these ecstasies differed from those of St Medard was their spontaneity. They affected the mind and body without reference to place or person—to the

* *Diction. des Sciences Medicales*, vol. vi. p. 210, art. “Convulsionnaire.”

† *The Epidemics of the Middle Ages*, by J. F. C. Hecker, translated by B. G. Babington, M.D. p. 5.

dust of dead or the orisons of living saints. The priests of *that* era found it expedient to denounce the affection as the work of Satan or his satellites, and employed the whole artillery of book and bell in exorcising the dancing demons.

Considerable space has been occupied in detailing these events, not only because they furnish parallels to some cases about to be related, but because they are themselves examples of one of the most singular forms which fanaticism has assumed. Patients who support suffering from being endowed with a stoical indifference to pain,—or who, from the abstraction in which they are plunged, cannot be roused by external impressions,—or who are, to a certain degree, actually insensible,—are to be met with in every hospital. But the most curious instance which I have examined, is that of a female who believed herself to be at once immortal and invulnerable. Her belief was so far well founded; for on the infliction of various injuries which were resorted to experimentally, she betrayed no agitation, or other indication that she was conscious that her skin had been pricked, pierced, or cut. She either did not feel, or possessed the power of resisting and concealing the effects of pain. Humanity and policy set limits to the extent to which this insensibility could be put to the test; and although the subject of the experiment petitioned daily to be discharged from the mouth of a twenty-four-pounder, her obtuseness of sensation was tried chiefly by means of pins, scarificators, seton needles, and similar instruments. Yet during the application of what would have proved intolerable torture to another person, her courage, or complacency, or insensibility, remained indomitable and imperturbable. Although composed and tranquil, and even smiling, during such operations, she was evidently acting under the influence of a high-wrought enthusiasm, and an unimpaired conviction of the exemption from the ordinary physical laws to which she laid claim. The strength of her moral feeling—in other words, the impression upon one part of the nervous system—rendered inert the sensation of pain, or the impression upon another part. Nor is this the prerogative of lunatics and fanatics alone. When Cranmer was brought to the stake, he held his offending right hand steadily amid the flames, as if the consuming and agonising power of the fire recoiled and were as nothing before the intensity of his devotion and the firmness of his purpose.*

Some difficulty would be found in discovering exact parallels to the Demonomaniacs of St Medard among the inmates of an asylum; for even mad miracle-mongers seldom pretend to possess, or to be benefited by, such gifts as those with which the ashes of Paris were endowed. Many features of coincidence, however, will be detected in the following cases.

* Southey's History of the Church, vol. ii. p. 240.

CASE IV.—C. W. æt. 60.

Predominating Organs.—Wonder, Ideality, Firmness, Veneration.

This patient has been insane for many years ; but, according to his own estimate, he was cured of all mental disease at a remote period. From the same authority we learn that he has from youth been a martyr to the persecutions of evil spirits of all sorts and dimensions. To the machinations of these he is still exposed, and he bows before their dominion as the savage at the shrine of his demon-god. He confesses to have been at two several periods incurably deranged, and incorrigibly wicked. To the epochs at which these moral taints were eradicated we would especially refer.

When his malady first appeared he was residing in his native parish ; and, according to the prescription of the minister and sundry wise women, he was bound hand and foot, carried to the churchyard, and deposited within the ruined walls of what had formerly been the place of worship. He was there left in company with three women similarly affected, to await midnight, which was to prove the critical season. The propitious hour arrived, the bonds fell from his limbs, and he arose free and unfettered by his complaint. His companions were not so fortunate ; but he had the ungallantry, or, as he regards it, the piety, to leave them to their fate. Such practices are still persevered in. I have examined a woman whose condition, to the surprise of her relatives, was unaltered by bathing her head in St Fillan's spring.

Was there trick or deception in these transactions ? or were the parties mutually deceived by their own superstitious feelings ? We may at least conclude that Wonder, Veneration, and Hope, dictated the ordeal, and that the same feelings made it, or made it appear, successful. The minister trusted implicitly in the efficacy of his prescription ; he believed that the holy character of the place would effect that which science had attempted in vain ; and the patient, participating in this trust, and convinced especially that the efficacy would be developed at a particular moment, exerted that strength which persons labouring under nervous diseases alone possess, burst the bonds, and arose changed, in so far as he would be looked upon by himself and by others as a favoured and heaven-protected mortal. At a subsequent period the public functionaries had formed a different opinion, and he was cognosced. Here commences the series of misdemeanours of which he is self-accused. They consisted in the inordinate activity of Amativeness and the other propensities. He became a terror unto himself ; for while irresistibly hurried toward sensual gratification, he felt all the agonies of impiety

and moral pollution. These tendencies were, as he expresses it, *lashed out of him*. The keeper to whom he was committed was of the old school, and preferred the virtue of a whip to that of persuasion. We know not whether the possessed literally kissed the hand of his unmerciful exorcist; but he expresses his sense of gratitude for the system of castigation to which he was subjected: he declares that every laceration of his back diminished the strength of his inclinations; that, in short, he was cured by the cat-o'-nine-tails. Three things are certain—that he was affected with satyriasis, that he was lashed without compunction, and that under this discipline his vicious propensities were extinguished or subdued.

CASE V. A. D. æt. 30.

Dimensions of the Head.

Ear to Philoprogenitiveness.....	4 inches.
... Concentrativeness.....	$4\frac{1}{8}$
... Self-Esteem	$4\frac{1}{8}$
... Firmness	$5\frac{1}{8}$
... Veneration.....	$5\frac{1}{8}$
... Benevolence	$5\frac{1}{8}$
... Comparison	6
... Individuality	$4\frac{1}{8}$
From Cautiousness to Cautiousness	$5\frac{1}{8}$
... Secretiveness to Secretiveness	$5\frac{1}{8}$
... Destructiveness to Destructiveness.....	$5\frac{1}{8}$
... Combativeness to Combativeness	4
... Philoprogenitiveness to Individuality...	$7\frac{1}{8}$

Predominating Organs.—Wonder, Veneration, Firmness, Cautiousness, Destructiveness.

Deficient Organs.—Hope, Self-Esteem.

This woman underwent a regular tutelage for religious mania. She has nursed the seeds of her malady within her for years, and, as they grew, rejoiced in their growth. Her conviction of unworthiness, arising from a large Veneration and small Self-Esteem and Hope, was a hoarded treasure, which, with the true characteristic of a miser, she would not exchange for its real value, the practical duties of life. Originally endowed with strong religious feelings, she was thrown into a situation where they were strengthened and stirred up until they usurped the place and influence of every other power. As a girl, she was known as despondingly pious, as fondly attached to home and its sources of happiness, and as disinclined to try or to trust to those of the world. She resided with a relation in the country, who saw little society, and who, being devout in disposition, and ignorant that an exalted state of religious feeling is not rational religion, rather encouraged her serious temper of mind. Thus prompted, she became affected

with a species of bibliolatriy. Her days were spent in reading, committing to memory, or interpreting the pages of the sacred volume; her nights passed in a sleepless anxiety to discover the hidden meanings of the difficulties which she encountered. In this occupation she believed the whole circle of Christian duties to consist. She now doubted the truths in which she had hitherto believed, and ultimately took refuge in a new religion. Next, she held, that so much was incumbent on man, and so inadequate were her moral capabilities, that she must perish in her disobedience and unbelief. Her friends indicate this as the point at which her mind bent and broke under the self-imposed burden. Closer observers would fix upon an earlier period; for there often appears a greater degree of infatuation and folly in training the mental powers in such a manner as to predispose to insanity, than in the extravagancies which characterise insanity itself. Her mind now became a mere conflict between despair and devotion—between the terror of deficient Hope and large Cautiousness, and the longing to propitiate by reverence that Being towards whom Hope directs its aspirations. She declared herself to be irreclaimably wicked, to have been specifically excluded from the wide pale of salvation, to be actually a murderer of God, the very deicide who nailed our Saviour to the cross. To this horrible idea she clung as if it had been necessary to her existence; and yet, to escape from the fear which it created, she had the daring to attempt suicide. This singular compound feeling is inexplicable save by phrenological analysis. But by the employment of this agent we find, that a large Wonder and a considerable Ideality would give to her religious views the colouring of awe and mysticism; that a large Cautiousness, excited by this moral darkness, added the sentiment of fear to superstition; that despondency resulted from the same organ associated with a very deficient Hope; and that the determination to put an end to her sufferings and existence was conferred by the activity of three of the largest organs in the head—Firmness, Destructiveness, and Secretiveness. So inveterate was the suicidal tendency, that, besides stratagems innumerable, in all probability suggested by this determination, upwards of a dozen of actual attempts were frustrated. Connected with the hallucination by which she was persecuted, are the phenomena which class her with some of the heroines of St Medard. In them a certain religious delusion—that of the sanctity and salutiferous virtues of a certain place or person—produced strong convulsions; in her a similar religious delusion—that of her having been an active agent in the crucifixion—likewise produces convulsions. In both the paroxysm took place when a certain class of feelings predominated; in both pain was said to be no longer felt; in both, the person affected,

cried beseechingly for the infliction of pain; and in both the consequences were so far beneficial, that tranquillity and a nearer approach to health succeeded.

I have seen this person in a voluntary convulsion fit, or one which it was in her power to produce by dwelling on particular objects of thought; continue to scream for a quarter of an hour at the utmost pitch of a shrill voice—"Pluck out my eye; cut off my hand; they have offended; I am lost, condemned!" As these lugubrious exclamations were accompanied by a look of absolute abandonment—by violent tossing of every limb, the writhing of the whole body, indeed the action of every muscle—the effect upon the mind of a spectator was unmingled horror. Confessedly these paroxysms recurred only when religion, or rather the destruction of the religious hopes in which she had been taught, or in which she had taught herself, to believe, was obtruded upon her recollection. She was tranquilized or exhausted by these exacerbations, however violent they might be.

These points of similarity, and the fact that a permanent convalescence is anticipated, appear to shew, that there may be convulsionnaires without the aid of the relics of the Abbé Paris—the moral cause being, however, in both cases the same.

(To be continued.)

ARTICLE XI.

ACCOUNT OF THE SYSTEM OF EDUCATION FOLLOWED IN THE REV. J. C. BRUCE'S ACADEMY AT NEWCASTLE-ON- TYNE.

MR COMBE, during his stay at Newcastle, visited the academy kept by the Rev. John Collingwood Bruce, A. M. in No. 80, Percy Street, and was greatly pleased with the system pursued; the appearance of intelligence and happiness in the pupils, and the extensive and correct knowledge which they had acquired. The academy is conducted on the modern principle of teaching both languages and useful knowledge; of exciting in the pupils an interest in, and love for, their studies; of relieving attention by regular changes in the objects pursued; and above all, of bringing a great amount of adult mind to bear upon the minds of the young, there being eight assistants employed in teaching about 120 pupils. Mr Combe requested Mr Bruce to favour him with an outline of his plan, with which solicitation he kindly complied, by addressing to him the following letter:

" 80 PERCY STREET, NEWCASTLE, *October 24, 1835.*

" DEAR SIR,—I felt sensibly your kindness in paying me a visit in school the other day, and was not a little gratified by the manner in which you expressed yourself respecting my arrangements. You requested an outline of my plans; I trust the enclosed documents are what you wished.

" A good schoolmaster must be an enthusiast in his profession, and an enthusiast is always glad of any one who will listen with some degree of patience to his disquisitions on his favourite topic. Knowing that the world has in you a warm friend to education, I am going to indulge myself in some further explanations.

" You would wonder at seeing a person not yet arrived at the middle age of life at the head of so large an establishment. It was formed by the talents and exertions of my father, who died about a year ago. It is but four years since I was conjoined with him in the management of the school.

" You will perceive that the plan of education pursued is a very comprehensive one, my object being to cultivate all the faculties with which Providence has endowed my young friends. A limb of gigantic growth attached to a body of diminutive proportions is justly considered a deformity; so also is it unseemly to behold a mind having one of its faculties cultivated to the utmost, whilst all the rest are unnurtured. The young mind, too, is incapable of long attention to one subject; and I find the observation of Cicero a just one, that the mind is more completely relieved by a change of occupation than by inaction. Many of my pupils, until a late period of their education, are undecided as to the choice of a profession; it is necessary, therefore, that they should prepare for any opening which may occur. Besides, by giving them a tolerably extensive view of literature and science, they have set before them the means of judging what path of life may be most congenial to their tastes. And further, as most of my pupils eventually engage in the ordinary commercial pursuits, it is satisfactory to think, that they do not become engrossed in business before they have imbibed a taste for knowledge, and have been made acquainted with the manner in which some favourite branch of study may be pursued at the hours of leisure.

" I have already mentioned the manner in which the study of the practical sciences was introduced among us.

" The order which we pursue in this department is this. The first course is Natural Philosophy and Astronomy. By Natural Philosophy I mean Somatology, Mechanics, Pneumatics, Electricity, &c. Familiar lectures on these subjects are given on the Tuesday and Thursday, illustrated, of course, by experiments; and on the Saturday a lecture on Astronomy is delivered, developing the application of many of the laws demonstrated in the other part of the course.

"The second course is Chemistry, which is always a favourite one; with it we conjoin, on the Saturday morning, the study of Geology. I always encourage my young pupils to repeat my experiments for themselves, and to make little collections of minerals, which gives them a wonderful interest in these pursuits.

"Our third course is Mental and Animal Physiology. The corporeal structure of man and the lower animals occupies us the two days; on the third we are engaged with the examination of our mental faculties.

"The pupils are frequently examined upon the topics brought before them, and once a-week they are required to write an essay upon one or other of them.

"I carefully avoid giving them a larger quantity of information at one time than their minds can easily retain, and am seldom, in my examinations, mortified by proofs of incapacity or inattention.

"Each course occupies a half year.

"Mathematics has always been made an important study in this academy, but I do not know that there is any thing new in our plans. Perhaps we are paying increased attention to the philosophy of Algebra and Arithmetic. Twice a-week all the pupils in Algebra are assembled, and are instructed in the theory and in the principles of the operations with which, at other times, they are made practically familiar; the same process is pursued with those in Arithmetic. On the other hand, we are anxious to exhibit to them the practical application of those parts of the mathematics which are chiefly presented to them in a theoretical form—Euclid's Elements, for example; with this view we occasionally perambulate the fields as practical land-surveyors.

"The languages are taught as I believe they are elsewhere. The "General Grammar Class" is composed of several of the higher Latin classes, for the purpose of pursuing in conjunction the study of the grammar of the Latin and English languages. By comparing these and other tongues together, we shall best arrive at an accurate knowledge of each; and this is perhaps the only way to acquire an acquaintance with the general principles of language.

"Geography is one of those useful and interesting studies which we never lose sight of—All the pupils engage in it from the earliest period.

"I have drawn out the scheme of "General Arrangement" exactly as the school is worked at present; and have selected, almost at random, an individual from the higher and one from the lower ranks, as further illustrations of the distribution of school hours. Other individuals from the same ranks would exhibit a somewhat different arrangement.

GENERAL ARRANGEMENT.

510

MR BRUCE'S ACADEMY AT NEWCASTLE.

A. M.	Mr Bruce.	1st Assist.	2d Assist.	3d Assist.	4th Assist.	5th Assist.	6th Assist.	7th Assist.	8th Assist.
8½	6th Reading Class.—History of England.	Mathematics.	3d Latin.—Virgil and Greek Grammar.	3d Reading Class.—History of Greece.	4th Reading Class.—History of Rome.	5th Reading Class.—School Collection.	8th Arithmetic Class. 9th Do.		1st French Class.
9½		1st English Grammar.	1st Latin.—Horace and Livy.	2d English Grammar.	4th Latin.—Ovid.	3d English Grammar. 4th Do.	6th Latin.—Phæd. Fables.		2d French Class.
10½		2d Reading Class.—History of Greece.	General Grammar Class.	1st Elocution Class.	5th Latin Class. Eutropius.	Ciphering and Arithmetic at Seats.	Superintending the Writing of Latin Exercises.	7th Reading Class.	German.
11	Recreation.		—	—	—	—	—	—	—
11½	3d Euclid.	1st Euclid and Theory of Algebra.	2d Euclid and Theory of Arithmetic.	Superintending Ciphering Books.	Ciphering.	Ciphering.	9th Arithmetic Class.	6th Reading Class.	
12									
P. M.									
2	Writing.	Writing.	Writing.	Writing.	Writing.	Writing.	Writing.		
	Drawing on Tuesday and Friday.			—	—	—	—		
2½	Recreation.		—	—	—	—	—	—	—
	Mental Arithmetic and Tables.			—	—	—	—		
3½		Mathematics.	2d Latin.—Salust and Horace. 2d Greek.	Arithmetic.	Arithmetic.	Arithmetic.	Arithmetic.		
4½	1st Geography and Scientific Class.	2d Geography Class.	3d Geography Class.	5th Geography Class.	4th Geography Class.	6th Geography Class.			
5½									

INDIVIDUAL ARRANGEMENT.—SENIOR PUPIL.

8½ hrs. | French, to 9½ | Latin, 10½ | Math. 11 | Recrn. ½ | Euclid, 12½ P. M. | Writing, 2½ | Recrn. 3 | Tables, 3½ | Math. 4½ | Geogry. 5½.

JUNIOR PUPIL ON THE LOWEST FORM.

9½ hrs. | Writ. to 9 | Arith. 9½ | Recrn. 10 | Eng. Gr. 10½ | Recrn. 10½ | Read. 11½ | Arith. 12½ | 2 P. M. | Writ. 2½ | Recrn. 3 | Tab. and Arith. 3½ | Recrn. 4 | Read. 4½ | Geog. 5½.

"A new general arrangement is required every half-year, to meet changing circumstances. In minor matters, I also give prominence to a pursuit which, at the next season, I may throw for a time into the shade. Since you visited us, I have assigned a longer time than usual to the first French class, circumstances requiring it at present.

"You will perhaps be surprised at the formidable array of assistants which the scheme presents. It requires some explanation. I do not myself undertake the responsible charge of many classes; I am chiefly engaged in superintending others. I have four regular assistants resident with me in the house; two others I look upon in the light of junior assistants, but they are wholly engaged in teaching; the seventh is a female relative of my own, whose services amongst the younger pupils are peculiarly valuable; the eighth is the French-master, whose services are required during only two hours of the day. Besides these, two drawing-masters attend on the drawing-days. With scarcely an exception, all my pupils learn drawing.

"I fear I have erred in giving you too many particulars rather than too few; but should you require any further information, I shall feel gratified by your demanding it. I trust I need not say that I shall be glad to learn. I am, dear Sir, yours respectfully,
J. C. BRUCE."

This communication speaks for itself. Mr Combe subsequently conversed with a young gentleman who had been educated at Mr Bruce's academy, and who had afterwards gone to Glasgow to pursue his medical studies at the college there; and he assured him that the elements of chemical and anatomical knowledge, which he had acquired from Mr Bruce, proved of the greatest value to him when he commenced his regular studies,—and that, from the first, he was familiar with the principles, terms, general bearing, as well as many of the details, of these sciences, and profited as much by the first course of lectures on them as boys who entered without this preparatory training generally did by the first and second. This fact we can easily credit, for it stands to reason; and we hope that Mr Bruce's success may prompt many teachers to follow his example. His system and terms are explained in the following Outline:—

"*First Division.*—Reading, Writing and Arithmetic; English Grammar, and the Rudiments of the Latin language.

"*Second Division.*—Reading and Recitation; Writing, &c. The advanced Rules of Arithmetic; Mental Arithmetic. English Grammar, and Exercises. Histories of England and Rome. Geography and the Use of the Globes. In Latin the Grammar is pursued, Turner's Grammatical Exercises are written, and several of the following authors successively read:—Lectures

Selettæ, Eutropius, Cornelius Nepos, Phædrus, Cæsar, Ovid, Virgil. Greek Grammar. French. Drawing.

"*Third Division*.—English Grammar: The Derivation and Structure of the English Language, and English Composition. Book-keeping by Single and Double Entry; Mental Arithmetic; the Nature of Foreign Exchanges; Practical Geometry, Mensuration, Euclid, Algebra, Trigonometry, plane and spherical; Navigation with Lunar Observations, Land Surveying, Mechanics, Fluxions, &c.—In Latin: Sallust, Horace, Cicero, Livy, Terence, Tacitus, &c.; Mair's Latin Exercises; Latin Versification.—In Greek: New Testament, *Analecta Minora*, Xenophon, Homer, &c. Sandford's Greek Exercises.—Geography: The Natural Aspect, the political and commercial Relations of the various Countries of the Earth; Ancient Geography. Astronomy, with the Use of the Globes and the Construction of Maps.—History: Universal History, Ancient and Modern. French. Drawing.

"*Philosophical Courses*.—The following subjects are in succession presented to the view of the senior pupils. Natural Philosophy, comprehending Mechanics, Pneumatics, Electricity, &c.; Chemistry; Geology and Mineralogy. Natural History; with reference especially to the Mechanism and Physiology of the Human Frame. Mental Philosophy and the *Belles Lettres*. The Evidences of Christianity. The Religious Instruction of the pupils is, in all the departments, made an object of primary importance.

"*TERMS*.—*For Day Scholars*: Entrance to the Academy one Guinea; pupils in the first Division, L. 1, 1s. per quarter; pupils in the second Division, L. 2, 2s. per quarter; pupils in the third Division, L. 3, 3s. per quarter; French 10s. 6d. and Drawing 5s. 6d. each per quarter extra; Dining for Day Boarders, L. 2, 2s. per quarter.—*For Boarders*: Entrance two guineas; Board and Education of pupils in the first Division, L. 35, per annum; ditto, second Division, L. 40 per annum; ditto, third Division, L. 45 per annum. Washing, 14s. per quarter. French 10s. 6d. and Drawing 5s. 6d. per quarter extra each. A quarter's previous notice or a quarter's payment is required on the removal of a pupil."

Mr Combe wrote Mr Bruce a note, pointing out to him that he had omitted to mention the arrangements for affording *exercise* to his boarders, and also the state of their sleeping apartments as to ventilation. Mr Bruce sent him the following reply:

"DEAR SIR,

PERCY STREET, 26th October 1835.

"I avail myself of the earliest opportunity of replying to your obliging inquiries. I shall be glad of your inserting in the Jour-

nal any portion, altered as your judgment may suggest, of my communication. The number of pupils in the Academy at this moment is 126. I desired some of my boys, to-day, to write out their own individual arrangements, which I enclose. One of the principal difficulties I have to cope with is, to make my arrangements so as to suit those who are not studying languages, and those whose advancement in one branch of education considerably exceeds that in another. This difficulty, I expect, will diminish every year; in this part of the country separate charges were formerly made for each separate branch of education, and the term card was like a bill of fare: some parents selected this branch, and some another; some suffered their children to begin a study as soon as they were fit for it, others kept them in the elementary branches as long as possible; and yet all were to be kept constantly employed during school hours. To obviate this difficulty, my father and I divided the school into the three divisions in the prospectus, holding out every inducement to parents to allow us to advance in every point the education of their children without restriction.

“ I have at present eighteen boarders (including two young relatives of my own); with this number I have been accustomed to consider my house full; at the same time had I the prospect of increasing my number by four, I should convert another room into a sleeping apartment. Our bed-rooms are thus occupied:— in one room seven young gentlemen sleep, in another four and a tutor, in another four and a tutor, in another two, and in another one. The last room is set apart as a sick-chamber, into which we may immediately put any one exhibiting any symptoms which may excite suspicions of infectious complaints. The room is not so occupied at present, not one case of sickness requiring medical aid having occurred during the twelvemonth that I have had charge of the house. You ask after the manner in which we provide for bodily exercise. The young gentlemen rise at half-past six; between seven and half-past eight, when we begin public school, they read a portion of the Scriptures, attend family prayers, look over the lessons they have prepared the night before, have a run in the play-ground for about a quarter of an hour, and breakfast. From twelve to one o'clock they take an *orderly* walk in the country, or have gymnastics; at one they dine; after dinner till two o'clock is at their own disposal, and they romp in the play-ground, or amuse themselves at drawing, as they think proper. You will observe our first occupation in school after dinner is of a kind requiring the least possible mental effort. From a quarter-past five until a quarter to seven, they spend in the play-ground, with the exception of the time occupied in taking tea. At a quarter to seven they are called in to prepare their lessons for the next day; at eight we have family prayers; after that

the young gentlemen have a little bread and milk, and at about half-past eight retire to bed : any of the elder ones who have improved their time during the day, and wish, for some specified purpose, to remain up, are always allowed to do so for an hour longer.

“ Boys usually provide for themselves athletic games, independently of any mechanical provisions for exercise ; nevertheless, in the play-ground attached to the premises, I have erected poles, parallel bars, &c. for gymnastic exercises : they also have a little car, in which they revolve one another with great rapidity round the ground to the speedy exhaustion of the muscular energies, &c. During the months of August and September Mr Roland of Edinburgh attends to give lessons in gymnastics and fencing. I have taken a garden immediately adjoining the play-ground, for the farther amusement of my pupils (having already one for my own amusement, and for the supply of the family with vegetables, &c.), and I shall do all in my power to induce them to cultivate it diligently and perseveringly.

“ I do not know that our noon-day walk will meet with your approval ; but there are some boys who, unless they were required to take exercise, would not, either from a studious disposition, or from quiet and retiring habits, exert voluntarily their muscular system to the extent which health requires. On a Saturday afternoon we take a more extensive and less constrained ramble.

“ I have thus endeavoured faithfully and without reserve to answer your inquiries ; and, allow me to say, I feel much obliged to you for the kind interest which these inquiries manifest. Sometimes descriptions look better on paper than the reality does on actual inspection. Should you have leisure during the short remainder of your stay at Newcastle to look in upon me at any time, I shall feel very great pleasure in shewing you our sleeping apartments and play-ground, that you may witness any disadvantages under which we labour, as well as any advantages which we may possess.

“ You observed to me, when I had the pleasure of seeing you, that, under the system we pursued, very little severity would be necessary. In connection with this subject I may mention one fact : for a year past, and I believe for some years previous, not a single instance of ‘ fighting ’ has occurred amongst the boys. I believe that, amongst so large a number of boys, their boxing propensities are generally more frequently manifested. Occasionally complaints are brought to me of one boy having annoyed another in some way : anxious to repress all unfeeling rudeness on the one hand, and querulousness on the other, I generally tell the complainant to apply to me again at some leisure time, probably an hour or two afterwards ; and the consequence is, I

seldom hear any thing of it again, the parties having become good friends in the interval.

"As a farther demonstration of kindly feeling on the part of the pupils, I have enclosed two printed papers, which the interest you take in the development of character assures me you will not think an intrusion of private or trifling affairs upon your attention. I am, dear Sir, yours very respectfully,

J. C. BRUCE."

On the 29th of October, Mr Combe again visited Mr Bruce's Academy, and found the facts mentioned in this letter confirmed by his own observations. He mentioned to Mr Bruce that he considered the number of pupils too great in the sleeping apartments for their size.

ARTICLE XII.

PHRENOLOGICAL ANALYSIS OF THE CHARACTER OF GEORGE CAMPBELL, recently executed at Glasgow for Murder.*

ON the 29th of September 1835, George Campbell was executed at Glasgow for murder. As the crime was characterized by peculiarly atrocious features, and his conduct, on receiving sentence, marked by unparalleled ferocity, I was anxious to ascertain how far the developments, in a phrenological point of view, harmonized with so strongly marked and singular a character. Having asked permission of the Magistrates to take a cast of his head after death, the request was, in the most liberal manner, at once granted, and a cast was accordingly taken. On examining this cast, I, as well as every one conversant with Phrenology by whom it was seen, perceived at once that it in a most remarkable degree confirmed the doctrines of Gall. Conceiving, however, that a previous knowledge of the individual might have had some influence in swaying our judgments, and making us see a greater analogy between the physical organization and the mental character than was actually warranted by circumstances, I came to the resolution of sending the cast to an eminent phrenologist in Edinburgh, for the purpose of learning what inference he—without any bias, and in perfect ignorance of the person from whom it was taken—would draw from it. To prevent the possibility of any suspicion being aroused on his part, the cast was forwarded, *not to him*, but to another gentleman, who was requested to deliver it into his hands, without saying whose head it was, by whom it was sent, or from what quarter it came. To make assurance doubly sure, that portion of the neck at the

* From the *Glasgow Courier* of 22d October 1835.

angle of the jaw, marked by the pressure of the rope, was carefully removed. No external mark was thus left to indicate that the person had perished by strangulation, nor did the countenance display the slightest appearance of violent death. This fact may be verified by any person who chooses to examine the cast. The gentleman to whom it was sent performed his part with scrupulous fidelity, and handed the cast to the object of its destination. "Mr —," says he, "had no information except what he has prefixed to his paper, and the knowledge of the fact that the cast was that of a dead man."* This information refers to the age, temperament, and education of the criminal—circumstances which must always be known before any thing like a just deduction can be drawn.

Campbell was of Irish parentage. In appearance he was a good-looking, and rather prepossessing young man. In stature he stood about five feet seven inches; he was cleanly made, and rather athletic. While very young he entered the army, where he remained seven years. Of his *general* conduct there I am unable to learn any thing that can be depended upon: suffice it to say, he was at one time severely flogged for striking his sergeant. On leaving the army, he went to his father's house, but soon left it in consequence of some family quarrels. He then took up his lodgings with a woman named Hanlin, with whose daughter (and with the mother also, if accounts can be trusted) he lived in a state of fornication. Hanlin's house was a most abandoned one. Lord Meadowbank, one of the Judges before whom Campbell was tried, pronounced it, with great truth and force of language, "a den of infamy, and the old woman the presiding demon of the place." It was for murdering this woman that Campbell paid the forfeit of his life. He had frequently threatened to murder her, and one day carried his purpose into effect, by literally, and in the most determined and ferocious manner, trampling her to death. After committing this crime, he made no attempt to escape, but went and informed the neighbours that the woman had killed herself by drinking. He was apprehended, tried, and *convicted, very much to his own astonishment*; and when sentence was passed upon him, he burst forth into a volley of imprecations against the Judges, such as never before polluted a court of justice. Those present on the occasion describe his conduct as unutterably horrible and disgusting. On being taken to the condemned cell, he seemed more attentive to his food than to any thing else, complained bitterly of the jail allowance, and expressed great satisfaction when supplied with food of a better quality. He was grossly ignorant, ebu-

* Having been the medium of communication between the writer of the present article and the phrenologist to whom the cast was sent, we are able to certify the correctness of these statements. The cast is now in the museum of the Phrenological Society.—ED. P. J.

rate, and impenitent. The respectable Catholic clergymen by whom he was attended (for he belonged to that Church) had great difficulty in making him comprehend almost any thing. To the last he denied his guilt. He may have acknowledged it privately to his confessor; but this, of course, is not known. He was vain of his person, and inclined to dress neatly. As a proof of this—he devoted a quarter of an hour, immediately previous to his execution, to curling his hair. On mounting the scaffold, he displayed wonderful firmness; walking erectly, tossing his head back in a theatrical manner, and having a bold swaggering appearance. All accounts agree in representing his life, so far as it is known, as rude, turbulent, and debauched. To the young woman with whom he cohabited, he was attached, although this did not prevent him from occasionally beating her, I suppose in his drunken fits. The attachment was returned on her part, and remained unweakened even after he murdered her mother: she visited him in jail subsequently to his condemnation, and seemed much affected by his situation. Having made these preliminary remarks, let us now turn to the phrenological analysis, which is as follows:—

“Plaster cast—size a little above average—temperament nervous-bilious—age 25—uneducated—dissipated.

“I was struck with the resemblance of this cast to that of the too famous Thurtell, in the Phrenological Society's collection,—only that Thurtell's Benevolence was larger, and his head generally larger; and, on turning to the development preserved of Thurtell in the Phrenological Journal, vol. i. p. 828; (but not till I had noted down that of the cast sent me), I found them to agree to a great extent. The individual from whom this cast was taken, being uneducated, and having possessed an active temperament, would give unrestrained vent to a degree of animalism and selfishness, which must have rendered him a nuisance to his neighbourhood. He has the organization of gross sensuality in all its three points. Even when sober, he had the tendency to brawling and bullying—a compound of impudent assurance, self-conceit, vanity, insolence, tyranny, obstinacy, violence, and cruelty; but, when drunk, a strait-waist-coat, or a cell in the police-office, would be absolutely necessary. He would be loud, boisterous, opinionative, and contentious, and his oaths and imprecations would be horrible; while his abuse would have in it an energy, malignity, and grossness peculiarly his own. His selfishness would be unmitigated; grasping, without ever giving, would characterize him. His indifference to the misfortunes or sufferings of others would be marked; and scenes of suffering, such as executions, floggings, surgical operations, prize and cock fights, would greatly delight him. A

single word which he felt as slighting or ridiculing him, would be returned by a blow ; but many an insult he would put on others, and in many a brawl he would be engaged. Nevertheless, he would not expose himself to unnecessary danger, but would calculate his adversary's strength before he proceeded to beat and bruise him or her ; for his utter want of refinement and generosity would make no difference of sex or age, saving always the very young—for the only soft corner of his heart seems to have been love of children. He was cunning, and probably a measureless liar, both in his vain-glorious boastings, and for all other selfish ends. He was a plotter and manœverer ; but although, from miserable reasoning powers, his schemes would be ill-laid, he would have great pride in being thought a 'deep dog.' He was superstitious, a lover of the marvellous, and accessible to religious terrors ; a *ghost* would settle him in his most boisterous moments. He would court society, and dislike solitude ; seeking, of course, to be always the cock of the company, for there would be about him a great share of vulgar self-importance.

"The knowing faculties seem good, and must have given considerable aptness and quickness. The Locality would give a roaming turn, and a knowledge of places. There must have been order and arrangement, which might shew themselves in neatness and tidiness of dress. There is Music, or the love of it, strong ; and Time so largely endowed, as not only to aid music, but to give the power of telling the hour at any time without looking at the clock. The reflecting faculties are very poor indeed, which would produce a deficiency in sense, and an utter blindness to the simplest consequences. This defect would render abortive many a plan to deceive. Gambling and betting would have for this unfortunately organized being peculiar charms. He loved money, and would not be scrupulous about the means of getting it ; while every farthing of it would go for selfish, and chiefly sensual indulgences.

"The cast appearing to have been taken after death, I asked, and was informed that the individual is dead, and 'has ceased from troubling ;' and I congratulate all who knew him on the riddance. I should like to learn how he died—it could not be peacefully in his bed. Query—Was he hanged for beating out some one's brains, or otherwise murdering with ruthless brutality ?

"If such was his fate, I have only to say, that in that enlightened system of criminal treatment to which the country is coming, because *it must*, it needed not to have been so. A penitentiary department will come to be allotted for the constitutionally violent, brutal, and cruel, who will be put within walls for a long course of reformatory education, on the first convic-

tion, by which their dangerous character is clearly proved. In a penitentiary founded on the humane principle of reformation without inflictive vengeance, even such a being as this might have been humanized, at least he would not have been permitted to annoy and endanger society by a long course of violence—to end, perhaps, in murder.”

Remarks.—I am doubtful whether Secretiveness and Acquisitiveness are so large as is supposed. The thickness of the temporal muscle not being evident from a cast, has probably led the very able writer of the foregoing to overrate them. He seems also to have made both Time and Tune larger than is justified by the appearance of the cast. Some, who have seen the cast, have objected, that the distance from the ear to Individuality is larger than we might have been prepared for; but phrenologists have long ceased to regard that measurement as any indication of the power of the intellect. The distance may be caused by a large middle lobe of the brain, as is the case in the present instance. The proper way to ascertain the point is to look how far forward the anterior lobe projects from Constructiveness. The great size of Combativeness and Destructiveness, uncontrolled by Benevolence, and called into fierce action by liquor, easily accounts for the murder. His astonishment at the verdict of “Guilty” probably arose from deficiency in the power of understanding the force of testimony, owing to the smallness of the reflecting organs. Ignorant people are very apt to indulge in absurd hopes. His great Love of Approbation, and his large Order, sufficiently explain the foppish freak of arranging his hair in curls at such a time, as well as the marked neatness of his dress as he appeared upon the scaffold. It is difficult to say what his religious feelings might have been, as probably his mind was never directed to them till after he was condemned. His denial of the crime makes good his claim to the character of a liar: his Love of Approbation would induce him to make it appear that he was innocent, and his Conscientiousness would be no match for this strong feeling. The affection of the woman for him was very natural. He was a good-looking fellow, and was doubtless so much attached to her by his large Adhesiveness as to display affection when in good humour; and, when strong marks of affection are bestowed on a woman, she is certain, in most cases, to return it. The organ on which the instinct of food is conceived to depend is large, which perhaps may explain his conduct with respect to the jail provisions, already alluded to, as well as his fondness for liquor. His good Time and Tune would probably give him a fondness for dancing, for which his figure was well adapted; but whether he really was given to this amusement I have not been able to learn. That he was so, however, I have very little doubt. His great Ama-

tiveness was sufficiently apparent in the circumstances of his sensual career.

Altogether, the head of this man is such, that no good phrenologist would hesitate one moment to say, that the lower propensities must have been very predominant, prevailing lamentably over the intellect and moral sentiments. His mode of life was extremely unfavourable to the exercise of the two latter, and must have tended to give to the first an enormous preponderance. Ignorance and dissipation acting together on such a mind, could hardly lead to any other result than the gallows. The analysis to which I have ventured to add these observations, will speak for itself. It is perhaps one of the most skilful displays of phrenological acumen of which we have any record, and speaks volumes for the science. Wherever the man's character was known, the inference accords most minutely with it; and there is every reason to suppose, that, were those points cleared up of which we are still ignorant, the correspondence between them and the deduction would not be less striking. The concluding paragraph of the analysis is most important, and well worthy the attention of legislators.

ARTICLE XIII.

DUBLIN PHRENOLOGICAL SOCIETY.

A MEETING of this Society was held at their rooms, Upper Sackville Street, on Monday evening, 17th August 1835, which was very numerously attended. Professor Harrison took the chair, and explained the object of the meeting to be, to take measures for the formation of a General Association of the Phrenologists of Great Britain and Ireland, to meet annually at any given time and place agreed upon, with a view to their assisting each other, and co-operating for the advancement of the science.

Dr Evanson moved a resolution to this effect, and suggested that the annual meetings might be held immediately after the times and at the places fixed for the meetings of the British Association, without being in anywise connected with it. That gigantic association had its own objects in view—the improvement and advancement of the physical sciences; yet many of its most distinguished members would be happy to join in the furtherance of phrenological science; and a time more suited for having the collected wisdom of so many scientific individuals together could not be fixed upon than the meetings of the British Association.

Dr Marsh seconded the resolution, and dilated with great

force upon the advantages of studying the mental manifestations ; drawing a line between the physical and metaphysical sciences.

Dr M'Dowell moved the appointment of a committee to carry the resolution above mentioned into effect. He acknowledged himself to have been most sceptical upon the utility of Phrenology as a science, until he had heard the admirable lectures of Dr Spurzheim in this city, from which time he had given the subject his best consideration, and became, in a great degree, a convert to it.

Dr Houston presented himself to the meeting, having the day previously obtained the skulls of the celebrated Dean Swift and Mrs Hesther Johnson, better known by the appellation "Stella." They had been entombed for one hundred years, and the coffins having been recently disturbed, in consequence of some improvement being about to be made in the vaults of St Patrick's Cathedral, permission was granted by the Very Rev. the Dean for their removal for a day or two, until accurate casts could be made of the skulls, with a view to the advancement of scientific knowledge. On an examination of the Dean's skull, it would appear, from the depression on the anterior part of the head, that the man must have been apparently an idiot *. The bones of the skull must have undergone considerable change during the ten or twelve last years of his life, while in a state of lunacy. The heads of children labouring under hydrocephalus often increase to a most extraordinary size. The identity of the skull was complete ; for it was handed down, and well known by old persons in the neighbourhood of the Cathedral, that the Dean's head was sawed across before he was buried. The skull was found in this state in the coffin ; and the inscription on the lid left little doubt on the subject. The head of "Stella" was found in the coffin next that of the Dean, inscribed with her name, &c.

Dr Evanson remarked that the bones of the anterior part of the head were considerably thickened, and the internal surface of the skull did not exhibit those impressions of the convolutions which are to be found in the healthy subject. It was also on record, that after the skull had been opened, a quantity of water was found suffused upon the brain. It was not fair to condemn the science if this head were not found to give an idea of the Dean's character ; for Phrenology paid regard only to developments occurring in the brain of a person in full health and vigour.

Mr Snow Harris made a few observations on the subject, bearing out Dr Evanson in his last observations.

Captain Sir John Ross, B.N., here presented himself to the meeting, and was very warmly received. He said he had, during a period of family privation and illness, occupied himself with studying Phrenology, and after four years observation he was

* We think this expression considerably stronger than is warranted by the cast of the skull.—Ed.

more and more convinced that the brain was the organ of the mind. He proved its practical utility often in the education of children; he had been the means of reconciling man and wife, who had disagreed with each other. In fact, it clearly pointed out the many imperfections of human nature, and taught every thing the Christian religion taught. He at one time undertook, from motives of humanity, to educate a child, whose father and mother had been hanged. At first the child was treated with great severity by those under whose care he had placed it. On his suggestion the treatment of the child was changed; in place of the usual severity being employed, the effect of being put into a dark room was tried, and in a short period the organization was altered, and the character in proportion. It selecting the crew of a ship he found it useful; he saw in whom he could trust, and those whom he could not; he was by it led to apply appropriate punishment, and during a period of ten years he never punished a man corporally; he was led to this system by Phrenology. It was not fair (Captain Ross observed, in reference to the skull of Dean Swift) to raise a discussion upon skulls either aged or diseased.—He had attended a meeting of the Phrenological Society in London, to which a skull had been sent, with a sealed letter, from a person who knew the character of the man whose skull had been presented. Dr Spurzheim was at the time in London: he analyzed the head and gave his opinion, which almost literally corresponded with the account given in the letter when it was read.

Mr Hawkins, V. P. of the Phrenological Society of London, instanced a case where he measured the head of a man after an interval of twenty-five years: in the latter part of his life he became an enthusiast in religion; the upper part of his head increased three-eighths of an inch in height, while the back part decreased one quarter of an inch. Mr Hawkins exhibited a wire made of grain tin, which he was in the habit of using for phrenological measurements, and described it as the most accurate which could be availed of.

A conversation took place in reference to a plaster cast, made from a marble bust of Dean Swift, executed during his lifetime by an artist named Cuninghame; but as the artists of those days were not accustomed to pay that attention to the developments of the head which is now given, it was considered to be unimportant in reference to the debateable ground in question.

Dr Evanson gave a highly interesting lecture on the skull of "Stella," shewing that it bore out all the characteristics of that singular and gifted woman.

The Society will have another meeting upon the subject brought before them on this occasion.

ARTICLE XIV.

PROPOSED ASSOCIATION FOR THE ADVANCEMENT OF
MENTAL SCIENCE.

THE following circular, addressed to the Secretary of the Phrenological Society, from the Phrenological Society of Dublin, has just been put into our hands:—

“ DUBLIN, November 1. 1835,
“ 36. Dawson Street.

“ SIR,—I am directed by the Members of the Dublin Phrenological Society to communicate to you the following resolution, passed unanimously at a special meeting of the Society :

“ ‘ *Resolved*, That it appears desirable that there should be formed a General Association of the Phrenologists of Great Britain and Ireland, to meet annually, for the purpose of advancing the Science of Phrenology, giving publicity to its doctrines, and effecting a system of mutual co-operation among Phrenologists.’

“ It is hoped that this proposition will meet with the approbation of the members of your Phrenological Society ; and we solicit your advice and assistance in carrying the proposal into effect.

“ To us it appears that the most eligible time and place for holding this assemblage of Phrenologists, would be immediately *after* the meeting of the British Association for the Advancement of Science, at whatever place, each year, that meeting is held ; as many there assembled would be thus saved the necessity for a separate journey to attend the Association of Phrenologists ; but we disclaim any intentions of attempting to interfere with the meetings of the British Association, or of mixing up our proceedings with theirs.

“ Several eminent Phrenologists have attended the meetings of the British Association, without having had opportunity of communicating together as such ; while several distinguished members of the Association, not Phrenologists, have expressed much interest respecting the science, and a desire for some opportunity to become acquainted with its principles.

“ To such the meetings of the Phrenological Association would afford the desired opportunity ; and to Phrenologists themselves would be secured opportunity for mutual intimacy and scientific communication :—their views could be compared together—truths would be confirmed, errors corrected, unanimity

promoted, and a new stimulus afforded to incite to future exertion;—while such a demonstration of the strength of Phrenologists would be made, as could not fail to produce a deep impression on the public mind.

“In these views we trust that we shall meet with the concurrence of the members of your Society, and hope to be favoured with an early communication on the subject.

“I remain, Sir, your obedient servant,

“RICHARD T. EVANSON, M. D. *Secretary.*

“To the Secretary of the
Edinburgh Phrenological Society.”

This circular (which there has not yet been an opportunity of submitting to the Phrenological Society), is an important document, and one which it gave us pleasure to receive. The time is come when phrenologists should, as a body, make a public stand—when Phrenology should be placed in its proper position, and the public taught to look upon it in its proper light.

Phrenology is a system of great and important truths—that true and tangible philosophy of mind, which so many great and good men have sought in vain, or only obtained a partial glimpse of; because, while they pursued an erroneous method of inquiry, however great their genius or good their intentions, their efforts could not be crowned with full success. That which philosophers have sought for from the days of Aristotle to the present time, Gall has attained, and Spurzheim promoted. Phrenologists are the repositories of this great collection of truths; to them is confided the sacred trust. Let them not neglect their charge—opposition cannot overturn truth, but neglect or indifference may retard its progress. The man who once avows his faith in Phrenology, and engages in its promotion, takes upon him no trifling responsibility. His neglect or indifference may be charged against the science as proof of error or unworthiness; and instead of becoming a promoter, he may be found a retarder, of truth. Not so with him, who, once convinced of the truth of the science, sees and feels its importance, and boldly and perseveringly steps forward to advocate its doctrines, and spread its principles abroad. He has broken through the trammels of ignorance and prejudice—he sees through the mists that surround him—a bright future opens on his view—and a fair fame cannot but be his reward, when, at no distant time, a better system has brought better things to man.

The schoolmaster is abroad! why should not the phrenologist be abroad too? The schoolmaster, after all, is but the pioneer to knowledge. He teaches us but to know how to know. How long are people to think that a knowledge of language is a knowledge of things—that sound is science?

Science has been conveniently divided into the fixed and the variable—into that whose basis is capable of demonstration, and that where much is left to conjecture. The former constitutes Physical, the latter Metaphysical Science; and to the former, from its certainty, has pre-eminence been awarded. Yet surely it is not of more importance to man, not more conducive to his happiness, though it may be more *directly* connected with his comforts. Each has its difficulties to contend with—prejudices to oppose—ignorance to dispel—fanaticism to contend against. Some of the simplest physical truths—the most obvious facts, which every child is now taught and knows—have had, on their first announcement, to combat ridicule, calumny, and even persecution. How long has the world been learning, if it has yet learned, “that the day,” as Kepler says, “will soon break, when pious simplicity will be ashamed of its blind superstition,—when men will recognise truth in the Book of Nature as well as in the Holy Scriptures, and rejoice in the two revelations!”

Physical Science has naturally gone first, and for it the day of which Kepler speaks may perhaps be said to have dawned. Not so with Metaphysical Science, the younger, and yet the fairer and more majestic of the two. Over man's greatness the elder sister may preside, but his happiness is influenced by the other. Knowledge is power; virtue alone makes happy.

Shall those, then, on the cultivation of whose science so much of human happiness depends, forget for one moment its importance, or, deterred by the difficulties of the task, lag in the undertaking they have once begun? The greatest difficulty is already surmounted. Upon metaphysical science has dawned the prospect of attaining to some of that certainty or fixedness which is the boast and bulwark of physics. The right method is at last attained. Mind is studied as it is constituted by the Creator, in its natural relations to the body, not in a state of fanciful existence. The facts of the physiologist are substituted for the phantasies of the metaphysician. Locke talked of an algebra of morals: Phrenology almost holds out the prospect of realizing such an idea. With clearness the various faculties of man are discerned—with distinctness set apart and determined—with certainty predicated, almost prophesied! Who could have believed a short time since that such could be done? How many still *will not* believe that it is done! But every age has had its wilfully ignorant and prejudiced. Men will rather talk than observe, and dispute than learn. But there are those who both observe and learn. Phrenology, though a new science, has made extraordinary progress. In spite of all opposition, and though perhaps peculiarly obnoxious to ridicule, its truths have sunk deeply into the public mind; its principles are widely diffused—almost instinctively adopted; and its phraseology

is widely employed, as if by common consent. How could it be otherwise? Phrenology is the true philosophy of mind: it satisfactorily explains the phenomena which no other system proposed ever did: it unites into one, and for the first time, the philosophy and physiology of man. Though young in years, it has had rapid growth, and seems as if already far advanced towards maturity. With those who look only for objections against the science, this very circumstance has been a favourite one. But was not such rapid progress to be expected? "Truth, like gold, is not the more new for being newly dug out of the mine;" Phrenology is not the more new for having been newly discovered. The brain was always the organ of the mind, and its several parts exercised alike their several functions, whether we knew it or not. But knowing it—being taught to look for these important facts—what a vast field at once opens on the view! The facts are all at hand, and obvious when we have once learned to read them aright—the scales have fallen from our eyes, and lo! we see.

The phrenologist need not concern himself because he is exposed to ridicule and opposition. His efforts have proved successful—his science has triumphed—phrenological societies abound—phrenologists increase and multiply. Men of the first rank in the medical as well as other professions, and eminent for learning, talent, and moral worth, are to be found in their ranks. It is full time, then, that a general co-operation should take place—that a demonstration of the strength of phrenologists be made, and the science placed fairly in its proper position before the public. Such is the proposition embodied in the circular issued by the Phrenological Society of Dublin—a society whose movement in regard to this matter we rejoice to see; because we know the energies and capabilities of many of its members, and are ever disposed to receive with favour any proposition from them. Our readers will remark the coincidence of their proposal with one made by Sir George Mackenzie in the 48d number of this journal. We took the opportunity in that number of pointing out the difference between an Association for the advancement of Physical Science, like the British; and an Association of Metaphysicians, such as that proposed by Sir George Mackenzie.

The physical sciences afford a fixed point of union, which must give a stable basis to an association established for their advancement;—where all is capable of proof, and nothing received until it is demonstrated,—and where no serious difference of opinion can arise. Not so in a metaphysical association,—no two members of which could agree upon any fundamental principle,—no two of whom, perhaps, had a single fundamental principle to agree upon.

Far different would be a *Phrenological* Association: here would be a fundamental principle of vast importance upon which all would be agreed; a fixed point from which to start—to which to return—on which to rest: all would be unanimous in principle: their object would be to investigate details; and how important—how interesting—how all-absorbing these details! “It is a good plot—an excellent plot”—it must succeed.

On a future occasion we may offer some remarks on the plan of proceeding, &c.,—endeavouring to elicit the opinions of those most competent to give good advice in the matter. In the mean time, we trust that the circular issued by our Dublin brethren will be promptly responded to by the various *Phrenological Societies* addressed; and we would here remark (as has been requested of us), that one of the objects of printing it in this *Journal*, is to give it immediate and extensive publicity, so that it may quickly come under the notice of all *Phrenological Societies* in Great Britain, the existence of some of which may not be known in Dublin, while opportunity may not speedily offer for sending the Address to others.

One topic more and we have done—but that is a topic of interest, on which it is desirable that we may be clearly understood. The proposal to form a *Phrenological Association*, and the suggestion to hold its meetings immediately *after* those of the British Association, neither implies, nor is meant to imply, any connexion, necessary or accidental, between the two.

The circular from the Dublin *Phrenological Society* is most explicit on this subject; no mistake in fact can be made, unless intentionally; but it is very probable that such mistake *will* be made, and erroneous statements industriously circulated. It will be said that the phrenologists are most anxious to attach themselves to the British Association, and that that Association is most anxious to shun any such attachment.

Of the British Association we are members, and to none do we yield in sincere zeal in behalf of its objects. It is an institution in whose prosperity we shall ever delight—a grand step towards that great and glorious regeneration of society, which the moral influence of such an association can do much to accelerate.

Men are not born all alike—the love of distinction is innate and energetic—too long has distinction been sought and attained on unworthy grounds. There is but one true foundation for the superiority of one man over another, and that is his superiority in intellect and in morals. The more society improves, the more will this truth be felt and acknowledged. But intellectual attainment has hitherto been too much confined to the cloistered solitudes of the university, or the retirement of private life. Now, however, it has gone abroad. Public attention, and public

applause are no longer to be awakened and commanded by the gaud and glitter of artificial distinction alone. The aristocracy of mind is now receiving its due.

But the British Association is devoted exclusively to the advancement of one section of science. It has adopted the Philosophy of Matter. We ask, Is less importance to be attached to the Philosophy of Mind? Are mental and moral philosophy to be neglected, because natural philosophy is to be promoted? Certainly not. That department is ours—we wish to pursue it definitely but separately. The British Association has its object, and we have ours—distinct certainly, but not thence necessarily hostile.

Finally: Let phrenologists be but true to themselves and their science; and all that they desire must be accomplished. Our science requires but to be known and understood to be believed and adopted. Truth must triumph; and of all the scientific truths that have been promulgated for the benefit of man, we sincerely and firmly believe Phrenology to be the most important.

ARTICLE XV.

THE CHRISTIAN EXAMINER, No. 65. Boston, U. S., Nov. 1834. 8vo.

ANNALS OF PHRENOLOGY, No. 5. Boston, U. S., May 1835. 8vo.

THE EDUCATIONAL MAGAZINE, Nos. 9, 10, and 11; (Sept., Oct., and Nov. 1836). London: Simpkin, Marshall, and Co. 8vo.

THE CHRISTIAN PHYSICIAN AND ANTHROPOLOGICAL MAGAZINE, Nos. 1, 2, and 3; (Sept., Oct., and Nov. 1836). London: E. Palmer. 8vo.

THE ANALYST, Nos. 11 and 12; (June and July 1835). London: Simpkin, Marshall, and Co. 8vo.

We have never regretted the want of space so much as in finding ourselves, as we do at present, compelled to notice in a single brief article so many publications which individually deserve more attention than what it is possible here to bestow upon the whole.

The Christian Examiner contains a long article, entitled "The Pretensions of Phrenology examined;" and the intention of the writer (who is a cloudy metaphysician) is to prove those pretensions to be groundless. His objections are, 1st, That "Phrenology is materialism;" 2d, "That the energy and perfection of the mental faculties are not always proportioned to the development of the brain—that idiocy, in many cases, if not all, consists in a disease of the nerves"—and that insanity affords no

proof in favour of Phrenology; 3d, That comparative anatomy furnishes evidence against Phrenology; 4th, That phrenologists admit no such faculty as Memory; and 5th, That consciousness is insulted by phrenologists, because they do not admit it to be a faculty of the mind. These objections are ably and conclusively replied to in *The Annals of Phrenology*, where the ignorance and laughable dogmatism of the objector are made abundantly manifest. We extract a short specimen of his remarks. "If it be maintained," says he, "that the mind operates by means of the brain, we throw the burden of proof on the physiologist, and demand *positive* demonstration of the fact; for we are by no means satisfied with the evidence hitherto adduced in support of it." It is much to be feared, that while this sceptical frame of mind continues, no evidence in addition to what is already accessible to him will be "positive" enough to make him change his opinion.—The article is characterized, as usual with such productions, by vague, declamatory, and sweeping assertion, and a plentiful lack of knowledge of the doctrines assailed. The writer has inserted another paper on the subject in *The New England Magazine* for March; where, among other modest things, he says, "I am convinced that my reasons against Phrenology are unanswerable." The tone of his letter, however, shews that he is ill at ease on the subject.

The reply in the *Annals* extends to seventy-one pages, and constitutes Article I. The second is an "Anatomical Report on the Skull of Spurzheim, by Nathaniel B. Shurtleff, M. D." The dimensions are carefully noted, the appearances of the bones described, and the article illustrated by horizontal and vertical sections of the skull. Dr Spurzheim died on 10th November 1832, and his brain was weighed on the 12th. "Being present," says Dr Shurtleff, "I took an account of the weight, which, after deducting that of the napkins, &c. which were used, was exactly three pounds seven ounces and one dram, or fifty-five and one-eighth ounces avoirdupois. The brain was previously deprived of its liquors, and divested of the dura mater." The dimensions of the skull differ very slightly from those published in our 39th number. The discrepancy is no doubt owing to our measurements having been taken from a cast.

Article III. is a review of the 39th, 40th, and 41st Numbers of this Journal. The reviewer is pleased to estimate our labours very highly, and gives them more applause than we can well admit their title to. Article IV. is headed "Last Death of Phrenology; effected by the Mask of Napoleon Bonaparte. By Wm. B. Fowle." Article V. is a "Phrenological Analysis of Infant Education," extracted, along with that which follows,—namely, a review of the Paris Phrenological Journal, No. 5,—from our own pages. The seventh and last article (on phreno-

logical quacks) is reprinted in our present Number. We are much pleased with the zeal and talent which the May Number of the *Annals* exhibits.

The Educational Magazine next demands our attention. It is published at the amazingly low price of one shilling, and contains much valuable and important information relative to the principles and practice of education. The contributions of practical men, as well as of educationists more exclusively speculative, are solicited and published; while, at the same time, the work may be looked upon as a kind of storehouse, in which all that is most interesting in regard to education is collected from contemporary journals and other publications. The conductors are liberal thinkers and sincere philanthropists—men anxious for the improvement of every grade of society in knowledge, happiness, virtue, and religion. The importance of moral training, especially in Infant Schools, is strenuously advocated; and the means of reform in every branch of education are largely discussed. But what is peculiarly gratifying to us as phrenologists is, that the conductors seem fully aware of the momentous truth, that to effect the moral and intellectual improvement of man, we must take the preliminary step of improving his physical organization—on the condition of which the efficiency and just balance of the faculties so essentially depend. It is their aim “to provide a record of all such mental and physiological facts as shall tend to produce a more accurate knowledge of the faculties of the mind, and of the effect of physical influences, and thus to enlist the teacher as one of the best observers of these facts;—to apply mental science to instruction, and to establish the art of teaching upon the basis of sound philosophy, and in connexion with the organic and moral laws;—and to endeavour to enlist the philosopher, the physician, and the medical practitioner, in the subject of education,—with a view to ascertain how far medical science may be held subsidiary to the science of education, how far moral remedies may be applied to the body, and to what degree bodily remedies act upon the mind.” Such, and similar to these, being the objects of *The Educational Magazine*, we regard it as an important auxiliary in the battle fought by ourselves; and trust it will meet with the encouragement which it deserves. Without identifying themselves with Phrenology, the conductors speak very favourably of its utility and merits, and forcibly maintain its title to receive a sober and candid consideration. The author of a series of essays on “The Philosophy of Teaching,” three of which have appeared, takes Phrenology throughout as the groundwork of his discussions.

The Christian Physician has three leading aims—to teach Phrenology; to shew that happiness is the invariable result of obedience to the laws of nature, and misery the punishment of their neglect; and to advocate liberal views in politics, and toleration in religion. It consists of twenty-four pages, and is sold at fourpence. The conductors have our best wishes for their success. An essay on Phrenology is contributed to each number by Dr Epps. From his second paper we extract the following instructive case:—“A boy, aged nine years, was kicked by a horse in the forehead: he was taken up insensible; the skull was driven in in the situation of the organs of Causality and Wit on the right side of the head. He lost a considerable portion of brains, perhaps two table-spoonsful. He was, by the skill of a medical practitioner in Kent, restored to health, and went to school, and, though not bright, did his duties at school as well as most boys. He entered into business after serving an apprenticeship; and forthwith became liable to fits. The exercise of his reflective powers in arranging the business concerns awakened the affection of the brain produced by the injury, and thus the fits were induced. He found, moreover, that these attacks came on generally when his mind had most thinking to perform; and, also, if he could direct his mind into other channels just before the attack came on, he avoided the attack. The consequence arising has been that he has been obliged to give up business.” This case is adduced by Dr Epps as an illustration of the fact, that the mind is often supposed to be uninjured by disease of the brain, because the patient is able to answer questions correctly, and to conduct himself with propriety among his acquaintances. But although this be the case, still the intellect may be utterly incapacitated for acting vigorously in circumstances requiring effort or application. Had the mind of this boy been judged of before he left school, it might have been pronounced perfectly uninjured; but as soon as the necessity arose for applying the faculties energetically to the business of life, the effect of the lesion became very apparent.

The Analyst is a monthly journal of literature, science, and the fine arts, printed formerly at Worcester, but now at Birmingham. We have looked into the greater part of the 11th and 12th Numbers, and think the work conducted with much ability. No. XI. contains a spirited paper by Neville Wood, Esq. entitled, “Some Remarks on a Review of a Paper on Phrenology by Dr Milligan.” It relates to the parallelism of the tables of the skull, a subject on which Dr Milligan was fond of carping against the phrenologists, though without any distinguished success. As an objection to Phrenology, the

want of absolute parallelism of the tables is now, we believe, universally abandoned.

The 19th Number of *The Analyst* contains an excellent paper, entitled, "Remarks on Phrenology as applied to Education." We intended to extract a portion of it, but, having no more space, must content ourselves with recommending it to the attention of our readers.

MISCELLANEOUS NOTICES.

EDINBURGH.—On 16th, 23d, and 25th September, a course of three lectures was delivered in Clyde Street Hall by Dr John Epps, on the applications of Phrenology to education, criminal legislation, and government. Notwithstanding the unfavourable state of the weather on all the evenings, the attendance was numerous and respectable.—Mr Combe is at present lecturing once a-week on Moral Philosophy to the Philosophical Association, in the Waterloo Rooms. His audience, hitherto, has been 600 persons.

The following office-bearers of the Edinburgh Ethical Society for the Study and Practical Application of Phrenology (which meets in the University every Friday evening, at half-past eight o'clock) were elected on 13th November:—A. G. Hunter and William B. Hodgson, *Presidents*; Robert Cox, *Secretary*; Thomas Moffatt, *Treasurer*; George Cruikshank, *Librarian*; Alexander Ireland, William Brown, William Nichol, Andrew Brash, and Abram Cox, *Councillors*.

GLASGOW.—A course of lectures on Phrenology was delivered by Dr Weir in the Mechanics' Institution, during September and October last, to about one hundred auditors. Phrenology will be taught this winter in the Anderson, Calton, and Potter's Institutions—in the two former by Mr Gullan, and in the last by Mr Duff. The Glasgow Phrenological Society has commenced its sittings with the prospect of an animated session. The office-bearers are—Dr William Weir, *President*; Mr Charles M'William and Dr Maxwell, *Vice-Presidents*; and Mr Richard S. Cunliff, *Secretary*.

DUNDEE.—The Dundee Mechanics Phrenological Society was instituted in March 1826, and from that time till the end of 1831 met regularly once a fortnight, for the purpose of reading essays, holding phrenological conversations, and borrowing and returning books. The entry-money was two shillings, and a weekly sum of twopence was afterwards exacted, till the whole payments amounted to a pound, when the member became free of all farther demands. Under this system the society flourished well, and acquired a considerable number of books and casts. In December 1831, it was thought advisable to make arrangements so that any individual could get the use of the library for a quarter without entering the society, and this plan has been eminently successful. The librarian attends every Saturday evening from eight to nine o'clock. Members pay 3d. a quarter, and subscribers recommended by members, pay 4d., both in advance. For new numbers of the Phrenological Journal, every reader pays a penny per diem for the first two weeks after publication, ½d. per diem for the second fortnight, and ¼d. per diem for the next eight weeks. The society possesses seven copies of Combe's System, four of his Elements, eight of his Constitution of Man, two of his Letter to Jeffrey, two of Dr Combe's Physiology, one of his Observations on Mental Derangement, three of Dr Spurzheim's Philosophical Principles of Phrenology, a complete set of the Phrenological Journal and duplicates of many of the numbers, with a variety of other phrenological, as well as antiphrenological, publications. There is also a collection of casts. The society's income in 1832, was L. 8, 12s.; in 1833, L. 7, 6s.; in 1834, L. 7 : 16 : 8½. We mention these facts because they may serve as useful hints in other quarters.

CUPAR-FIFE.—The Phrenological Society here was formally constituted on 27th August 1835. Mr Thomas Pratt was appointed President, and Mr Alexander Black Secretary and Treasurer. The number of members in the middle of September was twenty. At the first meeting, Mr Pratt read an address, in which he pointed out the uses of Phrenology, and the best method of studying it. As strangers are admitted to the meetings, a considerable accession of members is expected. Messrs Pratt and Black intend to address the Society alternately at the winter meetings, which occur once a fortnight. A supply of casts has been obtained. We are informed that a Phrenological Society has been formed in the neighbouring town of Newburgh, and another at Kirriemuir in Forfarshire.

GREENOCK.—Extract from the *Greenock Intelligencer*, 11th November 1835:—"Last night, Dr Wood delivered an introductory lecture on Anatomy, Physiology, and Phrenology, in the Reformed Presbyterian Church, West Stewart Street. The auditory was highly respectable, and listened throughout with marked attention, manifesting their approbation of the lecturer's arguments by loud applause. Dr Wood, previous to the commencement of the lecture, passed a merited compliment on our townsman, John Denniston, Esq., of whom he said, that 'if his other avocations did not interfere, he would shortly shine among the brightest luminaries of science.' After a very interesting prelection, which was curtailed from the indisposition of the lecturer, Dr Wood concluded by mentioning, that he would deliver the first lecture of the course, on the structure of the bones, on Friday evening."

NEWCASTLE.—At the conclusion of Mr Combe's lectures mentioned in the eighth article of our present number, a Phrenological Society was formed at Newcastle. Its first meeting was held on 11th November, when laws were adopted, and office-bearers appointed. Mr John Fife presided, and the attendance was very numerous.

PORTSMOUTH.—Dr Engledue, a gentleman of high talent, with whom we had the pleasure of becoming acquainted during his residence in Edinburgh last winter, and who was then a vigorous advocate of Phrenology in the Royal Medical Society, has lately delivered several lectures on that science at the Philosophical Society of Portsmouth. We extract the following notice of his second lecture from the *Hampshire Telegraph* of 26th October 1835:—"Dr Engledue delivered his second lecture on Phrenology, last evening, to a very crowded and highly interested audience, at the Philosophical Society. His attention was particularly applied to the points suggested in the former notice we took of his lecture; after which he commenced his details of the science, by explaining and illustrating a few of the propensities constituting the animal part of the human mind. After his lecture, the President, Mr J. W. Williams, invited the members to a discussion upon the subject, which being generally declined, he delivered himself of that 'priming' the interval between the first and second lectures had enabled him to effect, as a determined anti-phrenologist; and a more piling attack upon the science, a more contradictory, absurd, jumbling of ideas, more illogical inferences, more heated declamation devoid of proof, or senseless tirade against a science founded on observation and deduction, we never witnessed. He had the hardihood (with such a host of eminent authorities against him) to designate it 'a barbarous system of physical imposition—a trashy science, that would die away as all false delusions have done (instancing astrology!) when the present enlightenment of the public mind shall have been more maturely advanced; and with jeering, scoffing, and maukish ridicule, the scientific President filled out his hour, and sat down with evident unbounded self-satisfaction and complacency. Dr Engledue, in a comprehensive and smart, though brief reply, most effectually destroyed the imaginary, trashy, though in his own opinion incontrovertible, castles in the air, of the worthy President, and, with true phrenological spirit, dared him to the proofs of his wild assertions. The

greatest interest pervades most classes of the community on this interesting subject; and therefore we are happy to find that it is to be kept alive by Dr Engledue's third lecture, on Friday, October 30.

"The Portsmouth Phrenological Society held their first meeting on Thursday evening, at the Old Town Hall, when Dr Scott of Haslar delivered an introductory lecture. On Thursday next Dr Engledue will deliver the first of a series of six lectures, which he intends giving during the present session."

PHRENOLOGICAL COURTSHIP.—The following is the most recent specimen of antiphrenological wit which we have seen. It appeared in the *Caledonian Mercury* of 31st October, and is here inserted for the edification of our readers. "We regret extremely that the manner in which courtships are to be conducted on such principles has not been described, or even hinted at, though it is easy to guess it. We suspect, however, it must be attended at first with some inconvenience. We fear even open rebellion, and much heresy for a time, among a large proportion of the fair sex. But we doubt not that very soon common sense, regard for the public benefit, and the overpowering consideration of self-interest, will bend male and female to see the necessity, expediency, and justice of the practical adoption of that excellent maxim, 'Claw me, and I'll claw you.' Ball-rooms will probably exhibit many scenes which may seem strange till habit reconcile us

to recognise

A grandeur in the scratchings of the head.

Wigs will assuredly be indispensable for the ladies—(what a deal of poetry will go by the roots!)—and wigs, too, that, like certain stays we have seen advertised, may be removed 'with the rapidity of lightning.' A love-letter will probably run as follows:—

"DIVINE LOUISE,—I need not remind you that last night I felt—(not emotions, raptures, and soul-thrilling transports)—but your Bump. On returning home I also felt my own. And I hasten to inform you—while 17 (*Hope*) is throbbing like an earthquake in my brain—that all my development of 33 (*Language*) is insufficient to describe my state, on finding that a kind Providence has ordained, that for every bump on your beloved head, there rises a corresponding bump on mine. Dearest girl, need I say more? Nos. 2, 3, 4, and 29 (*Philoprogenitiveness, Adhesiveness, Concentrativeness, and Order*), are so harmoniously protuberant in both of us, that I can have no doubt either of a large family or a happy home. Your 23 and 24 (*Form and Size*), and the 26 (*Colouring*) on your cheeks, are indeed a ravis. Sweet soul, do allow your 13 (*Benevolence*) to name as soon as possible your 31 and 27 (*Time and Place*). Oh may no 30s (*Events*) ever cross our 17s (*Hopes*)—and for the present believe that I am wholly engrossed with No. 1 (*Amativeness*).—Thine,

FREDERIC AUGUSTUS.

"The last allusion in the letter might, in the common parlance of this iron and matter-of-fact age, be grossly misinterpreted, but it will be fairly understood in the golden era of Phrenology. Nor need we add, that then, likewise, our explanations of the numbers will be wholly superfluous.

"Well, such is the vision of the phrenologist—[Is the writer serious in making this avowal? If so, he is chargeable with grossly distorting the truth.]—and we dare say very few of our readers wish us to follow it farther. The majority of the world will be contented with us to take the heads on their shoulders for granted; as also its interior machinery and apparatus."

DR CALDWELL.—Extract from the Rev. Timothy Flint's Sketches of the Literature of the United States, in *The Athenæum*:—"Dr Charles Caldwell, of Lexington, a medical professor in the University there, has been for many years one of our most industrious writers in various walks. Some of his first productions drew on him unsparing ridicule. But, possessing a powerful and searching mind, with unusual capacities for original investigation, and the buoyancy of an opulent endowment determined to find scope, he wrote on,

despite ridicule and neglect, until he has extorted from the public an admission of his talents and powers, especially profound physiological knowledge, and acquaintance with the philosophy of medicine. He stands acknowledged as the head and almost the founder of Phrenology in the United States,—a circumstance which has contributed not a little to the ridicule with which his numerous writings have been met. The many medals for dissertations on medical subjects which he has obtained, and the growing popularity of Phrenology, which already numbers among its followers many of our best and most endowed scholars, is proof that the possession of talents, industry, and perseverance, will finally triumph over ridicule and prejudice, as the sun gained the prize in the struggle with the clouds."

IMPORTANCE OF PHRENOLOGY.—"The science of Phrenology, strictly, belongs to natural history....The facts and inferences are such as involve the happiness or misery of the human race, without excepting any rank, pursuit, or calling whatever."—*Loudon's Mag. of Nat. Hist.*, No. 54, p. 581.

INVENTION IN DREAMS.—The following curious case, stated to have occurred to an enlightened lawyer, is recorded in a late publication of high talent and excellent moral tendency, "The Cabinet; a Series of Essays, Moral and Literary;" Edinburgh, 1835, vol. ii. p. 315. After alluding to the general want of value and precision in our sleeping inventions, the lawyer proceeds:—"But there are odd enough exceptions; where one would almost think that the mind in sleep not only received very precise communications, but actually received them from others, and did not invent them herself. For instance, I dreamt the other night that several persons who were jointly interested in a lawsuit, came to consult me at my chambers. One of them acted as spokesman for the rest, and began to tell me the case, while I took notes of what he said. Near the commencement of his story, some circumstance escaped me; but, hoping that this might be supplied by the after narrative, I forbore to interrupt him for some time. I was, however, disappointed. He did not repeat the fact omitted, and for want of it, I felt that I could not understand him. So I stopped him, and begged that he would restate what I had lost. He did so: and I then clearly saw its application, and understood the whole case. Now, if this part omitted was all my own invention, like the rest, this was a strange circuitous way to bring it out. I was so much struck with the process on awaking, that I immediately noted down the whole circumstances, while fresh in my recollection." In the same essay allusion is made to the fact that our sleeping thoughts take much of their character from the state of our body—being agreeable or otherwise, as the body is at ease or in pain. To this general rule the following exception is related in page 319. "I had gone to bed with an acute headach, which kept me awake for some time. At length I fell asleep, and presently found myself walking down a grassy slope in a garden, where all around me was sunshine, verdure, and fragrance. I held by the hand a beautiful child of two years old, whom, to complete the enchantment, I fancied my own. The child made a false step, and would have fallen; but swung round by the hold which I kept of his hand. Though not hurt, he was frightened, and began to whimper. I caught him up in my arms, and kissed him: then, to divert his distress, I pretended to slip, as he had done; and, with an antic gesture, gradually and gently threw myself backwards on the turf, still holding his face opposite to mine. The child was so much tickled at my imitation and gestures, that he fell laughing through his tears. With this image before me, perhaps the loveliest in nature, I awoke. I had slept about two hours; and the pain under which I fell asleep, I found undiminished; and so much of the same kind, and in the same spot, that I had reason to think that it had never abated. But so agreeable was the impression left by my dream, that it lasted for some time after I awoke, and almost balanced my bodily pain."

THE BRITISH CYCLOPEDIA (London, 1835, vol. ii.) contains a well-written article on Phrenology, obviously from the pen of some one who has taken the trouble to make himself acquainted with the subject. The article, which

is entirely in its favour, commences in the following manner:—"This science may be said to owe its origin to the labours of Gall and Spurzheim; and it is but justice to the memory of those distinguished physiologists, now no more, to say that they succeeded in triumphing over a degree of opposition, which nothing but the immutable power of truth could have withstood." And the writer concludes thus:—"In closing the present article, which is of necessity but a brief outline of a science which has engaged the attention and employed the pens of some of the first philosophers of the present day, we must be pardoned for repeating our conviction that its fundamental principles are evidently based in the truths of reason and science. Many of the minor details, or what may be termed the technical parts of Phrenology, do not, however, deserve such unqualified acquiescence. Indeed we find some of its warmest supporters who differ from each other, not merely with regard to the name, but even as to the actual functions of some of the recognised organs. Shall, however, so splendid, so philosophical a fabric be held as worthless, merely because a coping stone is disarranged, or even wanting? No; let us continue to take nature for our guide, and, by multiplying and classifying the facts as they are presented in her great storehouse, complete for ourselves a superstructure, which will afterwards shine as one of the proudest mementos of the science of the present century."

RELIGIOUS EDUCATION.—A paper on Phrenology, in the seventh number of *The Educational Magazine*, contains some very sensible and graphic remarks on the education of the religious faculties. We give a short extract:—

"Very improper food has been presented to these faculties; and food, itself proper, has been presented in an improper way.

"To illustrate. Parents act most unwisely in this matter. Instead of allowing children to learn the truths and duties of religion, as matters of inference, from the interesting tales of Scripture, they seek to drive home on their children *abstract doctrinal truths*.

"Thus the Assembly's Catechism is taught to almost every child in Scotland. One of the first questions is, '*What is the chief end of man?*' The answer is, '*To glorify God and enjoy him.*' Now, here is an abstract truth. The child cannot comprehend this. He asks, '*What is it to glorify God?*' and is told, '*To be a good boy;*' and to be a good boy, is to do as he is bidden.

"The poor little fellow finds it to be a very difficult thing to be a good boy, according to the definition of a good boy generally held by such individuals; for to be 'a good boy,' consists in submitting quietly to every whim of those who are in a middle childhood; in sitting down at table as stiff as a poker; in repeating slowly a grace before meals, of which he does not understand one word; when speaking candidly, to be told that 'little boys should not tell what they think;' in sitting down every Sunday, and reading the Bible very slowly to the good father—the father not taking the trouble to select passages which will interest the child, such as the history of Joseph; in receiving quietly, when asking for any explanation of that which he is reading, the command, '*Go on;*' in going to church, and sitting still with his little eyes fixed on the minister, pretending to listen to all that the preacher may say, whereas perhaps not five sentences in the whole sermon are intelligible to the sham listeners. If going to sleep, to be waked by a tough push. When the hymns come, the child is obliged to stand up, and if he does not sing, the father pushes him in the back, and says, '*Sing, sing,*' whereas the sentiments which the child is called upon to sing, he cannot understand; and they may be such, that, in singing them, he tells a lie, and states that he feels what he has never felt.

"The child being taught that in these things consists the glorifying of God, finds the giving glory to God a very burdensome duty, and is led to hate religion, which is represented as consisting of such practices; whereas, were the child taught that God's glory consists in the happiness of his creatures, and in their fulfilling those beautiful intents which He has ordained them to fulfil—namely, enjoying all the delights of acquiring and giving information, prying into the wonders of nature, and gratifying all the powers of

the intellect, enjoying all the pleasures connected with the animal feelings to an extent, and in a way, so as always to make them pleasant, and studying to make his comrades as happy as he can, thus diffusing peace on earth and goodwill among men,—we should find that the child would readily acknowledge this God's glory, and that his own dignified happiness consists in giving glory to God."

A cheap edition of Mr Combe's work on the Constitution of Man was published about the middle of October, in royal 8vo, double columns, at the price of 1s. 6d.; and the whole impression of more than two thousand copies was sold in ten days. Five thousand additional copies have been thrown off; and the demand continues unabated. We extract the following particulars from a notice prefixed to the volume:—

"Mr Henderson's trustees, with every wish to continue to aid the circulation of the work by reducing the price, have not the means of doing so. The only sum, at present, applicable by them to the advancement of Phrenology, is that remaining annually after payment of the legacies and annuities; and from all the annuitants being alive, and likely to live for many years, its amount is so small, that the edition of March 1835 anticipated the surplus of two years. Their means being thus limited, the Trustees were under the necessity of circumscribing their contribution towards the expenses of the third edition to a very small sum; and in consequence, it continues to be sold in one volume 12mo, consisting of 362 pages, at four shillings. This price, however, is much too high to admit of an extensive purchase of the work by the operative classes; for, assuming their average annual income to be fifty pounds (an estimate above rather than below the truth), a book at one shilling would bear the same proportion to their means of purchase, than one at ten shillings would do to a class whose income was five hundred pounds per annum. From overlooking this obvious fact, and observing that the operatives do not purchase books on moral and intellectual science, the inference is unjustly drawn that they have no natural taste for them. One result of this conviction has been, that whenever works have been got up by the higher and middle classes for the instruction of the people, such subjects have been carefully avoided. The Library of Useful Knowledge; the Penny Magazine; and almost all the cheap weekly publications, with the exception of Chambers's Journal, might be referred to as examples; and even Lord Brougham, the great patron of the education of the people; has been misled so far by the popular opinion, as to have published the first volume of a *Treatise on Natural Theology*; containing less than one-half of the quantity of type in the present volume, at eight shillings, a sum quite beyond the means of the mass of British operatives. In like manner, the Trustees of the late Earl of Bridgewater, with the munificent donation of eight thousand pounds at their command, for diffusing a knowledge of Natural Theology, have so managed its application, that they have procured the publication of eight different treatises at actually higher prices than would have been charged, had booksellers themselves brought them forward as speculations of their own; whereas, by producing one able and comprehensive work, at a cheap rate, they might have insured its wide diffusion among that class of the community which stands most in need of instruction, but which has the smallest means of purchasing expensive books. These facts appear to prove, either that they and Lord Brougham do not consider Natural Theology as a fit subject for the instruction of the people, or that they doubt the people's inclination to be so instructed. The first proposition cannot be seriously maintained; and the second, when examined, is found not to rest on any stable foundation.

"One important effect of the sale of two thousand copies of the present work at the price of two shillings and sixpence, within two months, is to shake the above-mentioned prepossession to the foundation; because it appears to shew that the operative classes do take an interest in works on ethical subjects, and are disposed to study them extensively and with avidity, if only placed within their reach. Impressed with this conviction, the author, with the assistance of the Messrs Chambers, the ablest and most judicious instructors of the

people, has ventured to publish the present edition, in a form resembling that of the most popular Magazines, and at one shilling and sixpence per copy, a price corresponding in some degree with the pecuniary resources of the class for whom it is intended. To distinguish it from the third, it is named *THE PEOPLE'S EDITION*.

"If the sale shall be extensive, the benefit of the example will not be lost to the people. On a reasonable computation, their numbers, compared with those of the middle and higher classes, are as seven or eight to one. In publishing books, the limited sale is the great cause of a high price; insomuch that if one thousand copies of a work cost one hundred pounds, the retail price of each copy would be fixed at six shillings by the publisher, who is taught by experience that this rate is necessary to his indemnification; whereas, if he were insured of a demand for eight thousand copies, he could afford to sell the book at three shillings per copy, with an equal profit to himself. The people, therefore, may command a supply of literature of almost every description, by patronising it in proportion to their numbers, when brought within the limits of their pecuniary resources."

While adverting to Mr Combe's work, we may mention that a disgraceful plagiarism has recently been committed upon it in a small volume, styled "*The Art of Being Happy*;" by Bourne Hall Draper,—a publication which professes to be selected chiefly from a French work bearing the same title, by a Monsieur Droz. Of the contents of M. Droz's treatise we are entirely ignorant; but true it is, that the whole of Mr Draper's chapter on "the physical, organic, and moral laws" is an abridgment from Mr Combe's book, entire pages of which are transcribed *verbatim* into "*The Art of Being Happy*;" and all without the slightest acknowledgment. Another work, "*My Old House, or the Doctrine of Changes*," which has just appeared in Edinburgh, contains an able exposition of views similar to those advocated in Mr Combe's "*Lectures on Popular Education*," and in the "*Constitution of Man*," also without reference to these publications; but the thoughts only, and not the words, are the same.

An Association has just been formed in Edinburgh, called "*The Society for the Diffusion of Moral and Economical Knowledge*." Its object is to give the working classes such information as will enable them to improve their own condition and increase their social happiness. Proceeding on the principle which has been found so efficacious in regard to periodical literature—that of making extent of demand compensate for lowness of price,—they have instituted, in the Cowgate Chapel, on Wednesday evenings, a course of *Lectures on Education, Morals, and the Principles which ought to regulate Human Conduct*,—for admission to each of which the trifling sum of one penny is charged. The lecturer is Mr James Simpson, Advocate, who was earnestly solicited by the Society to aid them in their good work. The attendance is upwards of 1000; and the lectures, the style of which is excellently adapted to the audience, have been listened to with marked interest and attention. The success of this experiment has greatly delighted us; it furnishes good reason for the belief that such a mode of enlightening the working classes will ere long be adopted throughout the kingdom. Why should churches stand useless during six days out of the seven, when they might be employed for such an admirable and beneficial purpose?

TO CORRESPONDENTS.—The poem from Galashiels evinces high moral feeling in its author; but it is too flattering to the individual addressed to be suitable for our pages.—As we have no hope of being able to insert, within a reasonable time hence, Mr Noble's Essay on the Accordance of the Philosophy of Bacon with the Aptitude of the Human Intellect as demonstrated by Phrenology, it has been returned to him through our London publishers.—We have received the series of "*Teacher's Leçons*," by Mr Charles Baker of Doncaster.—A notice of "*The Moral Reformer and Teacher on the Human Constitution*," No. I. to IX., published at Boston, United States, will appear in our next number.—The valuable letter of Mr William Hancock junior, on Concentrativeness, is in types.

EDINBURGH, 1st December 1835.

THE
PHRENOLOGICAL JOURNAL.

NO. XLVII.

ARTICLE I.

OBSERVATIONS ON RELIGIOUS FANATICISM; illustrated by a Comparison of the Belief and Conduct of noted Religious Enthusiasts with those of Patients in the Montrose Lunatic Asylum. By W. A. F. BROWNE, Esq., Medical Superintendent of that Institution. (Continued from p. 546.) *

ESQUIROL, in the benevolent spirit which marks all his opinions, says of the convulsions of Saint Medard, "Happily this is the last scene of the kind which will afflict the human race." So long as fanaticism is recognised as worthy of respect and of cultivation, such an idea can be nothing more than the dream or desire of a sanguine heart. How profoundly and permanently affected the human mind may become by long-continued religious impressions, is well shewn in the events called "The Conversions of Cambuslang." A devoutly zealous pastor, conscious of the gross ignorance and crime by which his labours were impeded, and calculating that his efforts, to be successful, must be proportioned to the amount of the obstacles, consecrated every thought and energy to the task. The votaries of olden times used, emblematically, to leave their ordinary garments upon the steps of the altar. He, in truth, left every secular feeling, as well as every secular view of the constitution of the human mind, on the threshold of his church. For a whole year he preached on the doctrine of regeneration, attract-

* We have much pleasure in laying this article before our readers, because it treats of a very important subject, eminently in need of elucidation, to which the writer has long devoted his thoughts, and which he has enjoyed favourable opportunities of investigating. Medical men have so seldom reported their observations in this department of science, that we regard the contributions of Mr Browne as of very high value to the public. At the same time, it needs hardly be remarked, that, as the historical details introduced are varied and numerous, and the subjects little accessible to common observation, we are not to be considered as adopting implicitly either the statements or the opinions of the author.—EDITOR.

ing rather than fatiguing his hearers by the experiment. This was an appeal to the higher sentiments: Wonder was next enlisted in the cause. In order to demonstrate that the work he inculcated had commenced, he set apart the Sunday evenings to the public reading of missives and depositions, recording conversions which had followed the preaching of Whitefield in America. These were attended, and supposed to be attested, by great agitation of the muscular system, and pathetic ejaculations. Indeed, wherever these miraculous events have occurred—miraculous from their suddenness and the suspension of the moral law of gradual reformation—whether under the mild persuasions of Wesley, the impassioned eloquence of Whitefield, the ministrations of the Methodists of the present day, or the wild mysticism of Irving—they have always been accompanied by convulsive movements. Convulsion, indeed, is the grand characteristic of a sect holding this doctrine. The Shakers are probably better known to the humorist than to the philosopher; but their history is worthy of preservation, because they represent as a church—as a regularly organized religious community—the extreme opinions and mental condition which have signalised individuals or small bodies belonging to other churches, and living at various periods. The Jumpers and Shouters can only be regarded as branches from this parent stock.

The enthusiastic propagandist of Cambuslang created or stimulated the appetite he addressed. A desire was expressed for additional instruction, and a weekly lecture was the consequence. Fear for their spiritual safety seems now to have spread rapidly among his parishioners. At a more advanced period, three days in the week, and many hours of each day, were appropriated to a convention of what are styled fellowship meetings, where prayers were offered up for an outpouring of the Holy Ghost in their bounds as in other places abroad. Nothing was at first elicited by these spiritual exercises, although it is perfectly evident that something extraordinary was expected. At last, after a sort of expostulatory address to the Deity for fruits and confirmation of his mission, several persons “cried out publicly,” and about fifty confessed to the pastor the strong conviction of guilt and fears of punishment under which they laboured. The pilgrims to Cambuslang now waxed numerous, and service was performed to the assembled multitude in the open air. The evidence of the conversions now assumed a more tangible form. All who were affected presented similar symptoms. They were suddenly alarmed by some impressive expression in the prayer or sermon—by some personal application. They then began to entertain dreadful apprehensions concerning the state of their souls, and cried out, in the

most public and frightful manner, that they were enemies to God and despisers of Christ, that they heard the cries of the damned, &c. The external demonstrations of this state of conviction were agonising cries, violent agitations of body, clapping the hands and beating the breast, shaking and trembling, faintings and convulsions, and sometimes excessive bleeding at the nose. On such incontestable marks appearing, their spiritual adviser urged those affected not to stifle their convictions, but to encourage them; and as the most effectual method of enabling them to do so, he retired with them and spent the greater part of the following night in exhortation. These neophytes were on the next day led out with napkins bound round their heads, and placed before the tent "weeping and crying aloud," until the worship was concluded. The space of time which generally elapsed between the two stages of the process, between their conviction and conversion, was some days—occasionally only a few hours; at other times the latter was accomplished as suddenly as the former. "They were raised," says their historian, "from the lowest depths of sorrow and distress to the highest pitch of joy and happiness." One of the effects of these delightful impressions, was to prompt them to pray and exhort publicly, or to sing particular psalms, which they imagined God had commanded them to sing. While in the process of transition—that is, between their conviction and conversion—many had no appetite for food, or inclination to sleep; and all complained of the severity of their sufferings, which were stated by mothers to exceed the pangs of parturition. The extraordinary nature of these proceedings soon obtained for them sufficient publicity, which now affords the greatest guarantee for the authenticity of the accounts that have reached us. The season of grace continued for about six months, during which it is affirmed by the clergyman that four hundred were awakened, amongst whom no instance of backsliding occurred. The outward signs ceased, but the inward and substantial piety remained. The parish, from a scene of debauchery, strife, litigation, and drunkenness, became exemplary for peace, decorum, and sobriety; and those converts who had been most violent in their displays of penitence and zeal, preserved a character for uprightness and industry, and "behaved in a good measure"—so the historian expresses his opinion—"as became the Gospel." Many, however, it is added, "fell away, and turned as bad or worse than they were before."*

We grant that the facts took place as represented; we be-

* Account of the parish of Cambuslang, in Lanarkshire, by the Rev. Dr James Meek, minister of the parish; in Sir John Sinclair's Statistical Account of Scotland, vol. v. pp. 267-274. The events alluded to occurred in the year 1742; the date of the first demonstration was 18th February.

lieve that there was active and strenuous teaching, followed first, by violent agitation of the body, and secondly, by a moral conversion. We possess evidence that many individuals of depraved and dissolute lives heard that preaching, were convulsed, and afterwards became virtuous and upright members of society. It is admitted that the evidence is as strong for the conversion as for the convulsion. But we deny most explicitly that a shadow of a proof exists, that the convulsion was an indication of the conversion—a manifest sign that the Holy Spirit was working an instantaneous regeneration; or that it stood in any other relation to the moral change than what nervous or muscular disturbance does to any strong impression, whether physical or moral, fear or joy, despair or madness. Dr Erskine, and his biographer Sir Henry Moncreiff, adopted this view of these singular events; indeed, the whole of the latter's reasoning on the subject is clear, candid, and conclusive.* Orthodox authority for these observations has been sought for, because an eminent clergyman of the church within whose pale the conversions were effected, has within a few months expressed himself thus: "Let us trust and pray that the days of Cambuslang and Kilsyth may return," &c.†

We are aware that at the time a bitter controversy arose respecting the nature of these revivals; one party proclaiming them proofs of heavenly interference, while another denounced them as evidence of demoniac possession. With these combatants we do not mean to mingle. The accuracy of the facts has not been, and cannot be impugned; nor can it be denied that many of the individuals so singularly affected became better and wiser men, justifying by their subsequent deportment the supposition that they were converted. We have stated our inability to perceive any necessary connexion between the agitation of the muscles and the change going forward in the mind; but of the *three* causes by which this change might have been effectuated—the mere moral conviction produced by the instruction of spiritual guides, the impressions succeeding long-continued moral and physical excitement, and the operation of a higher influence—it is not our province to pronounce an opinion. We receive and treat the facts as they have been related even by those hostile to the interpretations assigned. We find a large body of men agitated by peculiar convulsive movements, holding the belief that they are regenerated by the direct agency of divine power, and acting decorously in consequence of this belief. We observe that these converts not merely were regarded as sane, but enjoyed a high character for sanctity, and

* Account of the Life and Writings of John Erskine, D. D., by Sir Henry Moncreiff Wellwood, pp. 115, 124.

† Report of a Meeting of the Glasgow Association for promoting the interests of the Church of Scotland, in *The Scottish Guardian*, Feb. 20. 1835.

are even now pointed out as models for the imitation of their unworthy descendants:* the charter of their prescriptive piety is sealed with the authority of some of the hierarchs of the church to which they belonged. We observe all this, and at the same time the truth is obtruded upon us, that other individuals, conducting themselves in a similar manner, and preferring similar claims, by a slight difference of circumstance, have been expelled from society as insensate outcasts, and condemned to continue their ecstatic experiences, or persevere in their conversion, within the walls of a madhouse. The following is an example:—

CASE VI.—J. S. ET. 69.

Predominating organs.—Wonder, Ideality, Cautiousness, Conscientiousness, Language, and Intellectual organs generally.

Deficient organ.—Self-Esteem.

This patient, who is a female, has long been much respected in her native village, and is an especial favourite of the proprietor, as a sensible, shrewd, and industrious person. She supports herself by keeping a sort of dame's-school. In common with the whole of her family, she is reputed as rigidly pious and exemplary in the performance of her religious duties. They generally travel eight miles every Sunday, in order to attend a particular clergyman. During childhood she had been exposed to some source of terror, which, whether real or imaginary, had affected her mind so powerfully that her life is a succession of alarms. Her Cautiousness is preternaturally excitable. The jar of a door acts like a shock of galvanism, and a lamp in a passage would be as if the spear of Ithuriel flashed on her eye. Moral hobgoblins are equally frightful. To this constitutional tendency her illness is to be traced. Probably from some previously existing nervous irritation, the philippics of her pastor produced an unusual impression; they seemed directed against her and her besetting sins. They exposed to her view all the enormous transgressions of which she knew that she had been guilty, and many of whose very existence she was ignorant. She was fascinated; the torture was regularly applied, but still she returned to be racked and reviled anew. Her awakening, as she terms her condition, was complete. The serene sleep of a life of industry and innocence was broken. These, it now appeared to her, were the dreams of a cold and callous spirit. She was roused to the realities of her latitudinarianism. It was clear that the whole of her life had been passed in negligence of the feelings by which she was now agitated, and she consequently concluded that long period to be a blank—a blot in her course. She must

* Nos. I., II., III., and IV. of a series of pamphlets, entitled "Revivals of Religion." Glasgow, 1835.

begin anew.—Her mind now became bewildered between the accusations of conscience and the terrors of retribution; she despaired, and became frantic. Although a weak old woman, several men were required to restrain her violence. This state of acute delirium continued for some days. At last it subsided. She had been entranced, and had received the delightful intelligence that she was forgiven. Her joy was as extravagant as had been her fear. Its expression became irresistible; quiet contemplation was altogether inadequate—she must dance and sing. In this state she entered the asylum; and, having taken off her shoes and stockings, as if to prepare for a serious undertaking, and selected the centre of the airing ground, she forthwith began to dance, sing, and snap her fingers, in the most earnest and indefatigable manner. These demonstrations were continued almost without pause for two days, at the end of which her strength was completely exhausted. She seemed to infuse her whole soul into the gallopade, and to feel regret that she could not do sufficient justice to the manifestations of her ecstasy—that she could not dance fast enough, and for ever. Several of the patients, who are partial to such exercise, went and *vis-a-vis'd* with her; but she utterly disregarded the formality of partners, and fairly danced them down. On the subsidence of this paroxysm, she was quiet, shy, and depressed, and had the look of long-established fatuity; when approached or addressed she trembled violently, and only answered that she was a poor lost creature.

Had this woman lived at the time, or been tried by the standards of the pietists at Cambuslang, what would have been the conclusion?

The ordeal was different, but the result has been somewhat similar. She has been restored to society, and is as virtuous and religious as ever convert was.

It is rare to witness a return to sanity so gradual and steady as was presented in this case. Every day some slight improvement could be traced, some vantage-ground was gained. The process of re-development of the faculties resembled the evolution of a flower, when the bud expands to the blossom, and leaf after leaf meets the eye; or, to render the comparison more exact, it resembled the gradual reappearance of the different parts of a perennial plant from the earth in spring-time, when the withered stems and relics of a past season are removed, and there arise from the soil, with a rapidity which can be marked and measured, the leaf, the flower, the fruit—when that which was not, is, and when that which was dead, liveth. She first ceased to speak of being lost; she then attended to sensations of pain, arising from an eruption on the head; thirdly, she spoke with some asperity of the want of feeling in her friends, then with

wonder and shame of her late deportment, and next with gratitude for her escape from confirmed lunacy, and for the kindness she had received; afterwards she adverted to the ordinary topics of discussion in her own neighbourhood, her home feelings became active, and, following them, her home habits and predilections; finally, she asked for tea, a stocking, and a newspaper—and was herself again!

The manifestations of enthusiasm at Cambuslang have been separated from those which have characterized the progress of Methodism, to which they are by many features closely allied, for this reason. The church among whose members these manifestations appeared at Cambuslang, has not publicly and officially recognised them as indispensable accompaniments or evidence of efficacious teaching—as marks a superior and exclusive sanctity—nor encouraged their renewal; while the Methodists have incorporated them with the principles of their creed, endeavour to produce them, and employ them, when produced, as means of religious instruction—or edification, as it is technically called. On analyzing the state of mind of the actors in these scenes, there appears to be this additional reason to justify the separation. In the Cambuslang pietists, the bodily condition was the direct result of the moral excitement, and without any consent on the part of the subject; in the Methodists, the bodily condition was spontaneous, or induced by the active co-operation of the subject with the efforts of the preachers.

But those who admit the miraculous origin of the scenes at Cambuslang, and who see in the distortions, and agonies, and fits, the finger of the Deity pointing out the operations of his wisdom, must perceive that it is equally incumbent to admit that the revivals, so prevalent during the early part of the career of Wesley, are possessed of a similar character. Nor can the admission stop here. Wherever religious instruction, given and received in sincerity of spirit, has produced sudden extravagance of manner, amounting in many cases to hysteria and epilepsy, accompanied by an internal feeling of moral renovation, and after the subsidence of the bodily disturbance by an entire change of conduct, no valid objection can be raised to honouring these results with the same title, and placing them in the same class with those observed at Cambuslang. Such an admission, accordingly, will and must include the cases of the disciples of Wesley, and a majority of those of Irving. The circumstances were the same in all: the preparatory training was similar; the principles propounded were identical; the convulsions were as frantic and fearful; and the beneficial effects—that is, the increased probity and industry of the proselytes—are asserted to

have been as marked and as permanent. The conversions of the two great regenerations came even with the stamp of higher authority than those to which they are now compared. They were, at least so far as Wesley is concerned, upon a grander scale; they took place in every variety of situation—the high as well as the low; the enlightened as well as the illiterate, participated in the impressions; they were witnessed by multitudes, and by many sceptics or scorners; they came, in fact, divested, if not of all, at least of a great number, of those objections which detract from the value and credibility of testimony, and consequently from the credibility of what are regarded as miracles. The object at present, however, is not to decide in what record they are worthy of a place—in the *Acta Sanctorum* or the *Wonderful Magazine*—or to determine upon their exact nature or importance; but simply to prove that they closely resemble those previously detailed. Wesley held as a corollary of his other doctrines, and in justification, perhaps, of what had happened, that the moral leper was cleansed from his sores at once, and might in an instant emerge from the most detestable wickedness to purity and to holiness. Sorilege was cherished as a pet practice, and, if not converted, he was long directed by having recourse to its auguries. He commanded the sick to rise and walk, and the blind to see. He was guided by portents, dreams, reveries. The enthusiasm of his youth made him “an adept at mysticism,” and the ambition of his more mature years seems to have shut his eyes to its nature or effects.* A mind so constituted, acting alternately under the dictates of Ideality and Veneration, and of Wonder and Cautiousness, could not fail to regard the extraordinary consequences by which his preaching was followed, as something superhuman, if not divine. That John Wesley was not a great and good man, or that his career was not a glorious and useful one, notwithstanding these peculiarities, it would be foolish and false to assert. Our concern, however, is not with those points in which he resembled, but with those in which he differed from other messengers of truth and peace.

The power of influencing the motives of masses of mankind is confessedly one of the noblest attributes of human intellect. The power is displayed, of course, in all the ordinary transactions of life, whenever mind submits to mind. But it is on the grand theatre and in the grand concerns of life, where eternal hopes are inspired, opinions discussed, rights asserted, that it becomes conspicuous. The practised preacher collects hundreds around him, and, in virtue either of the import of his subject, or of the beauty and interest with which he invests it,

* Hampson's *Life of Wesley*, vol. iii. p. 24.

he holds captive the attention, so that his auditors are no longer free. They cannot think but as he thinks; they must accompany him in his intellectual progress. He alarms or animates, soothes or convinces. The popular orator speaks to, and excites the propensities. His aim is to implant the indignation, the pride, the defiance of party spirit. He feels the edge of his tools, and can wield them at will: in other words, he knows the passions of his agents, and can estimate and direct their force—how successfully, let social discord, the triumphs of civil war, and some few social improvements, tell. The parliamentary leader, addressing for hours the best educated and most powerful and polished body of his countrymen, is the best example of this quality. He plunges them in the depths of political casuistry; he entices them through a barren detail of facts; he elevates them to the purest idealism; he rouses every hope and happy association in their hearts, until they shout with joy; he harrows every sympathy and kindly affection; he plays with their feelings as with puppets. But what is all this to the achievements of Wesley? In all these cases there is some one point of unanimity, some common principle, some common end. The great and unwilling heresiarch, on the other hand, stood directly opposed to every cherished opinion of his hearers. He insulted their pride—he contemptuously scorned their rectitude—he derided and refuted their belief. Yet we find him triumphing over all these obstacles, and effecting changes, both immediate and ultimate, so vast that Peter the Hermit would have envied his success. The charm of his preaching appears to have consisted in addressing the higher sentiments, and especially Wonder, Cautiousness, and Benevolence, in the very language which is dictated by their activity. His appeal was not through reason to fear, but through fear to reason. Wherever his strength resided, it was adequate to move multitudes.

His life was but a series of manifestations of these emotions; his credulity as to his power of curing disease, his self-created horrors, his sortilege, are all examples of this.* Of the signs of these wonderful impressions it is at present our intention to speak. In the vicinity of Bristol, where his labours in reclaiming the lawless colliers were aided by Whitefield, may these signs be said to have commenced. After many days passed in preparatory exhortation, private examinations, and acts of worship—after, in fact, their pupils had been kept in a state of violent moral agitation—the pathetic and awful harangues delivered to the assembled thousands were repeatedly interrupted by cries of internal agony, ejaculations of horrible import, sud-

* Southey's *Life of Wesley*, vol. ii. p. 21; Warburton's *Doctrine of Grace*, quoted in the *Edinburgh Review*, vol. xxxiii. p. 272.

dan convulsions, temporary delirium, and violent struggles, where efforts at self-mutilation could not be attributed either to spasm or to madness.* That one class of persons was invariably seized, we believe. But this class was indicated by neither age nor sex nor previous opinions. Delicate females and mere children,† as well as the aged and robust—the man holding settled religious opinions, as well as the man of none at all—were similarly affected. But those who screamed, saw visions, and were illuminated, would have certain characteristics in common: they would all display great nervous susceptibility, and a predominance of what may be named the supernatural sentiments in their mental economy.‡ The cries uttered by those who became assured of the peril of their souls, certainly did possess a common character. They were received as indicative of the nature of the fierce struggle which was going on within, and decisive as to the quality of the combatants. So horrible is the tenor of these exclamations, that we dare introduce two specimens only. “The devil will have me; I am his servant; I am damned”—is the cry of one. Another young man, who could not be restrained by seven of his companions, roared out for three hours, “Ten thousand devils, millions, millions of devils are about me.”§

These indications of the effects of their teaching were at first received with caution and uncertainty by the zealous labourers; but they were not directly discouraged. Their frequency and violence at length called for sanction or interference; and Wesley, acting in conformity with the sentiments which then and always actuated him,|| recognised in them irrefragable proof of satanic agency. The demon was struggling for the rights of property. His struggles did not cease, although exposed. Subsequently they appear to have presented a different aspect to the same interpreters. For, although never denied to be diabolical, they were pronounced to be contemporaneous with repentance, and consequently with the effusion of the Divine Spirit.¶ Whitfield must have been the author of this view. No one can

* Hampson's *Life of Wesley*, vol. i. p. 212.

† Nightingale's *Portraiture of Methodism*, p. 106. Jonathan Edwards' *Narrative of Surprising Conversions*; Works, vol. i. p. 362, Westley and Davis.

‡ *Essays on Superstition*, Christian Observer, vol. xxix. pp. 1, 65, 134, &c. forming the materials of Newham's work on superstition.

§ Hampson's *Life of Wesley*, vol. ii. p. 71.

|| For his cerebral development, see plates prefixed to Hampson's and Watson's *Lives*. Wonder, Veneration, Firmness, Benevolence, and Caution.

¶ This is denied, or rather explained away, in the *Life of Wesley*, Christian Biography, vol. xlii. p. 42.

doubt that these displays of strong emotion were perfectly sincere, and to a certain degree involuntary. It were vain to endeavour to explain the phenomena, by supposing a design to deceive the public or the preachers, or an act of collusion between the two parties. Since the period alluded to, even to the present day, such manifestations have continued to attend the ministrations of the disciples of Wesley. It would be work for such a historian as Fleury to attempt to trace the gradual development of that system of which they now form a part, or of the means established to secure their production. Two epochs may be selected for the purpose of illustrating the character which they now present, and the physiological condition by which they are accompanied. It will be seen that the grand object of the priest is now, at certain seasons, to produce, and of the neophyte to assist in producing, the bodily disturbance as a testimony of contrition. The convulsion, then, is beyond the control of the will; but the excitement upon which it depends may be self-induced. These seasons are called Revivals, and are intended to counteract a tendency to apathy or delinquency, or to counterbalance the actual amount of these. A very signal movement of this kind took place in Cornwall in 1818.* Four thousand people went through the prescribed formula of conversion, or, as my authority expresses himself, "were affected with this convulsive malady." The initiative of this scene is worthy of note. The actors remained in the chapels for many days and nights without sleep or sustenance. Every moral stimulant which long experience in the weakness of human nature could suggest was administered. At last this discipline effected the object intended: the penitents passed from exquisite misery to ecstasy. Visions of glory floated around them—they burst forth in transports, became faint and actually fainted, or were convulsed. The syncope continued in some cases for a great length of time. The violent contractions of the muscles, after frightfully distorting the countenance, were propagated first to the neck, then to the trunk, and ultimately to the whole body. Such is a picture, then, of a body of men, supposed to be pure, pious and rational, obeying the call of their spiritual guides. Were some features of greater magnitude and magnificence added—were it enriched with the gloom and grandeur of forest scenery at midnight, the gleam of watch-fires, the wild entreaties of a chapter of priests, the hymns and hallelujahs of thousands of voices—the picture would represent admirably what annually takes place at the camp-meetings in

* Hecker's Epidemics of the Middle Ages, p. 142-146. Fothergill and Want's Medical Journal, vol. xxxi. p. 373, quoted in Hecker. Bishop Lavington on the Enthusiasm of Methodists and Papists, p. 109, *et passim*.

America.* There are there no sounds to be heard save shouts, whoops, screams, clapping of hands, and exclamations of "glory, glory;"—nothing to be seen but leaping, falling, swooning, fits resembling epilepsy, and other feats, the accounts of which a right-minded man is disposed to wish may have been exaggerated. There is even a stage or arena set apart near the pulpit, where the penitents, especially the females, rouse themselves to the requisite degree of excitement, and endure the paroxysm of religious fervour—a sort of high altar, it has been insinuated, where the sacrifice of delicacy and common sense is consummated.

The advocates of methodism have insisted upon the act of conviction. They have pronounced the moral and the physical convulsion integral parts of it. It is a dogma of their faith. It may be gradual or instantaneous, with or without premonitory teaching; but it must consist of an overpowering sense of unworthiness and peccability, an abandonment of every hope and trust of self-reformation, and a horror at the consequences. When the moral leper has arrived at this point in his journey, the path appears to divide, and leads him on the one hand to farther improvement or conversion, and on the other to despair and madness.

To pause, to remain in such a condition, is to embrace a destiny of mental misery, which must render every effort of reason or exercise of sound sentiment impossible or unavailing, and compared to which madness would be a boon and a blessing. The characteristics here applied to those in the process of moral change are equally applicable to the desponding religious maniac.† They might serve indeed as a definition of his disease. There is the same hopelessness, helplessness, and horror; and, what is strikingly illustrative of how closely the mental condition in both cases is assimilated, there are, in a majority of cases, involuntary cries, agitation of the muscles, or completely formed convulsions. The methodist passes on, it is true; he recovers from his state of doubt and suffering to enter upon one of confidence and happiness. The unfortunate maniac stops to endure that state, or, if he recovers, he gains nothing but his original reason. I have, within a short time, examined several lunatics, the phenomena of whose insanity corresponded with the description above given; and have found, that whatever the configuration of the other regions of the head might be, the organs of Hope and Self-esteem were small, and that of Cau-

* Letters from America by James Flint, Esq. Letter xix., August 1820, p. 231. This author is friendly to the Americans. Domestic Manners of the Americans, by Mrs Trollope.

† Scott has observed the resemblance of these states, in his observations on Luther's character; Church History, vol. v. p. 487.

tiousness large—a result which was well calculated to confirm the opinion, that however much a speculative belief in the depravity of human nature may be countenanced by reason, what is called by the Methodists the personal experience of such depravity, proceeds rather from a feeling of alarm directed to particular objects, than from an induction. It is at this stage, likewise, that suicide is resorted to;* and, if the organization, under the influence of which such an awful alternative is generally adopted, be considered in connexion with the views of Mr Cox on the laws of the activity of Destructiveness,† the frequency of such a result is easily explained. The following table illustrates the condition of the desponding maniacs at present under my care.

- J. G. aged 35. *Characteristic Development*: Cautiousness, very large; Philoprogenitiveness, Veneration, Adhesiveness, Firmness, Secretiveness, Destructiveness, large; Hope, Conscientiousness, Intellect, small. *Cause*: Hypochondria. *Bodily Complications*: Tremor and disease of heart. *Delusions, &c.*: Is lost and cannot be saved; in great distress respecting her children. *Result*: Under treatment.
- J. A. aged 25. *Characteristic Development*: Conscientiousness, Veneration, Benevolence, Cautiousness, Destructiveness, large; Hope, Self-Esteem, Intellect, small. *Cause*: Religious despondency. *Bodily Complications*: Epileptiform tremor. *Delusions, &c.*: Is lost but penitent; attempted suicide many times. *Result*: Under treatment.
- E. A. aged 54. *Characteristic Development*: Cautiousness, Wonder, Firmness, Self-Esteem, Veneration, Destructiveness, and Secretiveness, large; Hope, very small. *Cause*: Religious despondency. *Delusions, &c.*: Collects stones to build the New Jerusalem; attempted suicide twice. *Result*: Under treatment.
- A. D. aged 30. *Characteristic Development*: Wonder, Veneration, Firmness, Cautiousness, and Destructiveness, large; Hope and Self-Esteem, small. *Cause*: Religious despondency. *Bodily Complications*: Tremor and amenorrhoea. *Delusions, &c.*: Nailed the Saviour to the cross; attempted suicide twenty times. *Result*: Improved.
- M. G. aged 51. *Characteristic Development*: Benevolence, Cautiousness, Veneration, Philoprogenitiveness, Conscientiousness, and Intellect, large; Hope, small; Self-Esteem, extremely small. *Cause*: Domestic affliction. *Bodily Complications*: Constipation and headach. *Delusions, &c.*: Is utterly lost and condemned; attempted suicide twice. *Result*: Improved.

The Rev. Mr Clarke of Dundee examined three of the cases in the above Table, and coincided in the view which it is intended to illustrate.

The following narratives will exhibit how closely the inhabitants of an asylum may tread in the steps of those who are the saints of their sect.

CASE VII. P. O., ET. 80.

A very instructive case was at one time under my care. It is not in my power to present the results of the measurement or

* Lackington's Memoir, p. 105.

† Phren. Journal, No. 45, p. 402. vol. ix.

manipulation of the head of this individual: but I can state, that the regions of the head were nearly *in equilibrio*; or, if the balance was turned, it inclined towards the organs of the moral sentiments. The head was of moderate size; the temperament nervous.

As the cloud no bigger than a hand shews the direction of the coming storm, this case suggests the tendency which certain religious opinions at one time threatened to take. A well-educated gentleman, who had mingled some of the follies and vices with many of the nobler pursuits of youth, found it expedient from pecuniary embarrassments to determine upon a complete change in his mode of life. From the first step in this change, the calm consideration of his own affairs, he ran through the whole gamut of distempered moral feelings. Successively he was *grave*, serious, desponding, despairing, and at last deranged. During this series of transitions, he was much exposed to the exhortations of relatives who had imbibed the views of Mr Irving. The constant and continued appeal to the moral feelings, which naturally preponderated and were at the time affected with diseased activity, produced the inevitable consequence, and his insanity assumed a religious aspect. He was a miserable rejected cast-away. Temptations to sin were never absent from his heart, and these were occasionally urged upon him by the author of all wickedness in person. Whenever he became impressed with the idea that he was in the presence of a being from another world, he was affected with epileptiform fits; or, we ought to say, the delusion was the *aura*, the premonitory symptom of the convulsion. These were of two kinds. He either fell suddenly backwards as if in syncope, or appeared to be turned or twisted forcibly round from the right to the left side. He was not conscious of those attacks, but gesticulated violently, and cried as if he were. During his illness, and since his recovery, his conduct has become of the most virtuous and irreproachable kind. Here, then, are three events—a powerful impression, agitation of the body, and reformation. The second of these was regarded by his medical advisers as an indication of his disease, treated as such, and removed. But it was not looked upon in this light by the relatives of the patient; nor would it have been so regarded, had it been contemporaneous with the occurrences at Cambuslang. A near connexion remarked to me, that she believed these fits to be the wrestlings of the Spirit in working out a great change. The result has probably confirmed her in this opinion.

CASE VIII. J. A. AT. 25.

From Ear to	Philoprogenitiveness,	4 $\frac{1}{8}$ inches.
... ..	Concentrativeness,	4 $\frac{7}{8}$
... ..	Self-Esteem,	5 $\frac{1}{8}$
... ..	Firmness,	5 $\frac{1}{8}$
... ..	Veneration,	6 $\frac{1}{8}$
... ..	Benevolence,	5 $\frac{1}{4}$
... ..	Comparison,	5
... ..	Individuality,	4 $\frac{1}{8}$
From	Acquisitiveness to Individuality,	3 $\frac{1}{8}$
... ..	Philoprogenitiveness to Individuality,	6 $\frac{1}{8}$
... ..	Destructiveness to Destructiveness,	6 $\frac{1}{8}$
... ..	Combativeness to Combativeness,	4 $\frac{1}{8}$
... ..	Cautiousness to Cautiousness,	5 $\frac{1}{8}$
... ..	Ideality to Ideality,	5
... ..	Secretiveness to Secretiveness,	6 $\frac{1}{8}$

Predominating organs.—Veneration, Benevolence, Cautiousness, Destructiveness, Acquisitiveness, Wonder, Conscientiousness, Secretiveness.

Deficient organs.—Self-Esteem, Hope, Intellect.

J. A. is, by profession, a clerk in a counting-house. In boyhood, while under the influence of parental example and authority, his religious principles were correct, his conduct was without a stain. But the authority, rather than the principle, had been the controlling power; it was Veneration and Love of Approval, more than Conscientiousness, under which he acted. His chief characteristic was a morbid diffidence and sensibility to blame. The temptations of the world had brought the propensities into play, and he became gay, gallant, and guilty. Until then he courted religious thoughts and topics, and was an authority in these matters among his friends. He conciliated the good-will of all men by his gentleness and integrity, and was a general favourite. His want of confidence in his own abilities, and fidgetty exactitude in the performance of duty, were his least attractive qualities, and often annoyed those who respected him for modesty and scrupulous honour. With an inquiring but uneducated mind, he sought out or was found by companions of a kindred spirit, who endeavoured to satisfy his longings by the trite but untrue maxim that philosophy consists in doubting. His opinions were first speculative, then sceptical. He arrived at that climax of absurdity, the doubt of his own existence; and subsequently at that climax of misery, the doubt of the existence of a God. All this was evidently the misdirection of an uncultivated intellect—the result of using powers in ignorance how they should be used. His ordinary duties were still faithfully performed. But his philosophy had not produced its boasted tranquillity; his opinions were at war with his feelings. He sought refuge in extra labour, supererogatory duties, and fatigue. As in the case of Sir Kenelm Digby's prescription, this was applying the remedy to the sword, and not to the wound which it had inflicted. To remove his

disquietude and terror, he exhausted his intellect, and laboured twelve hours a-day. The nostrum did not work. His mind lived upon itself for six months, and his boasted sunlight conclusions darkened into shadows of dread and despair at every step. An imaginary affront induced him to leave his native town. But his flight was inauspicious. The very act of fleeing creates fear. The whole of his moral sentiments were morbidly excited; but Hope and Self-Esteem being unfortunately deficient, and consequently incapable of the same degree of activity, he was stricken by shame, conscience, and terror. At every step he encountered the finger of scorn, the "still small voice," the halloo of pursuit. He felt himself lost and abandoned by all good men and by all good influences, and his despair was consummated. His relatives now interfered: they found that his insanity was evinced by a sense of his own unworthiness and condemnation; and that whenever this idea was presented to his mind by reading or conversation, his agitation became extreme, his limbs tossed violently, and he swooned, sometimes remaining in this condition for several hours. So intolerable were his sufferings, that his attempts at suicide were repeated and most insidious. Deprived of all other means, he endeavoured to beat out his brains by running furiously against a wall, and transfixing his tongue with a nail, under the impression that he would bleed to death. I have examined this patient's mind attentively. His doubts no longer exist. He believes all that he was taught to believe, and therefore he despairs. He recollects the penalty incurred by those who have rejected the truth; he knows that he has lived a life of sin and pollution, that he has been a slave to Satan, and that unless emancipated he must be condemned. This chain of sequences, whenever it rises before the mind, produces convulsions; and he recognises these as the struggles of that fiend by whose artifices he has been destroyed, and to whose temptations he is still exposed. His terror, cries, and aspect, and the general disturbance of his manner, when his guilt is conjured up, are appalling even to those who perceive their real nature and cause: they would be regarded as hysterical if dissociated from the religious impressions. His exclamations of despair, and entreaties for pity and pardon, are, even as the wild ravings of a lunatic, awful:—"I am lost, cast away; I am torn and tormented by a spirit," are the only words his agony can find. The conviction, the convulsion, the very expressions by which it is ushered in, the firm belief that these are of supernatural origin in this case, present features of resemblance to some forms of modern enthusiasm, too striking to be overlooked. How much it is to be regretted that there is neither a Gassner to exorcise, nor a Whitefield to convert this miserable man!

UNKNOWN TONGUES.

Of all the supernatural powers imparted to the founders of the primitive church, that of speaking in unknown tongues appears to have been the first withdrawn. Beyond a mere casual notice, there is no evidence that this part of the miraculous endowment of the apostles descended even to their immediate successors. The history of succeeding ages shews that, from time to time, personages of great zeal, if not of great discretion, have laid claim to this gift, and based their pretensions to sanctity and divine inspiration upon possessing it. The schismatics called Pietists, in the seventeenth century, are described as obscuring the divine truths of religion "by a gloomy jargon of their own invention." More recently, a devout priest of Ratisbon, who gained a livelihood and an immortality by exorcism, treated a young person who, in the highest degree of somnambulism, had the faculty of communicating her thoughts in a language of which she comprehended not one syllable.* As a proof that such exhibitions were of frequent occurrence, it may be mentioned, that, in one instance at least, they became part of the accomplishments of a mountebank. The daughter of one of those speculators on the credulity of mankind became possessed. She was the victim of a sort of polyglot-devil; for, after the accustomed contortions, she declaimed in Hebrew, Greek, Latin, and so forth. She even condescended on some of the French provincial patois. Her scholarship was used, historians assert, to calumniate Huguenots. She was at last exorcised and convicted of imposture by a shrewd and conscientious bishop, who, with common water and a key, produced the same convulsions which were supposed to testify the repugnance of the devil to consecrated water and the crucifix.†

The object of the revocation of the edict of Nantes‡ was to eradicate schism, and to produce that moral miracle, unanimity of opinion. But whilst its devisers spoke of peace and concord, and of the beauty and benefit of one people professing one worship, its characters were written in blood. This mandate called for an instantaneous conversion, or, what was equally valued, conformance. To effect this, no machinery of missions or exhortations was resorted to; but armies were spread over the disaffected districts, and dragoons exacted at the point of the sword the confession of the convinced or the life of the refractory heretic. Throughout a large portion of France, slaughter, conflagration, and emigration were triumphant, and all dissent from the dominant religion had disappeared. But, in a remote

* Bertrand du *Magnetisme Animal*, p. 398.

† Smedley, *Hist. of Reformed Religion in France*, vol. iii. p. 52.

‡ 1685.

and almost inaccessible region, called "Les Cevennes," the perpetrators of these enormities not merely failed, but were opposed, repeatedly repulsed, and ultimately defeated. Against these rebellious schismatics the whole vengeance of the orthodox loyal was directed. The resistance of these brave but bigoted mountaineers appears to have at first proceeded from a strong and rational attachment to the faith of their fathers. Persecution, want, and constant excitement, had, however, their usual demoralizing effects; and this noble warfare at last degenerated, in some cases, into the unmeaning struggles of a fanatical rabble,—in others, into a sort of religious brigandism. These are perhaps the features of all religious contests which are unequally waged,—where there is superstition on both sides, but political strength on one only. But this act of the saintly Le Tellier induced consequences even more interesting than the fate of his victims: "Nunc demittis servum tuum, quia viderunt oculi salutem tuam," was the exclamation of this personage on signing the edict.*

The Protestants of the Cevennes inhabited a high and barren country. Like other mountaineers, they were superstitious, —not because they lived a certain number of toises above the level of the sea, but in virtue of an organization which they shared with all other Celtic races; like them, too, they were born bondsmen to the propensities. Their soil was rocky and unproductive, and lay not upon any of those grand thoroughfares by which civilization has penetrated to the corners of the world. They were therefore poor, and, from their poverty, ignorant. Their faith was purer than that of their adversaries, and upon this single point did their superiority and strength depend. These men were without guides, or educated leaders; for their priests, the only individuals who could have acted as such, were either killed or expatriated at an early part of the struggle. Thus constituted, they are summoned to deliver up, as to a feudal lord, what had been incorporated with their minds since infancy, or die. Be that faith and conviction founded upon Causality, a dogma received by Veneration and Hope, or a dream of Wonder, all must be yielded up. They are attacked—their stores pillaged—their homes and hearts made desolate; they are hunted like the wolves on their hills; every social affection and feeling of personal happiness is exasperated; their minds are agitated by the excitement of despair. Under such circumstances, it might be predicated not only that they would seek consolation in the religion for which they were suffering, but that, from their constitutional tendency to marvellousness, they would mingle with it those rites, expectations of divine interposition, and demonstrations of piety, which the educated and unexcited reject. Accordingly, it is related that

* Voltaire on "Calvinism." Translated works, vol. ix. p. 70.

they trembled, were convulsed, enjoyed ecstasies, saw visions and prophesied. At the close of the campaign there are said to have been ten thousand in the field. That all these prophesied is incredible; but that they all believed the prophecies to be oracular is highly probable. That their numbers must have been considerable may be concluded from the fact, that an academy was founded for the cultivation of these ecstasies, and prophets literally trained to their vocation. Another property which they claimed, and seem actually to have possessed—that of insensibility to pain—allies their case with that of other classes of men acting under similar impulses. What were the subjects of these visions and vaticinations, if not denunciations against their persecutors, it is now vain to conjecture. That they were sufficiently comprehensive may be gathered from their length. Marechal Villars declares that a prophetic exercised her functions for a whole hour in his presence. A still more extraordinary gift was claimed and displayed. These peasants, during their enthusiasm, spoke in languages unknown to themselves or their auditors. This was not always the case; English, Hebrew, and Greek were occasionally uttered, and likewise occasionally interpreted by the speaker.* The pacificator of the Cevennes, as Villars is styled, is again an authority in this matter. He gives an account of a female who, endowed with this power, would extemporise for an hour in any of the learned languages, in the presence and to the complete perplexity of a corps of ecclesiastics. The Marechal adds the quaint criticism, that she spoke exactly in the same manner as the Duke de Ferte spoke English when he had taken too much wine; his, strange to say, being, when sober, unacquainted with that language. This spiritual improvisatrice convinced a magistrate of the sanctity of her mission, became his mistress, and ultimately a mother.† Partly by a gradual process of extirpation, and partly by a treaty which it was perhaps never intended to observe; the league of these pietists—they must not all be branded as fanatics—was broken up, and their leaders and prophets dispersed. In the year 1707, three of the latter came to England in order to proselytize. Disowned by their own countrymen, and rejected by the intelligent of all sects, they addressed themselves to the speculative and imaginative, and succeeded in forming a church. Their pretensions were precisely similar to those which signalized their fellow-countrymen. While they denounced human learning and power, they, with a singular inconsistency, spoke tongues of which they were ignorant, and made promises which they could not fulfil. There are three points worthy of consideration in their histo-

* *Theatre Sacré des Cévennes*; quoted in Bertrand.

† Bertrand, p. 135.

ry. First, they had improved upon the rude notions of their predecessors, and systematized the philosophy of prophecy, or spiritual power. It was divided by them into the stages of warning, of reception, of the actual privilege of predicting, and, lastly, of miracle-working ; *—steps corresponding distinctly to those of the excitement of Wonder, Hope, and Ideality. Secondly, in the sincerity of their belief, they predicted that the resurrection of one of their followers would take place five months after his death, and were willing to test their authority by the event. The public accepted the challenge ; but unfortunately for the corpse and the prophet, no resurrection took place. Thirdly, they gave forth their precepts and denunciations in an unknown tongue, specimens of which have been preserved. Wesley, who was little apt to be startled or made sceptical by the extravagance of fanatics, was so horror-stricken by the want of harmony and intelligibility in this language, that, on listening to what he describes as “ the gabbling of a turkey cock,” he began to exorcise the speaker with “ Thou deaf and dumb devil ! ” &c.† These men never attempted to exercise this gift but when under the most powerful agitation, when confessedly they had lost all self-possession—a state of mental excitement incompatible with the dominion of reason, and allied only to these conditions of dreaming, violent passion, intoxication, or monomania, where the extreme energy of a single feeling seeks expression in sounds which are not conventional signs, but may be perfectly significant of the emotion. Far be it from us to assert that the French prophets were in any of these states ; a large body of men, some of them well informed and acute, arrived at an opposite conclusion. The following may suffice as an example of what enabled these converts to perceive the truth : there are creatures who see in the dark. “ Mon enfant,” the prophet thus introduces his prediction, “ je m’en vaie repandre sur les ennemies mes jugemens terribles, et ma dernière sentence sera *Tring trang, swing swang, hing hang.*”‡ Now, it is a well authenticated fact, that individuals have spoken in a language of the import of which they were totally ignorant. In these cases no inspiration existed or was suspected. The words were spoken under peculiar states of the nervous system ; and although the proximate mode in which these states operated in producing such a phenomenon is not very clear, the relation of the bodily lesion with the mental peculiarity was at the time supposed and perfectly established to be that of cause and effect. Could any such solution be formed for the more modern and more obscure instances ? But of the cases themselves. First, there is that

* Smedley, vol. iii. p. 308.

† Southey's Life of Wesley, vol. i. p. 278.

‡ Smedley, vol. iii. p. 309.

of the Welshman, who, receiving a blow on the head, and labouring under the consequent inflammation of brain, forgets English, to which he had been accustomed for many years, and speaks incessantly the language of his youth; the oblivion and the vivid memory both evidently depending on the cerebral excitement, although in what manner depending cannot be determined.* Next, there is the narrative of the German girl, who, seized with a nervous fever—that is, a fever in which the organ principally affected is the brain—speaks, and will condescend to speak, in no less classic tongues than Greek, Latin, or Hebrew. She, being illiterate and a heretic, was pronounced possessed. As the chronicler remarks, it must have been “a learned devil.” Her character and situation put all suspicion of connivance or conspiracy at rest. Her physician, more of a philosopher than a theologian, wrote down her ravings. They were discovered to be coherent but unconnected sentences of Hebrew. Some parts of them were traced to the Bible, others were concluded to be rabbinical. This increased the mystery. How could a simple domestic drudge have an intimate or even an imperfect knowledge of the sacred languages? The physician traced her career through various families and vicissitudes of fortune, until, after long search and solicitude, he discovered that, when a child, she had been the protégé of a clergyman, who, devoted to the study of the ancient languages, was accustomed to read or repeat, in her hearing, passages from his favourite authors. Her ravings were compared and identified with the scholar’s books, and the hypothesis of demoniac possession fell to the ground.† Voltaire says that the devil hates a physician; he may well hate such a physician as the one now mentioned. It is because such enlightened inquirers are so few, that wonders and delusions and miracles are so many.

A modern sect has arisen, claiming similar privileges and properties. Proscription, in this case, did not cause, but followed, the public assertion and display of these gifts. A man of brilliant but eccentric genius, irreproachable life, a profound sense of piety, and impressive but obscure eloquence, was brought into constant intercourse with individuals possessing minds of far inferior power and little cultivation, but congenial in the degree of excitement of, and in the ardent desire for such solemn impressions as are addressed to Wonder, Hope, and Cautious-

* The case of the Welshman is noticed by various authors of eminence; particularly Dr Mason Good, *Study of Medicine*, 2d edition, vol. iv. p. 180; and Dr J. C. Prichard, *Cyclopædia of Practical Medicine*, vol. i. p. 500, Article “*DELIRIUM*.” Dr Prichard adds to his account of the case, that “this statement, which was first given by Mr Tupper, has been confirmed to the writer of this article by a personal witness.”

† Coleridge, *Biographia Literaria*, vol. i. p. 112.

ness. A mutual reaction took place. He ministered to this desire; he gratified by stimulating these feelings, until they burst forth in such intensity as to baffle even his power to gratify, appease, or check. So complete was his success, so irresistible the craving for spiritual instructions and exercises, that he naturally believed that his labour had effected all that human ministration could effect, and that these manifestations were the actual recognition and reward of the doctrines he had taught. He had long been a transcendentalist in religion; that is, he had pondered on the suggestions of certain feelings—Wonder and Ideality—as the results of a process of reason, and had adopted and acted upon them as such. His pupils lived under the same influence, and, unaccustomed either by education, or by habit, to examine or understand their own minds, they yielded implicitly to the imperious impulse which they conceived to be religious, because connected with and arising out of religion; they far outstripped their teacher in the intensity of their emotions, and in the effect which these had on their general conduct.—The system of starving out the evil principle within us is a very antiquated one. The Irvingites, such of them at least as attained the greatest popularity, seem to have acted upon it. They did not literally fast—this would have been wise; but they gave up day and night, soul and body, the duties and affections of life, as a sacrifice to the predominating feeling. The thrice repeated hebdomadal service, stimulating as it is reported to have been, was not enough; they assembled every morning at six o'clock, and passed the whole of the day in public or in private meetings, where energetic prayer and every other means were used to rouse and sustain the state of religious exaltation. All secular affairs, even the feeding the hungry and clothing the naked, must have been suspended. So great indeed was the interest or abstraction created, that one individual spent such a day without recollecting that he had tasted no food. But the struggle did not terminate here. The mind was not allowed a moment's repose. The night was dedicated to that rigid self-search and repentance which solitude and silence are supposed to favour. To what extent all these items were complied with by each individual cannot be ascertained; but as a general practice it appears to have continued for some months. The crisis of this excitement arrived. A female started up in the congregation, and, with a flushed face and wild gesticulation, pronounced some sentences of sounds which were unintelligible. From their unintelligibility,—from the character of the party,—and from the fiat of the pastor, or apostle as he was called, who was endowed with “discernment,”—these sounds were declared to belong to an unknown tongue, to be evidence of the working

of the Holy Spirit—in plain terms, to be the voice of God. The enunciation was always attended by violent agitation of the muscles, and often succeeded by swooning or hysteria. The sounds consisted of such words as “*Holimoth holif anthem.*” A still more perfect example is given by one of the believers at Greenock: *—“*Hippe gerosio hippo booros senoots Floorins oerin heopo Jamo Noostin. Noorastin Niparous Hipanos Bantos Boorin. O Pinitos Elelastino Halimungitos Dantitu.*” If the force of this language was equal to its euphony, it deserved to be cultivated. Exhibitions of the same kind became frequent in the church, where they first occurred, and in various other parts of the country. An anachronism has, perhaps, been committed in citing Mr Irving’s church as the scene of the first ebullition; Port-Glasgow was the favoured spot. There several tongues were spoken; but in the metropolis the number was much more considerable. The French prophets professed fifty-two. But the greatest feat of this kind is recorded of the elect lady of the Shakers, who spoke seventy-two tongues, all equally unintelligible to the living. They were literally entitled to the designation of dead languages, as they served her as a mode of communication with the dead.†

Miracles were performed, prophecies were published, and tongues were spoken; but, alas! although many individuals spoke, there was none to interpret. At last a disciple felt a conviction that he understood the meaning of what the inspired uttered, and accordingly proclaimed it. Fortunately an autobiography of this person’s feelings and opinions has been published. It is the confessions of a prophet.‡ The objects of this account are to describe the nature of the emotions under which the author participated in these displays, to insinuate that there was deceit rather than delusion on the part of some of the actors, and to prove that he actually did understand and translate the unknown tongues. His mind seems to have undergone the training which we have described, although his intellect was less obscured by awe, imagination, and self-esteem. His attempt to shew the existence of collusion is a failure; and the examples of the unknown tongue being a composite of Spanish, Italian, &c. are too few and feeble to establish his proposition. But his pamphlet most clearly proves, *first*, that the tongues resulted from an undoubting belief that whatever the petitioner might ask would be granted; a belief

* A Pamphlet by Mr M’Kerrel, quoted in the Glasgow Herald, November 4. 1831.

† Erskine’s Sketches and Hints of Church History, p. 269.

‡ The Unknown Tongues, discovered to be English, Spanish, and Latin, by George Pilkington, who interpreted before the Congregation. London 1831.

founded upon Hope, Wonder, Self-esteem, and misdirected Intellect: *secondly*, that the delivery of the tongues was accompanied by convulsive movements: *thirdly*, that the speaker attached some meaning to the sounds: and, *fourthly*, that these ebullitions could be restrained by an effort of the will or by prayer; that is, by bringing another faculty into action.

The following is an additional example of the power of language-making.

CASE IX.—Miss N. æt. 40.

Dimensions of the Head.

		Inches.
From Individuality	to Philoprogenitiveness,	7 ⁷ / ₈
— Ear	to Philoprogenitiveness,	4 ⁷ / ₈
— —	to Concentrativeness,	5
— —	to Self-esteem,	5 ³ / ₈
— —	to Firmness,	5 ³ / ₈
— —	to Veneration,	5 ⁷ / ₈
— —	to Benevolence,	5 ⁷ / ₈
— —	to Comparison,	5
— —	to Individuality,	4 ⁷ / ₈
— Acquisitiveness	to Individuality,	3 ⁷ / ₈
— Cautiousness	to Cautiousness,	5 ³ / ₈
— Combativeness	to Combativeness,	4 ⁷ / ₈
— Ideality	to Ideality,	5 ¹ / ₈
— Destructiveness	to Destructiveness,	5 ⁷ / ₈
— Secretiveness	to Secretiveness,	5 ⁷ / ₈

Predominating Organs.—Amativeness, Destructiveness, Imitation, Secretiveness, Wonder, and Language, are very large; Love of Approbation, Hope, Ideality, Cautiousness, and Individuality, large.

Miss N. is the type of a fanaticism of a past and of the present age. Her history, as a sane individual, is a blank; indeed it is doubtful if she ever was in such a condition. Two circumstances revealed by herself shew how unfortunately constituted her mind must have originally been, and when, and by what means, her present delusions were induced. Her temper was so irritable, jealous, and tormenting, that, to parody a hackneyed line, “she never said a mild thing, and never did a kind one.” Her relations were rendered miserable, and at last the desire of peace and quiet became too strong for the ties of blood. Estranged by her persecutions, they appear to have rejoiced to find a pretext for removing her to a distance. She dates all her misfortunes, that is, her illness and confinement, from the perfidy of a young man to whom she either was, or fancied that she was engaged.

She surprised this deceiver not only paying marked attention to one of her sisters, but literally locked in that lady's embrace. This discovery took place on the evening previous to the day on which she supposed their union was to be solemn-

nized. How far this may be true, it is impossible to determine, and would be immaterial if possible. All that succeeds is the suggestion of madness. Disgusted at such treatment, she escaped, but was speedily brought back to her mother's residence, which she now found was surrounded by a number of soldiers, intended as a guard of honour to pay her suitable respect. The high birth and dignity now disclosed and recognised, had been long known to the respectable inhabitants of the county in which she lived, but, for reasons of state policy, had never been revealed either to herself or to her friends. She is, in short, the sister of Prince Charles Edward, who, she declares, is still alive, and—our rulers had better look to it—about to claim and combat for his own again. Naturally a defender of the divine right of kings, she pushes the doctrine a little farther than the modern advocates of legitimacy. She holds that, in the nature of her illustrious birth, and in herself, there is a species of infusion of the Holy Spirit. Notwithstanding this high and holy origin, the devil has often appeared to her, and in what to young ladies is insinuated to be rather a tempting garb, that of a recruiting-officer. Occasionally his rank is not so elevated. At a sainted spring, when she had fasted for many hours, and had quarrelled with, and for ever disowned her friends, he approached as a drummer in a militia regiment.

This person is an example of a favourite definition of lunacy. She reasons correctly from erroneous premises. Were she, according to her own representation, inspired by the Holy Ghost, and a Princess-Royal of the House of Stuart, her opinions, attributes, and deportment could be understood, and would be in keeping; but seeing that according to our knowledge she is neither, they appear to be sadly wild and out of joint.

In command of the escort mentioned, was a redoubtable major, who figures as the hero of many romantic visions; but as the tie existing between them appears to have been Amative-ness and Adheaveness, and foreign as an illustration of the present subject, his exploits must be left unrecorded. Another reason for omitting these and many other delusions is, that they are temporary, while her pretensions to extraordinary sanctity are permanent. She was converted—in other words, received the Divine emanation which dwells within her—in a moment, while a glorious light shone around. She is subject to hysterical symptoms, although not to regularly-formed fits of hysteria, and also to fits, most regularly formed, of uncontrollable passion; and it is more than probable that she refers this moral change to one or other of these conditions. Since this was effected, she has been free from sin—nay more, from the liability to sin. Specific endowments have been vouch-

safed, such as unrivalled eloquence and never-erring foresight. She boasts of an exemption from suffering, a sort of invulnerability, though at the same time she is receiving medicine to relieve a headach; and she arrogates to her prayers an efficacy which is employed in consigning her enemies to every evil that a lively hatred can suggest. How fortunate it is that Nature has set some limit, yet unknown, to the discoveries and powers of mankind! Had Franklin advanced one step farther, and had tyrants, or conquerors, or madmen, been enabled to wield the thunder-bolt, how awful must have been the consequences to the human race! Or, had it been consistent with the Divine scheme, as some have thought, that the moral thunder-bolt of malign prayer could be hurled by such hands, how still more awful must have been the consequences!

She likewise affirms, that she has been gifted with the power of speaking in an unknown tongue; which, however, she partly understands, but will not interpret. This belief is curious, as she has been an inmate of the asylum for nine years—a period which precludes the possibility of her having heard, and subsequently imitated, what have been called manifestations of the spirit. As no newspapers or other periodicals commemorative of such transactions ever penetrated within her prison-walls, and no other means of communication with the external world existed, we are forced to adopt the opinion that the delusion is spontaneous, and originating from a common source with the opinions of the Irvingites—in all probability from a peculiar view of certain texts contained in the first epistle to the Corinthians. A sister, she states, participates in this privilege. When uttering the mystic words, she is in a high degree of excitement, looking the Pythones admirably. Her bright eye becomes dazzling and unsteady; her cheeks, brow, and temples are crimsoned; her arms wave to and fro, and the whole body is in a state of tremor. When she has commenced her manifestations, it is impossible for her to stop, or to be stopped. By the uninitiated the language she employs may be taken for Coptic or Cherokee, so vehement is the enunciation, and so discordant the tones. The words are, however, melodious and rhythmical, and have been declared by uninspired linguists closely to resemble Greek. That they belong to none of these languages may be concluded from the following specimen, written by the lady herself, but whether assimilated to that which fell from the lips of Miss Cardale, it is not for us to decide. “*Ellueam vuruem er-rexuem vaulem bathoram, ullem dathureem. been tuurem el-leauem vara elleoara exullem, dathellia villera civeu ureme vas cillera exerem datherveam bauleveiliuueum villirea repthallon erriphultow bilirea ebillerea lubluron eluberon,*” &c.

I possess very voluminous MSS. of a similar description;

and, it is to be presumed, of a similar import. There are two very remarkable features in all these documents: *first*, Words are repeated with a prefix as if to modify their signification; and, *secondly*, The same words, or words extremely similar in sound and orthography, occur in papers written at various and sometimes very distant periods. These facts would tend to prove that the jargon so often spoken by maniacs may be systematized, and the rules of the system recollected and brought into operation like the ordinary rules of syntax. One unknown tongue has already been quenched under my care; a second I find to be irradicable.

Her own account of this gift affords no elucidation of the mystery. She has heard Gaelic spoken, but does not understand it. She is profoundly ignorant upon all subjects, even of the Scriptures, to which she so constantly refers; and, although naturally shrewd and sensible, cannot farther assist our inquiries than by insisting that her language is unearthly and sublime, that she was assured by the Spirit that it is spoken in heaven, and that it is blasphemy to contradict any of these postulates. Nothing more satisfactory has been, or perhaps could be stated, by those who have exercised similar powers in the bosom of the churches.*

(To be concluded in next Number.)

ARTICLE II.

ON THE AUTHENTICITY OF THE SKULLS OF DEAN SWIFT AND STELLA. By Dr HoustON of Dublin.

To GEORGE COMBE, Esq.

DEAR SIR,

DUBLIN, October 22. 1835.

In compliance with your request, as conveyed to me by Mr Carmichael, I beg leave to forward you some memoranda relative to the disinterment of the skulls of the celebrated Dean Swift and his favourite Stella, which may serve to remove any doubts as to the genuineness of these relics. I am still farther prompted to acquiesce in your request, by a desire to remove some prejudices, which an imperfect acquaintance with the facts leading to their disinterment appears to have given rise to; particularly on account of the feelings of the present venerable

* A specimen of this "Unknown Tongue" is in the possession of our publisher; for the inspection and translation of those who are curious or learned in these matters.

Dean of St Patrick's, by whose permission I was enabled to take advantage of an unavoidable temporary exposure of the coffins in which they lay entombed. It was no idle curiosity, neither can we boast of its being zeal for the cause of science, which led to the disinterment; it was purely a matter of accident. In making some alterations in the aisle of the church, it became necessary to expose several coffins, and, amongst others, those of Swift and Stella, which lay side by side; and I would ask the most sensitive on such matters, What aggravation of the exposure was it to transfer for a few hours, from the hands of common workmen to those of persons capable of appreciating the value of such objects, the time-worn bones of the great deceased? Permission having been given me to be present at the disinterment, I availed myself of the privilege; and, under a pledge that the skulls would be restored after a very short period, I was allowed to remove them from the cathedral. The pledge has long since been redeemed: the bones once more lie mouldering with their kindred dust; and the most scrupulous may, I think, be satisfied.

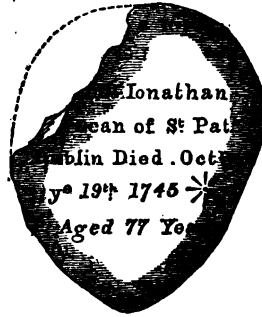
The tablet erected to the memory of Dean Swift bears the following inscription, written by himself:

Hic depositum est corpus
 JOHATHAN SWIFT, S. T. P.
 Hujus ecclesiæ cathedralis
 decani:
 ubi sæva indignatio
 ulterius cor lacerare nequit.
 Abi viator,
 et imitare, si poteris,
 Strenuum pro virili libertatis vindicem.
 Obiit Anno (1745):
 Mensis (Octobris) die (19);
 Ætatis Anno (78).

Transversely in from the pillar supporting this tablet, and as close as it could be placed, lies the coffin, at a short distance from that of Stella. The localities of both of these coffins are well known by persons about the cathedral to have been none others than those appropriated to those two remarkable individuals. An old man, named Richard Brennan, who died about forty years ago, was the chief chronicler of these facts. This man who, with his mother, had been faithful servants to the Dean, was present at the interment of his master. He subsequently filled the office of beadle in St Patrick's Cathedral, and oftentimes, during that servitude, pointed out to Mr William Macquire, the present sexton in the church, the place in which he had assisted in depositing the remains of his master. He knew well, also, the exact spot in which the coffin of Stella had been laid; and the record of his narrative, taken in connexion

with other evidence, leaves no doubt of the accuracy of our information on the subject of both.

The coffin under Swift's monument is of solid oak, corresponding to that said to have been desired by the Dean himself, long before his death, as the fitting receptacle for his mortal remains. On the lid of this coffin there is a silver-plated mounting, nearly perfect, and bearing the following perfectly legible words:



This metallic plate represents a heart in the centre, with the above inscription, in the order here given, traced upon it in black letters. The top and sides of the heart are surrounded with embossed ornamental work, perfect everywhere except at the left corner, where the words "*Here lieth,*" perhaps, and "*Swift,*" have crumbled away. The apex of the heart rests on an angel's head, supported by two lateral wings, in a most perfect state of preservation. The absence of the words from the beginning of the first line, and of "*Swift*" from that of the second, detracts nothing from the applicability of this dedication to the Dean, as the blanks are of such dimensions as to admit of being filled up by exactly the number of letters required to complete such words,—and as the remaining words and figures are not only inapplicable to the name, profession, or date of decease of any other personage, but are actually the same as those exhibited on the tablet erected to the Dean. The difference of one year in his age—it being stated at 78 on the tablet, and 77 on the mounting of the coffin—is evidently the result of an error committed by the printer of the latter, as the date of decease in both is the same, and as it is well ascertained that his birth-day was on the 30th November 1667. We may then take it as certain, that the coffin found under Dean Swift's monument was that in which the body of that celebrated individual was deposited.

The coffin lay about two feet and a half below the flags; it was surrounded by wet clay, and nearly filled inside with water. The workmen having arrived at this stage of the disinter-

ment, exhibited the utmost curiosity and haste to determine the truth of a tradition handed down to them by old Brennan, namely, that the head of the Dean had been trepanned after his death, and before being laid in the grave. Brennan's oft-repeated story was, that, in consequence of the state of his master's intellects for a long time previous to death, the surgeons had opened his head to ascertain the cause of his insanity. He boasted that he himself had been present at the operation, and that he even held the basin in which the brain was placed after its removal from the skull. He told, moreover, that there was brain mixed with water to such an amount as to fill the basin, and by their quantity to call forth expressions of astonishment from the medical gentlemen engaged in the examination. The curiosity of the workmen was excited only with a view to determine the truth or falsehood of Brennan's story, though the testing of its veracity was looked upon by me as of no small import towards the identification of the individual who lay within entombed. But the suspense was not of long duration: as soon as the coffin was sufficiently emptied of the water to yield a view of the bones, which lay at the bottom, a general exclamation burst forth that "Old Brennan had spoken truth;" for the top of the skull was discovered lying alongside the bottom part, from which it had been detached horizontally by a saw.

All the bones of the skeleton lay in the position into which they had fallen when deprived of the flesh that enveloped and held them together. The skull, with the calvarium by its side, lay at the top of the coffin; the bones of the neck lay next, and mixed with them were found the cartilages of the larynx, which by age had been converted into bone. All the rings of the trachea, which had undergone the same change, were equally in a state of preservation and order. The dorsal vertebræ and ribs occupied the middle of the coffin; the bones of the arms and hands lay, as they had been placed in death, along the sides; and the pelvis and lower extremities were found towards the bottom. The teeth were nearly all gone, and their sockets were filled up with bone. Six of the middle dorsal vertebræ, and three of the lumbar, were joined together by ankylosis. Several of the ribs were united to the sternum by ossification of the intermediate cartilages. The whole were evidently the remains of a very aged man.

The bones were all clean, and in a singularly perfect state of preservation. When first removed, they were nearly black; but on being dried they assumed a brownish colour. The water in which they were immersed was remarkably free from putrefaction; even the wood of the coffin was perfectly sound and unbroken.

There being no longer any doubt that the body which lay in this coffin was that of Doctor Swift, particular attention was paid

to the examination of the bones of the neck and that part of the skull to which the first is articulated, in order to be certain that the head in the coffin really belonged to the other bones, and that no question, founded on the possibility of a theft on the skull having been committed by the medical gentlemen who examined the body after death, should hereafter be raised; and it was evident to all persons present, among whom were several medical gentlemen of eminence, that the adaptation of the respective vertebræ to each other, and of the first to the condyles of the occiput, was so perfect, that no doubt whatever of their all having belonged to the same individual could be entertained. They were all the bones of one man, and that, beyond all manner of doubt, the immortal Swift.

Respecting the genuineness of the skull of the accomplished Mrs Hester Johnston, otherwise Stella, disinterred at the same time, there can be as little question as there is regarding that of Dean Swift. The coffin in which it lay was of the same material, and placed in the same relation to the pillar bearing the tablet to her memory as that of the Dean; and the bones constituting the skeleton exhibited the same characters, and were in equally perfect preservation, though interred ten years earlier. Its exact and proper place was well known, and no other coffin lay near it, from which any confusion might have arisen.

As regards the examination of these heads in a phrenological point of view, I shall offer no remarks. You are already so fully in possession of all the circumstances connected with them, having seen and examined them in person, that I shall leave the matter entirely in your hands. I may, however, be allowed to state, in reference to the pathological condition of the skull of Swift, that it is my opinion that the bones cannot be regarded as free from indications of previous chronic disease. There are certainly no marks of caries or of fungous growths on any part of the head; but the condition of the cerebral surface of the whole of the frontal region is evidently of a character indicating the presence, during lifetime, of diseased action in the subjacent membranes of the brain. The skull in this region is thickened, flattened, and unusually smooth and hard in some places, whilst it is thinned and roughened in others. The marks of the vessels on the bone exhibit, moreover, a very unusual appearance; they look more like the imprints of vessels which had been generated *de novo*, in connexion with some diseased action, than as the original arborescent trunks. The impressions of the middle arteries of the dura mater are unnaturally large and deep, and the branches of these vessels which pass in the direction forwards are thick and short, and terminate abruptly by dividing into an unusual number of minute twigs; whilst those of the same trunks which take their course backwards are long and re-

gular, and of graduated size from the beginning to the end of their course. This peculiarity in the condition of the vessels is well demonstrated in the casts which I have taken of the interior of the skull, and which, in other respects besides, convey an accurate notion of the form and dimensions of this cavity.

It is unnecessary for me, however, to say more on the subject, as you have already, in the 45th number of your Journal, given a sufficiently detailed account of the appearances which the skulls exhibited.

I beg leave, in conclusion, to say, that I have forwarded to you three casts of these heads, taken under my own inspection, and which I take the liberty of requesting you will present to the Phrenological Society of Edinburgh. No. 1 is a cast of the exterior of the skull of Dean Swift. No. 2 is a cast of the interior of the same, shewing accurately the condition of the bones on their cerebral surface. No. 3 is a cast of the exterior of the skull of Stella. The skull of the Dean having been found open in the coffin, I was enabled to have a cast of the inside taken, without doing violence to so sacred a relic: that of Stella being entire, I did not wish to wound public prejudice, by inflicting on the head that injury which would have been necessary towards procuring a cast of its interior.

I remain, Dear Sir, your obedient Servant,
J. HOUSTON.

ARTICLE III.

WHAT IS THE USE OF THE DOUBLE BRAIN?

LOOKING back to the very unsuccessful application of speculative theories in bygone attempts to explain mental phenomena, it certainly behoves phrenologists to be cautious in resorting to this course. Nevertheless, in other sciences, speculative explanations have been resorted to with great advantage, and have become of highly practical benefit, although incapable of direct proof. The atomic theory in chemistry, that of gravitation in astronomy, and the undulatory theory of heat and light, are familiar examples. In physiological and moral science, we are almost compelled to resort to explanations which cannot be demonstrated, and the correctness of which must be assumed from their applicability to observed facts. I premise this observation, and adopt an interrogative title, more fully to impress that the following suggestions are to be regarded as questions or

hints for the consideration of others; and not in the light of ascertained points. The subject seems likely to remain long open to discussion.

I am unaware of any sufficient theory to account for the double brain, so universally found in animals until we descend very low in the scale of organization and intelligence. Spurzheim writes: "All the proper cerebral organs, like the other instruments of phrenic life, occur in pairs, or are double, from the medulla oblongata up to their expansion in the convolutions. This probably happens because of their importance, and to the end that the congenerate parts may supply each other's places, should either chance to be injured."—(*Anatomy of the Brain*, p. 178.) To me this appears an unsatisfactory explanation. The heart and stomach are most important organs, and yet there is no provision of a second, should one "chance to be injured." The following passage appears to afford a sufficient counter-quotation:—"From all the observations which have been made on animated nature, it may be inferred as an universal law, that whenever the Creator has bestowed two organs on an animated being, the healthy condition of both is indispensably necessary to the production of their full effect in the economy of that being."—(*Phren. Journ.* vol. iii. p. 84.) What, then, is the full effect, in other words the use, of the double cerebral organs? The reply suggested in the work just referred to is, that *perception* being a lower, and *memory* a higher degree of functional activity, one sound organ may suffice for the former, though both may be required for the latter manifestation. This suggestion is not wanting in plausibility, and may prove correct; yet I have some grounds for questioning the entire correctness of it, which will appear at a future day. Meantime I proceed to my own speculations.

The human frame is almost a double; the one side being nearly a counterpart of the other. But many of the double parts, from their use and constitution, act individually as well as jointly; and, when acting in concert, their actions are often different, and sometimes opposed. In walking, the legs move alternately; one being held more or less steady, while the other is in motion: and, when both move at once, their motions usually differ in kind or degree. The hands, in like manner, are made to perform different motions at the same instant, and such are frequently antagonist motions. So also the eyes and ears receive and transmit sensations singly, at the same instant of time. Hence it appears like a matter of necessity that the internal organs which guide the hands, legs, eyes, and ears, as well as those which receive sensations therefrom or thereby, should also be double. But if it be necessary that the two legs and hands, the two eyes and ears, should be able to exert inde-

pendent and even antagonist actions at the same time; so may the brain be required to perform independent or antagonist actions at the same time, and thus necessarily be doubled throughout, the two hemispheres being capable of acting singly or jointly.

I am not aware of any facts that can directly negative this suggestion; and although it will not suffice to explain all the peculiarities of consciousness, yet it does appear reconcilable with several phenomena not to be accounted for otherwise. In playing at chess, a person makes schemes and determines the movements of the pieces on his own side. To do this successfully, he must mentally play the game of his adversary as well as of himself: within his own cranium he must carry on the work of two brains; brains working in opposition to each other. I take this game as an illustration of many of the schemes and movements of real life. It requires no argument to prove that we shape our conduct towards others, and have our feelings towards them excited, not in accordance with *their* actual motives and feelings, but in accordance with *our own* mental images of such—with the representations of their motives and feelings which we form for ourselves. We do not see their ideas and feelings; we see only certain signs and symbols, the translation of which is made in our brains. It would hence appear that we must have the presumed wishes and ideas of others, as well as our own wishes and ideas, pictorially present in the brain at the very same instant. But if our own ideas and feelings co-exist with the represented ideas and feelings of another, we are driven to conclude either that the two corresponding organs, manifesting any given function, work individually, or that each exists in two different states at the same instant. The only way of escaping this dilemma, is by denying the co-existence of ideas, and attributing the apparent consciousness of it to the rapidity with which they succeed each other—an assumption not unreasonable, but fully as gratuitous. It appears to me, that the co-existence of ideas is most easily reconcilable with observed facts, and that the existence of two connected brains thus becomes necessary.

According to this view, mental communication with others, as it is commonly expressed, may be just a self-communing between the hemispheres of our own brains, accompanied by signs and sounds addressed to the senses. If so, we must have the power of dividing the consciousness of the two hemispheres to a certain extent, so as to make one of them represent the mind of another person, more or less divested of the ideas familiar to ourselves. This I apprehend to be really done while in conversation with others. It is rendered more apparent in those confabulations and self-communings which active brains are ever carrying on when awake, and not fully occupied by impressions arising from the external senses. And it becomes still more evident during

dreams, when the consciousness is so completely dissevered, that, in idea, we make ourselves into two parties, one of which is (always?) *self* more or less changed.* The very remarkable case of two-fold personality, mentioned in Combe's *System of Phrenology*, page 519 of 3d edition, appears to be a more exalted degree of the state of brain existing during sleep, and was ushered in by somnolency and dreams. Many cases of insanity look like intermediate states between the vivid pictures and dialogues of active or excited brains when awake, and the more completely divided consciousness in dreams. The divided consciousness of the insane does not appear to be complete. Though an individual pronounces and seems to believe himself a deity, many of his actions have still, necessarily, a reference to his own proper self and nature, and there is often a betrayed anxiety lest others should detect mortality in assumed divinity.

Were this supposed individual action of the hemispheres an established point, it might lend some aid towards explaining states of mind or consciousness which have much puzzled metaphysicians. In such case, for instance, I should be induced to regard perception as the active state of either of the corresponding intellectual organs. Attention might be supposed to rest in the combined activity of the two organs directed to the same matter. (We see with either eye, but we look with both.) The sense of resemblance might depend on the two corresponding organs co-existing in the same state, though individually excited. Sympathy would arise when the same occurred to the affective organs. The sense of contrast and discord would imply the opposite states. Memory seems nearly allied to comparison. I will not, however, run off too far in the application of a merely speculative theory, until the essential part of it has been tested by other minds. The essential part I consider to be *the capability of independent activity in the two hemispheres.*†

HEWETT WATSON.

* Besides dreams remembered in waking hours, the writer of this is perfectly conscious of certain trains of ideas, repeated again and during different intervals of sleep; yet, when he is awake, not the most vague notions can be formed of them, beyond the mere conviction that such ideas have existed. They are again remembered when again repeated, and this remembrance, he thinks, is accompanied by a knowledge that the recollection of them has been vainly wished since they were last formed or felt. If this be not a mental deception, others will be conscious of the same changes in their sleeping and waking ideas.

† In Dr Spurzheim's *Phrenology*, 3d Edition, p. 37, the following statements occur. "Tiedemann relates the case of one Moer, who was insane on one side, and observed his insanity with the other. Dr Gall attended a minister similarly afflicted: for three years he heard himself reproached and abused on his left side; with his right he commonly appreciated the madness of his left side—sometimes, however, when feverish and unwell, he did not judge properly. Long after getting rid of this singular disorder, anger or a greater indulgence in wine than usual induced a tendency to relapse." Dr Caldwell mentions, in his *Elements of Phrenology*, 3d Edition (Lexington, Ky.,

Philoprogenitiveness is defective, may be led by Conscientiousness and Benevolence to take care of her children; but she can never give that unceasing and unwearied attention to their wants which is given by those whose strong Philoprogenitiveness feels a natural delight in so doing. And they who have little attachment to the pursuit in which they are engaged, may, from various motives, continue steadily at it, but can never give it the close and concentrated regard which proceeds from that very attention being in itself a source of pleasure.

Neither can this attachment be excited by the mere desire of rising in a certain way, by the mere conviction of the propriety or utility of a certain line of conduct, any more than love of offspring and love of friends can be excited in a similar manner.

It is an respect to inobject:—When strong it may be said to be exclusive, in this particular resembling Amativeness alone. We may love at the same time, and in an equal degree, many children and many friends: but a man can seldom, if ever, be ardently in love with more than one mistress at a time. She who converses with many, who pays a compliment first to one and then to another, generally cares for none. So it is but seldom that two persons can share equally our attachment: and the propensity we are now considering must be weak in him who can quickly turn from one occupation to another, and find an equal degree of pleasure in them all. Both of these propensities give a shade to our character by their general manifestation. Amativeness renders us respectful and attentive to every female, and Conscientiousness leads us to take an interest even in those pursuits which only momentarily attract our notice, and consequently to give them, while that interest lasts, an undivided attention. Still, however, one object is the pole-star which guides our course. We may look round for an instant on the other constellations, but it is to this alone that the eye is steadily directed. This gives a sort of individuality or unity of purpose to our conduct, which is one of the distinguishing characteristics of the propensity we are now considering. When Concentrativeness is strong, we are like travellers: it hinders us from reaching their journey's end. They may occasionally rest for refreshment and repose; they may sometimes pause to contemplate the beauty of the scenery; but they will not go off their road, nor make any unnecessary delay. When it is weak we are like tourists on a party of pleasure, constantly leaving the track proposed, and stopping for every trifle.

It does not, however, grow on the power of discriminating and selecting what is best suited for our purpose: this would impart to it the character of an intellectual faculty, which it is no more entitled to than is any other of the propensities. Mr Combe, therefore, seems to attribute rather too much to its effect, when

nications, we willingly insert both, in the hope that, whatever may be thought of their conclusiveness, they may at least help to bring about a final settlement of this long-agitated question. Mr Hancock, however, would have considerably enhanced the value of his letter, by specifying more fully the cerebral development of the individuals whose cases are introduced.

" TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

" SIR,—Though I cannot subscribe to many of the opinions generally entertained by phrenologists, yet, acknowledging that there is *some* truth in their fundamental propositions, and approving of their mode of investigation, I cordially wish them success, and feel desirous of adding my mite to the stock of valuable information they have acquired on subjects connected with the philosophy of mind.

" Having been not only *led* to the study of human nature by natural inclination, but in a manner *driven* to it by external circumstances, I flatter myself that the following observations (suggested by a perusal of Mr Combe's System of Phrenology); will be found not altogether undeserving of a place in your Journal.

" *Concentrativeness* seems to be the least understood of all the propensities, and the facts ascertained with regard to it have hitherto been very few.

" Perhaps the best and simplest definition that can be given of it is *the love of pursuit*, or attachment to the occupation which at any particular time occupies the greatest share of our attention. The natural and indeed necessary effect of such an attachment, is the concentration of our faculties upon this favourite occupation. This effect, however,—this calling of the intellect—into action, and directing of its energies to the object in view, is not produced by any power or faculty peculiar to the organ in question, but by one common to it with the other propensities; for any one of them, when strongly excited, concentrates all our powers of mind upon the attainment of that which it desires. Thus if a man in whom Amativeness and Adhesiveness are large; be deeply in love, his thoughts are ever turning on his mistress, and every faculty is exerted to the utmost in order to gain the heart and hand of her who is the object of his affections: so when our love of a pursuit is strong, the whole power of the intellect is directed towards it; the perceptive faculties let no fact escape observation, and the reflecting let none pass by unemployed; that can be rendered available to the purpose intended.

" Like the other propensities, too, its place, when weak, may be partly, though not *wholly*, supplied. A mother in whom

Philoprogenitiveness is defective, may be led by Conscientiousness and Benevolence to take care of her children; but she can never give that unceasing and unwearied attention to their wants which is given by those whose strong Philoprogenitiveness feels a *maternal delight* in so doing. And they who have little attachment to the pursuit in which they are engaged, may, from various motives, continue steadily at it, but can never give it the close and concentrated regard which proceeds from that very attention being in itself a source of pleasure.

"Neither can this attachment be excited by the mere desire of acting in a certain way, by the mere conviction of the propriety or utility of a certain line of conduct, any more than love of offspring and love of friends can be excited in a similar manner.

"With respect to its object:—When strong it may be said to be exclusive, in this particular resembling Amativeness alone. We may love at the same time, and in an equal degree, many children and many friends; but a man can seldom, if ever, be ardently in love with more than one mistress at a time. She who enquets with many, who pays a compliment first to one and then to another, generally cares for none. So it is but seldom that two pursuits can share equally our attachment; and the propensity we are now considering must be weak in him who can quickly turn from one occupation to another, and find an equal degree of pleasure in them all. Both of these propensities give a shade to our character by their general manifestation. Amativeness renders us respectful and attentive to every female, and Concentrativeness leads us to take an interest even in those pursuits which only momentarily attract our notice, and consequently to give them, while that interest lasts, an undivided attention. Still, however, one object is the pole-star which guides our course. We may look round for an instant on the other constellations, but it is to this alone that the eye is steadily directed. This gives a sort of individuality or unity of purpose to our conduct, which is one of the distinguishing characteristics of the propensity we are now considering. When Concentrativeness is strong, we are like travellers in haste to reach their journey's end. They may occasionally halt for refreshment and repose; they may sometimes pause to contemplate the beauty of the scenery; but they will not go off their road, nor make any unnecessary delay. When it is weak we are like tourists on a party of pleasure, constantly leaving the track proposed, and stopping for every trifle.

"It does not, however, give us the power of discriminating and selecting what is best suited for our purpose: this would impart to it the character of an intellectual faculty, which it is no more entitled to than is any other of the propensities. Mr Combe, therefore, seems to attribute rather too much to its effect, when

he adduces a specimen of a rambling style as a proof of the writer's want of Concentrativeness; for though it will undoubtedly give him a desire to keep close to the subject, a writer may have no want of attachment to his pursuit, though he does not see clearly what facts and arguments bear most directly upon it. It gives unity of *purpose*, but not unity of *execution* and *design*.

"In strict accordance with the description here given, Mr Combe calls it 'a tendency to concentrate the mind within itself, and to direct its powers in a combined effort to one object'; the seeming difference between the two accounts being merely verbal. Dr Hoppe of Copenhagen says, 'The fundamental function of No. 8. is probably to give *attachment to what we are about*;' and Mr Welsh thinks that 'it gives the tendency to dwell on any thing, till all or most of the faculties are satisfied respecting it.' Some following remarks will shew more clearly the accordance of this last conjecture, with the supposition of its function being love of pursuit, or attachment to what we are about.

"Dr Spurzheim calls it Inhabitiveness, because he has found the organ largely developed in several persons fond of living in the country; but it is at least probable, that this fondness for a country life arose rather from a liking to country pursuits, than from an affection for any particular spot. Mountaineers no doubt are, as he observes, commonly much attached to their native soil; but so are they also to their native pursuits, which can be carried on in such situations alone.

"Concentrativeness seems to be the basis of what is commonly called enthusiasm in studies or professions. Two men are frequently found equal in talents, and similar in dispositions. To the one his profession is the source of constant pleasure; to the other it is a drudgery, to which he submits only because he thereby gains a livelihood. In the former, I should expect to find Concentrativeness large, its energies being directed to his profession; in the latter it is either weak or directed to something else.

"When this attachment is directed towards objects of minor importance, these objects are frequently called, in familiar conversation, *hobbies*. 'Every man,' says the proverb, 'has his hobby;' and so far this is true: for as every man has the organ in question, so every man is attached, in a certain degree, to his favourite pursuit: but in some this attachment is much stronger and more evident than in others; in some cases it hardly amounts to a decided preference,—in others it is persevering, impetuous, and exclusive.

There are other kinds of attachment to pursuit, which are somewhat similar, in effect, to that which we have been considering, but are very different in their causes and nature. From these we must carefully distinguish it.

"In the first place, it is distinct from that species of attachment to a pursuit, which is produced by a sense of the advantages resulting from it. The one refers to the end, the other to the means by which that end may be attained. An avaricious man, for example, will prosecute eagerly any study or occupation which he hopes will bring him emolument; he who is actuated by a love of pursuit, will follow after it because he finds pleasure in it simply *as a pursuit*. The former will abandon it whenever a more lucrative occupation is offered; the latter will persevere, till either the actual impossibility of carrying it on, or the imperative commands of reason or the higher sentiments, compel him to desist—and even then, he will part from it like a lover from his mistress, with unwillingness and regret. Persons who are of what is called a sanguine disposition, in whom Hope and Ideality are strong, are frequently found to manifest this second species of attachment. When we contemplate the object to be obtained, Hope 'lends enchantment to the view;' and while the fond illusion lasts, the same concentration of ideas, the same tendency of the thoughts to turn upon one particular object is shewn; but when the illusion has passed away, our ardour vanishes too.

"A third species of attachment to pursuit, is produced by one faculty being much stronger than the rest. When Tune, for example, is large, there will be an attachment to music, though Concentrativeness be small; but this species is so easily distinguished from the others, that it is only necessary to mention it.

"Concentrativeness, however, though a distinct propensity, seldom acts alone. The more desirable an object appears to us, the greater, *cæteris paribus*, will be our love of the pursuit. A moderate endowment of the propensity we are now considering, joined to Hope and Ideality large, will produce a greater degree of ardour, than a large Concentrativeness with Hope and Ideality small; though probably what it exceeds in ardour, it will want in constancy: the one will be like the pursuit of the greyhound, rapid but soon given over, and in vain if not immediately successful; the other, like that of the bloodhound, slow, but persevering and sure. Its effects will also be greater if our attention is directed to occupations suited to our talents and dispositions: indeed, like Adhesiveness, it can be directed only towards a congenial object. As we can never love him as a friend, whose character and feelings are opposite to our own, so we cannot take pleasure in any occupation opposed by our predominating sympathies and tastes: the naturally timid and cowardly can never become fond of a soldier's or a sailor's life."

" TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

" SIR,—From a paper on Concentrativeness which appeared in the 44th number of your Journal, I am induced to submit to you some views which do not appear to be hinted at there, or, as far as I know, admitted to any extent elsewhere. On reading Mr Combe's admirable System of Phrenology some time ago, I was presumptuous enough to differ from him, in some measure, in his remarks upon this faculty; for I recollected that four of my own immediate acquaintance were in contradiction to his theory. From the observations I have made upon these four cases, as well as on many others which have come under my notice, I would, with the greatest deference, submit to phrenologists, whether the organ in question is not that which gives the feeling of *constancy* in character, as opposed to fickleness. The first of the cases above alluded to has a very large Concentrativeness, but no ease, I may almost say no capability, of concentrating his thoughts upon a given subject, though he possesses an extraordinary *constancy* of thinking or meditating upon a few subjects which have been the unvarying occupation of his life. The other, with large Concentrativeness, has no particular concentrative faculty, but a similar propensity to continue in the exercise of the same thoughts and employments, and frequently reads the same book two or three times following with increased pleasure. The third case, with very small Concentrativeness, has great power of thinking on one subject, or employing his whole energies on one particular branch of science; but for a short time only—a few weeks or perhaps months. It then loses its charm for him, and he turns to something else; and though possessed of a favourable organization and considerable intellect, he is ever stigmatized as fickle, and wanting in perseverance. The fourth case is another of small Concentrativeness, in which I have never remarked any want of immediate concentration, but rather a closeness, earnestness, and tenacity of argument; this case is combined with large Firmness and moderate Intellect. But the possessor of it is as fickle as the wind, and changeable to a proverb—arguing for a point to-day, and against it to-morrow, never following one object or one pursuit long enough to gain mediocrity in it—if in town languishing for the country, if in the country languishing for town; in short versatile in every thing. These facts, if my observations are correct, as I believe they are, militate very much against any faculty of Concentrativeness. The objection of Mr Deville to this name, and the faculty of the organ, struck me as very forcible. He says, 'It presents a difficulty in the part chosen;' and indeed its situation seems almost an insuperable objection to the faculty with which Mr Combe is disposed to invest it. According to his theory, Concentrativeness must at

least have the strictest connexion with the intellectual faculties, if it be not absolutely one of them; and if so, it would much deface the harmony of arrangement by being placed in the very midst of the organs or the propensities so far from those of intellect. It may be objected that Firmness is constancy; but I do not think that is the case. Firmness seems to me to cause perseverance in an object, but then it is always perseverance with an effort or determination to carry a thing through, however irksome or tedious—it is the feeling which prompts to the expression ‘I will.’ Constancy appears to me altogether distinct from Firmness; having nothing of determination or effort in it, prompting to a continuity of action pleasing to the actor and resulting simply from inclination, as involuntary as the activity of Cautiousness or any other sentiment or propensity. I would therefore suggest, whether Constancy is not a primitive propensity acting on every faculty, producing that attachment to accustomed usages which is called habit, and as regards the intellect, not concentrative thinking, but continuity of thought. In the two first cases I have mentioned as possessing large Concentrativeness, there is a great propensity to follow the same pursuits, and retain the same customs: in one of the cases, where the intellectual faculties are weak and little cultivated, this tenacity of ancient usage amounts to the ridiculous; in both, any study or pursuit once taken up becomes more charming the longer it is pursued, and frequent change of occupation is an effort. I have even remarked its effects on the presumed faculty of Alimentiveness, when the two with large Concentrativeness have excited the ridicule of the rest at table, by declaring that the longer they eat of one thing the better they like it, and that they would be well content to dine off one dish all the year round. The two with small Concentrativeness are by no means rambling in conversation or argument, but yet are remarkable for fickleness—entering upon pursuits with the greatest ardour, and tiring of them almost as soon as begun. I suspect, therefore, that all persons who follow one unvarying round of existence, with continually increased pleasure in it, will be found to have a large Concentrativeness, or, as I am rather disposed to say, a large *Constancy*, with deficient Wonder. This faculty of the organ in question would bear out, and even give additional effect to, what has always appeared to me one of the most beautiful facts of the phrenological system—I mean, the exquisite harmony and perfect propriety with which the organs classed themselves, as, one by one, they were brought to light by diligent observation of nature. Constancy would here be immediately above Philoprogenitiveness, and on each side of Attachment; giving permanence to the warm breathings of friendship, and continued strength to the fond feelings of affection; spread-

ing a patient endurance and an abiding hope over parental tenderness; and even fostering that pure and exalted patriotism which says, 'This is my own, my native land:' whilst its remoter effects are felt on every faculty, rendering it constant to one object till Intellect is satisfied with its consideration, or till Wonder, with a still stronger impulse, prompts to novelty.

I send you this suggestion, that constancy may be the primitive faculty of the organ now called Concentrativeness, as one which appears to me probable, though I do so with the greatest deference, submitting it entirely to your discretion as to whether its own probability, or any effect it might have to excite farther observation, fits it for publication in your Journal. It is possible that this view of the organ may have been propounded and refuted before, or you may at once perceive it to be false: if so, you will of course think nothing farther of it. My only object is, an humble endeavour to elicit the truth, and advance the interests of phrenological science. I am, Sir, your obedient servant,

WM. HANCOCK JUN."

WIMELISCOMBE, SOMERSETSHIRE, July 22. 1835.

We are inclined to look with favour on the views expounded by our ingenious correspondents in the foregoing communications. If *constancy*, *love of pursuit*, or (what has been suggested as a preferable name) *love of object*, be the faculty manifested by the organ No. 3, it will certainly afford the means of explaining phenomena which without its intervention have an aspect of much difficulty. For although other faculties unquestionably give a love of certain *classes* of pursuits or objects, we have still to account for predilections in favour of *individual pursuits or objects* of the same class, to the neglect of others. In many cases this is explicable by the faculties which are strong in combination with that giving fondness for a class of pursuits; thus Acquisitiveness, which is a general propensity to hoard, often takes the direction of antiquities when combined with a powerful Veneration. In other cases, however, of which examples are given by Mr Hancock, such an explanation seems inadmissible, and we are forced either to have recourse to the faculty contended for, or to confess our inability to account for the phenomena. The similarity of the views of our two correspondents is to some extent a presumption that both are on the right path; and an additional presumption to the same effect arises from the circumstance, that such a faculty as the love of pursuit and object would form an antagonist power to the sentiment of Wonder, which delights in novelty and change. Nature makes great use of antagonist forces in the human mind, apparently in order

that they may not run into excess by being allowed to operate without a check. This is the case especially with our strongest and most active powers. Combativeness and Destructiveness, for instance, are antagonized by Benevolence; Self-Esteem by Veneration; and Secretiveness and Acquisitiveness by Conscientiousness. Now, as Wonder is a very influential faculty, and, when disproportionately strong, gives a craving for novelty and change which is incompatible with the due performance of the duties of life, it is natural to suppose that this sentiment also may be restrained by a special antagonist. On this subject, however, we forbear to enlarge; the point must be settled by observation, and not by argument.

ARTICLE V.

ON THE IMPORTANCE OF PHYSIOLOGY WITH REFERENCE TO EDUCATION. BY ANDREW COMBE, M.D.*

WHEN we last met, I said that I was much gratified to see the recently formed Association of Teachers ranking physiology first among the subjects which it was important for them as professional men to be acquainted with—and the reason I gave was the simple fact, that all the moral and intellectual functions stand in the same relation to one part of our organized structure, viz. the brain, as the physical power of motion or exercise does to another, viz. the muscles; that consequently to educate the moral or intellectual faculties successfully, we must have the same constant reference to the laws under which organization acts, as we have in educating the muscles and training them to any of the ordinary exercises of walking, dancing, fencing, or riding; and that hitherto this grand principle had been overlooked, and many modes of training the intellect and feelings resorted to, which, being contrary to the laws of organization, *could not* succeed.

I gave the muscular system as an example, and stated it as a law of organization, that to keep a part in health and vigour it must be *duly* and *regularly* exercised. If it be too little, the blood flows languidly through it, the nervous energy in it is enfeebled, and the part becomes *weakened* and *INDISPOSED TO ACT without some strong stimulus*. If it be too much exercised, its vessels and nerves become feeble and irritable *from exhaustion*, and *INABILITY* to act with vigour ensues. If it be exercised to

* This article was originally written as a private letter to a friend who desired the explanations which it contains, and it is now published in the belief that it will not prove uninteresting to our readers at large.—EDITOR.

a proper extent, the circulation through it becomes animated, it receives more blood, and consequently more nourishment; its nerves act with more tone, and IT BECOMES STRONGER, READIER FOR ACTION, and after a time fitted for repose. If, however, the exercise be not resumed after sufficient repose, then weakness of necessity follows as above.

To apply this principle to the exercise of a bodily power. Suppose that A B walks ten or fifteen miles every Monday morning, and during the other six days of the week not at all, and that, finding himself greatly fatigued by the exertion, he roundly asserts that exercise is hurtful—what answer would be made? He would be told that as he sowed so had he reaped—that as he had infringed all the laws of exercise so had he suffered the punishment due to the infringement: *1st*, By walking much farther than his constitution was fit for, he had induced *debility from exhaustion*; *2dly*, By remaining inactive the other six days, he had induced *debility, with indisposition to action*, dependent on a sluggish circulation and low tone of vitality. Had he wished to strengthen his muscular system, the laws of exercise required that he should employ his muscles to a sufficient degree to increase their tone, and regularly resume the exercise after adequate repose. The very gradual and regular way in which horses are prepared for the race-course or hunting-field is an excellent illustration of the importance attached to the observance of the law of Nature in training animals.

In training the mental powers, precisely the same principle ought to guide our efforts, because God has made the mind as dependent on the brain for its action during life, as he has done the power of motion in the muscles; and therefore we are doubly bound to follow the law which He has given us for our guidance. According to this principle, then, every mental power may be weakened by *too little*, and also by *too much* exercise; because the brain, through which it acts, may be left sluggish or be exhausted by excess of exertion. In the first case, the mental faculty becomes *indisposed* to act; and in the second it becomes *incapable* of acting vigorously and steadily. It *may* be excited to action, but the latter will be irritable, and unsteady, and unprofitable—not permanent, enduring, and available, such as attends the medium or right degree of exercise.

To apply this to moral education. It is evident, that, granting the truth of the principle (which can be demonstrated), every *moral* feeling which we wish to strengthen and cultivate must be duly, regularly, and systematically exercised before full success can be attained—just as we see done with the intellectual faculties of music, painting, language, and memory of facts. We have no choice in the matter. Either we must obey the law

which God has imposed on our constitution, or we must fail in attaining the moral excellence of which he has made us capable. He has connected mind and feeling with organization to fit us for our residence in a material world, and we must either act under its laws or suffer.

Here, then, is the use of teachers being taught this fact. Love of Approbation is a strong and active feeling of the human mind, and it is one to which food is easily administered, and the gratification of which is attended with much pleasure to those who are largely endowed with it. Being a very prominent feeling in society, it is perhaps the most regularly and sedulously educated which we have. Before an infant can walk, or speak, or understand, we begin by praising its beauty, its shoes, its rattle, or its dress: when it cries, we flatter it to silence; when it speaks, reads, sings, or dances, every one is an ecstasy of admiration at its achievement. At school, its vanity is cultivated by places and prizes, and public exhibitions. At college, emulation ill directed is often its bane. In the world, "fame" is its grand prize. With females, emulation, prizes, flattering and compliment are still more effective. The result of this careful education and systematic exercise of an inferior feeling is manifest in every age, and in every rank of life. It predominates everywhere. How much of character and conduct in public and in private circles springs from the single principle of Love of Approbation in its various modifications of emulation, vanity, desire of renown, love of praise, notoriety, or fame! There is, in truth, scarcely an act of any note in which it does not come in as a primary element.

Is it equally so with the sense of justice or religion? Are *they* called systematically into play in every act which intervenes between the cradle and the grave? And do we find them constantly referred to as rules of conduct as we do emulation, fame, glory, and honour? And do we find them exercising even a tithe of the influence over human conduct which the other does? Far from it; conscience, indeed, is a "still small voice," for its cry is rarely heard, and its voice is easily drowned by less noble sounds. Why is it so? The reason is obvious: not being recognised as a primitive faculty connected with an organ of its own, no one thinks that it requires regular and systematic exercise to give it strength. Being viewed as an offshoot from intellect, it is said, "Cultivate intellect, and the sense of justice will shift for itself." From this error, parents and teachers not only neglect to educate conscience, or the sentiment of justice, but too often violate its dictates, in the belief that the child has not sense enough to see the violation. Instead of being made a ruling principle in every-day life, it is rarely heard of; and hence, *from inactivity* IT BECOMES INDISPOSED TO ACT, because such is the law of its organization.

It is the same with the religious feelings. If these be actively cherished and made to regulate every-day life, their organs acquire readiness and vigour of action, and the feelings become sources of happiness and right conduct. But if their exercise be reserved for the seventh day, and they be laid aside in the intervening six, the law of organization decreed by God is again broken, and from sluggishness *indisposition to activity is induced!* The separation of belief from practice, which some inculcate, has misled many, and done infinite harm.

From the same principle which requires the regular exercise of *all* the moral and intellectual faculties, it necessarily happens, that if one or several be greatly cultivated to the exclusion of the rest, all are apt to suffer. Those which are too constantly in action, are apt to pass into that irritable state of excitement which constitutes an almost morbid craving, and is hurt by indulgence; while those which are not sufficiently exercised become sluggish and *INDISPOSED* to act. This is in truth one of the reasons why persons remarkably gifted with partial talent, are rarely equally remarkable for sound general sense or feeling, or for being proportionably happy. Continual activity in the one direction exalts their irritability, diminishes the healthy tone of the system, and leaves in abeyance all the other faculties of the mind, whether moral or intellectual. Hence in some degree the proverbial irritability of poets, artists, musicians, and authors, whose minds are exercised on one set of objects, and whose moral feelings are not brought sufficiently into play in the ordinary duties of life. And hence, I may add, the danger or deterioration of character in young people from excessive addiction to one line of pursuit, and the neglect of their other and higher faculties.

In short, in attempting to produce moral excellence in the young, we have no royal road to stride over with seven-league boots. We must just submit to cultivate the sense of Justice, and the sentiments of Veneration and Benevolence, on the same principle as we do musical talent, or muscular power; and we may be very thankful in having the guarantee of Omnipotence to assure us of success when we do so. It is a fact which I can explain only by the prevailing neglect of moral education, that, as a general rule, the organ of Conscientiousness is larger in childhood than in mature age. If the sentiment were properly cultivated, I think it would become proportionably stronger instead of weaker.

ARTICLE VI.

ON THE FUNCTIONS OF THE ORGANS CALLED WEIGHT AND CONSTRUCTIVENESS; being the Substance of a Paper, read before the Members of the Manchester Phrenological Society, June 2. 1835 : with some Observations on Mr SIMPSON'S Views, as given in the 43d Number of the Phrenological Journal. By RICHARD EDMONDSON.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,—The function of the organ called Weight has been the source of considerable discussion among some of the most eminent and talented phrenologists. Sir George Mackenzie and Mr Simpson have both engaged in its elucidation, and have given to the world some brilliant specimens of high intellectual and practical attainments on this subject; and though it may appear great presumption in me to enter the lists against such powerful champions, yet, as we are assured upon high authority that “the race is not always to the swift nor the battle to the strong,” I will venture to break a lance in the cause of what I consider phrenological truth. You have twice favoured me with a clear field in your valuable pages, and I shall feel much obliged by a repetition of your kindness on the present occasion, while I more fully unfold my view of the function of this organ than I have hitherto done, and at the same time offer a few remarks upon Mr Simpson's views, as given in his last most able and valuable essay.* I have for the last six years been engaged, more or less, in making observations upon the perceptive organs generally, and especially upon Weight; and the utmost I aim at upon the present occasion is to lay the result before your readers in plain and intelligible language.

This organ, like Individuality, Form, Size, and some others, appears to be put into relation with external objects by two distinct media—the optic nerves, and the nerves of muscular sensation; † and through the *former* to see the *direction* of the gravitating force in external objects, or, in other words, their state of verticality or inclination to the base on which they rest; and through the *latter* to perceive the position of our own bodies relative to the base on which they rest, or, in other words, the *direction* of the gravitating force of our bodies, as well as of any thing in contact with us, and therefore cognizable through this medium. Here, then, is the point of difference between Mr Simpson (and, indeed, all who have published on the subject) and

* Page 193 of the present volume.

† By the nerves of muscular sensation are here meant the nerves discovered by Sir Charles Bell, the function of which is to make us aware of the state of the muscles, or degree of their contraction.

myself. He considers that its function is to cognize and apply the proper amount of force in each animal movement or muscular action, and also that it is the foundation of mechanics and mechanical improvements; and accordingly he calls it the organ for force or mechanical perception. On the other hand, I hold its function to be confined to the perception of the *direction* of the *gravitating* force, both in ourselves and in external objects.

No one will deny that Mr Simpson's last essay does all but demonstrate the existence of an organ of force, and few, I am inclined to think, will differ from him as to the existence of a sense for resistance with its nerve—the point at issue betwixt Sir George Mackenzie and himself. They are both agreed, not only that we have such an organ, but that it is situated, “in man, immediately above the orbital plate, between the organs of Size and Colouring;” but I trust, Mr Editor, to convince them, not only that it is not situated in that region, but that it occupies a very different place in the cerebral mass. I shall not enter into any illustration of the function of “Weight” as put into relation with external objects by the optic nerve; as my other communications * contain probably sufficient evidence of the justness of my view, and more especially as Mr Simpson acknowledges its correctness, though he must pardon me if I make a remark upon the form of expression he has used. He says, in reference to my view upon the perceptions of the faculty through the sense of sight, “This is quite true, and shews that *equilibrium* of external objects is observed by the sense of sight,” &c. If, in speaking of equilibrium, he refers exclusively to objects at rest, the term is not sufficiently comprehensive; for by this organ we as certainly cognize the state of objects *in motion* as to verticality to their base, as we do those which are at rest. Take, as examples, the beam and piston of a steam-engine when at work, the masts and rigging of a ship in a heavy sea, the stems and branches of trees in a gale, the pendulum of a clock in motion; none of these objects is strictly in equilibrium, though they are always in some state of verticality or inclination to the earth's surface: and my position is, that, *cæteris paribus*, just in proportion to the size of the organ of Weight are we able to perceive that state, whether vertical or inclined. Or if Mr S. restricts the term to objects whose position is vertical, the term is equally objectionable; for it is by this organ that we detect deviations from the perpendicular.

In unfolding the view I entertain of the perceptions received by it through the nerves of muscular sensation, I shall take the liberty of using the facts afforded by Mr Simpson himself; as they are most pointed and conclusive evidence in my support, and, from having been adduced in support of a different theory,

* Page 349 of the present volume, vol. vii. p. 106; and vol. ix. p. 142.

will probably carry more conviction to the mind of the reader than my own observations would do, though equally strong in point.

Mr Simpson refers to a case communicated by Mr Levison of Hull, of a gentleman whose organ of Weight was so very deficient, that, when travelling by sea, he seemed (to use his own words) as if he could not balance himself. Mr Simpson very justly attaches great importance to this fact, and considers it one of the most pointed confirmations of the organ that have been recorded. I perfectly agree with him in this; for it is clear to me, that the gentleman's incapability of balancing himself arose mainly from a deficiency in the power of perceiving the *direction* of the gravitating force of his body; which was constantly changed by the motion of the vessel, the base on which he stood. He could not balance himself—in other words, he could not accommodate his body to alterations in parallelism of the ship's deck, so as to maintain a steady gait or position; being deficient in the power of perceiving his own direction to his centre of gravity.

Contrast with this gentleman the celebrated equestrian Ducrow, who possesses the organ in question in an unusually large degree, and in whom it has been long and intensely cultivated. No one who has witnessed the feats of this wonderful man, can fail to have been struck with the steadiness and gracefulness of his positions when performing. He stands on the back of a horse at full speed, with as much apparent ease to himself as that with which most men stand on a parlour floor. However difficult the feat he may perform,—however rapid and unstable his support,—he is ever graceful, firm, and secure: you suffer no apprehension for his safety, no fear of his falling; you, in fact, see and feel that he is the master of his art. His large and highly cultivated organ of Weight enables him to perceive, with the nicest accuracy, the *direction* of his own frame relative to his ever-changing centre of gravity; and no matter how rapidly the changes succeed each other, he at once perceives them, and (by his organ of Force, which I deem to be also large) adapts his positions accordingly, with the precision of an instinct. And the organ of Weight, through its other medium, serves him as an assistant or regulator very materially, exhibiting to him the true position of each surrounding object relative to its base. Probably most who have seen him perform, may have noticed the constant use he makes of his eyes,—keeping them generally directed to objects nearly at his own level; and there can be no doubt that he would lose much of both gracefulness and security were he blindfolded. In proof of this, let any one try the experiment on himself when either walking or dancing, and he will be at once convinced of the immense importance of the eyes in preserving equilibrium: indeed, it is almost impossible for any one who

has not a good development of this organ, even to stand on one leg with them closed.

My own observations, so far as they have extended, strongly, and without exception, support this view of the subject; and were brevity not indispensable, I might enter into considerable detail. But as that is the case, I shall merely state that I have found that, *ceteris paribus*, infants who have the organ of Weight well developed walk sooner and more steadily than those who are not so favourably endowed; and on the same principle, individuals whose business or pleasure leads them upon the mighty deep, and who are favoured with this part of the brain large, will, *ceteris paribus*, sooner get their "sea-legs" (as the sailors say) than others who are deficient in it. But I must say, that I have found no regular connection between the development of Weight and the liability to sea-sickness. I have met with so many persons with the organ large, who are regularly sea-sick, and even coach-sick; and some just the opposite, that I much doubt the reality of any connection between them.

The effects of disease upon the perceptions obtained by the organ of Weight through both media, are strikingly corroborative of my view. Miss S. L., for instance, when attacked with pain in the region of this organ, "saw horizontal floors and ceilings in an inclined position, and felt the sensation of being lifted up, and of falling down and forwards, as if she had been tipsy." Mr Hunter, likewise, when suffering from a particular affection, "felt as if he had drunk too much, as if suspended in the air, whirled round with great rapidity, and sinking down; he also saw perpendiculars at other angles, and did not receive information from his own feelings of his centre of gravity." A case very similar to the above fell under my own observation some time ago. It was that of a newly married lady; who, at the change which generally takes place in ladies under such circumstances, was attacked with severe pain in the region of Individuality, which gradually extended over the whole of the super-auricular ridge, and was the prelude of derangement of the functions attributed by phrenologists to the perceptive organs situated in that region. Her chief hallucination was seeing spectral figures, which were of the most distorted forms and features, and of all tints and colours. She also saw perpendiculars at other angles; the windows appeared to have fallen on one side, and the walls and ceiling seemed jumbled together in strange confusion. The bed on which she lay did not appear sufficiently level to be safe; her feelings, in fact, did not correctly inform her of the direction of the gravitating force of her body. Nearly a week elapsed before she became convalescent, when the organs gradually regained their healthy tone. Neither Eventuality, Language, nor the reflective faculties, were affected,—at least perceptibly,—as she

appeared perfectly sane on all points, save those referable to Individuality and the perceptive organs at the superciliary ridge.

Again, the phenomena of intoxication, as described in Mr Simpson's essay, afford evidence not less conclusive; the almost universal incapability of maintaining equilibrium in this unnatural condition, arising, I imagine, from two causes; namely, a derangement of the power of perceiving the *direction* of the gravitating force of the body, and a diminished power of adapting the muscular energies to the exigences of the case—in other words, from a morbid condition of the organ called Weight, and of the organ of Force, but more especially the former; at least I have seen a considerable number of individuals in this state, who could use their muscles with great accuracy, as in playing upon the flute or violin, or in singing, talking, &c., and who, at the same time, could scarcely either walk or stand.

There are other two points connected with the function of this organ, as connected with external objects by the nerves of muscular sensation, which I shall briefly notice. As already stated, it enables us to perceive the direction of the gravitating force of objects sufficiently in contact with us to be cognizable through this medium. To exemplify this: Suppose I take in my hand a billiard-ball or any other substance—it is by this organ that I ascertain the *direction* of its gravitation; not the *amount* of the force, or its *weight*, but the *direction*: there is a distinction here, and obviously two sensations, and one organ cannot give us both. The substance may be of any weight, according to its size and density, yet its *direction* will always be the same, namely, towards the earth's centre, the point of gravitation. The other point is this: If I close my eyes and run my hand over the leg of a table, I shall, according to the development of this organ, *ceteris paribus*, be able to ascertain its position relative to its base, whether vertical or inclined; just as the organ of Form enables me, through the same medium, to perceive that a billiard-ball is spherical. Blind people, whose perceptive organs can act only through this medium, manifest, owing to constant exercise, astonishing accuracy in this respect; and the rule of size, *ceteris paribus*, being the index of power, applies to them equally with their more favoured fellows.

The circumstance of the organ of Weight having invariably been found largely developed in all eminent engineers and mechanics hitherto examined, has had more importance attached to it, as an argument for the organ being that of Force, than it merits; for precisely the like occurs, so far as observation has extended, in all clever equestrians, tight and slack rope dancers, &c., and there is not much analogy in the pursuits of the two classes. We have seen how, in the view I have of its function, it is so essential to the equestrian; and that it is equally neces-

sary to the engineer will be obvious when we consider that his business consists in surveying land, in planning roads, works, canals, bridges, aqueducts, &c., and in drawing upon paper the plans he may form, so intelligibly and correctly, that they may be understood and acted upon by others who are to realize them in construction. These things he could not do without an accurate perception of perpendiculars and inclined angles; the true function, as I believe, of this organ as related to external objects by the sense of vision.

The same remarks will apply to the mechanic and the architect. Mr Simpson mentions in a note, as confirmatory of his view that Weight and not Constructiveness is the organ of Force, "the case of M'Lachlan, a Saltcoats weaver, who, in the energy of his perception of momentum, engaged for years in making experiments upon the stroke of a pump, and ruined himself by employing others to *make* what he invented; and accordingly in him the organ of Weight is large, and Constructiveness small." Had a more full account of this man's development been given, every phrenologist would have been able to ascertain, in some measure, the probable motives to action in this singular case; instead of which, we are simply informed, that, owing to the energy of his perception of momentum, he ruined himself by continuing these experiments, and that, accordingly, he had the organ called Weight large, and Constructiveness small. However, taking the case as it stands, it is evidence of considerable force of the justness of my view; more especially if M'Lachlan was prompted to this conduct solely by the energy of Weight; for we find all the powers he possessed, engaged unremittingly for years upon the improvement of one single motion of a simple machine—the stroke of a pump,—the direction of which, all are aware, is vertical to the earth's surface; in other words, the pump-box is moved up and down the tree or body of the pump *perpendicularly*, affording direct and constant gratification to this organ. Again, the organ has been found large in all eminent billiard-players, bowlers, quoiters, &c., and the fact has been adduced as strong evidence for its being the organ for Force; Mr Simpson alludes to it at the commencement of his essay. The circumstance is however a strong confirmation of my view, as will be obvious to all who consider the nature of these games. Billiards, for instance, is an entire game of straight lines and angles, requiring the nicest perception of their innumerable directions, in order that the requisite force may be properly applied; and it would be utterly impossible for any one to excel in this beautiful and fascinating game, who had not an accurate perception of these angles, the result of a large development of this organ. A particularly large organ of Force is not so essential, *direction* be-

ing, as I should imagine from experience, about seven-tenths of the game. Any one who has attended a billiard-table, either as an amateur or as a player, must have observed that many excellent players use very little force in their strokes, playing what is called the "quiet game;" while others, equally good, apply, in most cases, ten times the amount—*amount*, as I before observed, being, in the majority of strokes, of less consequence than *direction*. In bowls this is not the case, amount being quite as important as direction; for however correctly a bowl be grounded or biased, if the precise amount of force requisite be not applied, the stroke will be just as useless as if not directed in the proper angle: in other words, both an accurate perception of the required angle of direction, and the capability to apply the necessary amount of force, are essential to the successful bowler. So also in the game of quoits. A good development of *Locality*, which, from observation, I deem to perceive the distance of each object from the eye, is indispensable in all these games.*

I have now, Sir, as briefly as full justice to the subject would allow, unfolded the view I hold of the function of the organ called *Weight*. I trust to have shewn, that the evidence collected and recorded by others, in support of its being the organ of *Force*, is, when properly applied, most pointed and conclusive in establishing my proposition; and it is worthy of notice, that every recorded fact that I have seen connected with its manifestation, coincides with my own observations, and, so far as they apply, clearly shew that its function is the perception of the *direction* of gravitating force; receiving information through two media, the optic nerve and the nerves of muscular sensation—enabling us, through the former, to see the relative position, whether vertical or inclined, in motion or at rest, of all external objects to the earth's surface, or the base on which they rest; and, through the latter, to perceive the position of our bodies relative to the base on which they rest—in other words, the direction of the gravitating force of our bodies and anything in contact with us, and so cognizable through this medium. This being the case, I scarcely need say that "*Weight*" appears a very inapt name for the organ, and that "*Mechanical Perception*" is equally inappropriate, neither of them being at all expressive of its function. "*Verticality*" is the best word our language affords, both for brevity and comprehensiveness; for, though the organ perceives deviations from the vertical, it is

* The organ of *Size* is believed by many phrenologists to take cognizance of distance, as well as of other modifications of space. May not this organ have been large, along with *Locality*, in the cases observed by Mr Edmondson? The ideas of *position* and *distance* appear so essentially different, that we are little inclined to regard them as originating from a single faculty.—EDMR.

clear to me that it does so by placing either real or imaginary vertical lines in juxtaposition with them : so that the term is very expressive, and I would here respectfully suggest its adoption.

I will now, with your permission, proceed to offer a very few observations on what I consider to be the true organ of Force. Mr Simpson, in the note to which I before alluded, says that it is not Constructiveness; but the reason he gives, viz. "that the ablest mechanic is often obliged to employ more expert workmen than himself to construct what he suggests—to realize his principle in construction, as patentees say," is far from being conclusive; and I hope to convince him, that if Constructiveness be not the organ of Force, its function is still undiscovered. It is undisputed, I believe, among intelligent phrenologists, that this organ gives expertness in exercising the muscles of the hand, arm, &c. in the use of tools. It does not contrive or invent, but merely gives dexterity in operative labour:—in other words, an individual who has the organ largely developed, will, *cæteris paribus*, perform a greater amount of his usual work in a given time, than one who has it small; the quality of the work in both being dependent not upon it, but upon the intellectual organs. This being the case, the question arises—What constitutes this manual dexterity or expertness? Should we consider a joiner an expert workman, who, in driving a four-inch nail, used no more force than he would when driving a half-inch sprig?—or one who, in rough planing an oak plank, should treat it as delicately as would be requisite were he smoothing off the edge of a half-inch deal board? Certainly not. Or should we consider a blacksmith an expert workman, who used as much force in nailing on the shoe of a horse, as he would in welding together two thick bars of iron? Or should we pronounce a man dexterous in the use of a turning tool, who applied as much force when finishing off a piece of wood or metal, as he would when roughing it out? Or would a man be thought dexterous in penmanship, who, in imitating the present fashionable, delicate, and indescribable female scrawl, applied the same amount of force to his pen, that he did when a boy at school in writing large hand, or *vice versa*? By no means. Or should we say that a painter was expert in his art, who applied as much force to his pencil, in the last finishing touches of a female face, as would suffice for his first rubbing in? Or would a surgeon be an expert operator, were he to apply as much force when reducing a fracture in the leg of an infant, as he would use when performing the same operation upon an adult—or *vice versa*? Undoubtedly not. I might, if necessary, go through the whole circle of voluntary muscular action, with, I think, the same results; but sufficient has been said to shew, that no man would be a dexterous or expert work

man, who failed in applying the proper amount of force required by the nature of his work. But allow him that power in a high degree, combined with a well developed and healthy muscular system, an active temperament, and a proper training,—and he will be, in what I take to be the legitimate sense of the term, an expert workman, that is a rapid one; and the conclusion appears to me inevitable, that as Constructiveness in high endowment gives this expertness, Constructiveness is, to all intents and purposes, the organ of Force. There is, however, another qualification necessary to constitute a *skilful* or good, in addition to an *expert*, workman, namely, the power of properly *directing* the proper amount of force, which depends, as I hope to shew, upon the intellectual organs; and in the precise ratio to the development of these organs, *cæteris paribus*, will be the quality of the work performed. For instance, an artist has to execute a portrait of the human face: he must not only be able to apply to his pencil the proper degree of force, but it must be applied in certain directions perceived by the organ of Form (which from a great number of observations I believe to cognize curved lines), and according to the accuracy of his perception of the necessary lines, will be his direction of the pencil: if he be deficient in Form, he cannot accurately perceive the different curves, and therefore cannot trace them; in other words, he cannot apply the proper force in the required direction. Or suppose an architect has to draw the plan of a building about to be erected: unless he have the organ of Weight large, he cannot perceive perpendiculars and inclined angles correctly; and though he may be quite competent to use the just degree of force, he cannot use it in the direction of the required angles, because he cannot accurately perceive them; and so on through the whole of the intellectual faculties, both in their single and in their combined manifestations. With large Constructiveness and the above-mentioned favourable conditions, a man will be an expert workman, or able to apply with rapidity force in the required amount; and with a good development of the intellectual organs necessary in the particular pursuit in which he may engage superadded, he will be able to apply that force in the proper direction: he will be both an expert and a skilful workman, no other qualifications being requisite.

So far as my own observations go, they most decidedly confirm this view; and for some time I have felt convinced that if Constructiveness be not the organ for muscular force, its function is unknown. For instance, I had a man in my employment a short time ago as an engraver upon steel, who was very deficient in Constructiveness; and though his work when done was in most respects tolerably good as to quality or skill displayed,

yet he was the most unprofitable workman I ever had, as, notwithstanding very close application and great assiduity, he required at least one-third more time for the execution of each pattern than ought to have been taken. His organs of Form, Size, Weight, Colouring, Order, and Individuality, were well developed, and the reflecting organs about the average. His temperament was sanguine, and he had been in constant practice for eighteen or twenty years. His great deficiency was really the incapability to apply to his work the proper amount of muscular force; he required to go over his steel with the graver and other tools several times oftener than others with large Constructiveness find necessary, before he could work up his drawing to the strength required, although he was a strong muscular person. And the practical result of my observation is, that I would never willingly engage a man, either as an engraver or as any other kind of workman, whom I found deficient in this organ; knowing that such an one would be an unprofitable servant, however skilful he might be. As a contrast to the above—I have had for several years a man in my employment as a turner and filer, whose Constructiveness is large, but whose Form and Size are small; Weight and Order are rather large, and the reflecting organs small. His kind of work does not require much skill, and he is truly “rough and ready,” and can execute more work in the same time than most men I have seen; yet, though he has been constantly employed at a lathe for the last sixteen years, should any thing occur to throw it out of order, he appears to have no more idea how to set it to rights, than a ploughman who had never seen a lathe in his life would have: indeed he has no more mechanical skill or contrivance or taste, than a North American Indian. His temperament is a mixture of bilious and nervous, chiefly the former. I might multiply cases of this kind to tediousness, but I trust the above will suffice to make clear the kind of evidence on which my view rests, as to the function of the organ called Constructiveness.

I have hitherto always found that individuals with Constructiveness large, are, *ceteris paribus*, more active in any kind of muscular action, and delight more in muscular exertion, than others who are deficient in it; and the organ appears to me not only to incite to muscular action, but to give the power of using the amount necessary to accomplish the result desired.

There is a gentleman in Manchester, a principal in one of the most extensive and respectable machine-making establishments in the neighbourhood, and who is personally eminent for his mechanical inventions and improvements, whose organ of Constructiveness is most decidedly small (indeed, it was pronounced to be so by Dr Spurzheim himself, and considered by him as a

case of great difficulty: Mr. Bally is my authority for this, who took a cast of the gentleman's head at the Doctor's request, which he has in his collection). The character given of the gentleman, by his workmen, as a mechanician, is, that he can invent anything, but that he can scarcely put his inventions together when each part is made ready to his hand and by his own direction, or take them to pieces when put together. Of course, this is an exaggeration; but I believe he is a much better contriver and judge of work than he is able to work himself. Those who are competent to judge of the matter, consider that his inventions are frequently defective in principle (which I humbly conceive to arise from his organs of reflection being, comparatively speaking, deficient), but beautiful in detail as to proportion, form of each part, and general finish, the result of course of his immense development of the organs of perception; and it appears to me that all mechanical inventions and improvements, *as to principle*, are the result of reflection, aided by observation and experience; that the practical skill or knowledge necessary to realize them in construction—in other words, to form the component parts, and to give them proportion, accuracy of position as to the different angles each part should occupy, beauty of finish, &c.—is dependent upon the perceptive organs, and that Constructiveness, the humble servant of the rest, gives the power to apply the muscular force essential to the completion of the whole.

I may, perhaps, at some future period, resume the subject; and in the mean time, I would request those phrenologists who, like myself, employ a number of hands, to direct their attention to it in the way of observation; as all mere opinions are valueless in Phrenology, facts alone being calculated to further its progress and completion.—I am, &c.

RICHD. EDMONDSON.

Though not yet prepared to coincide with Mr Edmondson in all his views, we think the facts and arguments adduced in his paper worthy of the attentive consideration of phrenologists. Having artizans in his employment, he is favourably situated for making observations tending to throw light on the subject under discussion, and we trust that he and other phrenologists who have similar opportunities will continue to impart their discoveries to the public. Constructiveness is a faculty regarding elementary nature of which we have never been fully satisfied. *The propensity to fashion or configurate* has occurred to us as the phrase most accurately descriptive of it; but if Mr Edmondson's views be sound, some other name must of course be applied. In several of the manifestations ascribed by Dr

Spurzheim himself to this faculty, there is neither construction nor any other kind of fashioning or configuring: "It is necessary," says he, "to those who excel by their ability in musical performances, to clever experimenters in physical doctrines, to good operative surgeons."—EDITOR.

ARTICLE VII.

THE DETAILS OF PHRENOLOGY.

THE empty cry about the conclusions of phrenologists being unsupported by facts has now ceased, unless with a few specimens of antiquity or obtuseness, to the stock of whose ideas no addition has been made for some twenty or thirty years. It is found more convenient, because more vague and unmeaning, to make random protests against the *details*. What are these details? They are either facts considered individually, or the relations existing between such facts; that which is discovered to be applicable to all similar facts, or all similar relations, being called a general conclusion. These general conclusions are usually admitted by the persons who object to the details. Now, the facts exist in nature, and that by millions, whether we observe them or not. So, also, do their mutual relations. The uniting of these details into general conclusions is what the phrenologists can alone claim the peculiar credit of. How vast, therefore, is the absurdity of these objectors to "the details," who thus give their acquiescence to Phrenology, in so far as it depends immediately upon the correct observations and reasonings of phrenologists; yet, in the same breath, deny such details of the science as rest directly on the visible realities of nature, open to the eyes of every one! After all, we find such objections to the details to be merely nominal—merely a cry without substance and support; since practical observers of acknowledged ability are continually bringing forward these details as matters of fact, and differ from phrenologists only by failing to reach the conclusions.

A good illustration of this may be seen in Audubon's description of a visit to the late Mr Bewick, the celebrated engraver on wood.* Bewick is described as being "a tall stout man, with a large head, and with eyes placed farther apart than those of any man I have ever seen;—a perfect Englishman, full of life, although seventy-four years of age, active and prompt in his la-

* In the third volume, recently published, of his "Ornithological Biography," p. 300.

hours." On reading this simple description, a phrenologist would at once presume the large head and active temperament to have been attended with a powerful and energetic mind; while the very large organ of Form, indicated by the extraordinary breadth between the eyes, would at once point out the probable direction of that mental power to some art in which a talent for correctly observing *shapes* is pre-eminently called forth. Of course, Audubon, in speaking of Bewick's talents and force of mind, deems it necessary to give his own guess as to their origin; and, after making due allowance for the vague manner in which mental manifestations are usually written of, the explanation of Mr Audubon is substantially correct as a general statement; but it wants the "phrenological details" necessary to render it of any practical applicability. His words are—"My own opinion of this remarkable man is, that he was purely a son of nature, to whom alone he owed nearly all that characterized him as an artist and a man. Warm in his affections, of deep feeling, and possessed of a vigorous imagination, with correct and penetrating observation, he needed little extraneous aid to make him what he became, the first engraver on wood that England has produced." Let us now join this description of Bewick's mind to the description of his person, and we have one of the "details of Phrenology," given by a man of great natural talent, and who, in all likelihood, had no suspicion that he was doing so when writing the descriptions above quoted. How many, too, will read those descriptions without ever suspecting the necessary connexion of the facts mentioned; and, possibly enough, in a few hours thereafter, some of them will declaim against the "DETAILS OF PHRENOLOGY."

H. C. W.

February 1836.

ARTICLE VIII.

REMARKS ON THE CEREBRAL ORGAN CALLED MARVELLOUSNESS by SPURSHIM, and WONDER by COMBE.

(TO THE EDITOR OF THE EDINBURGH PHRENOLOGICAL JOURNAL.)

SIR,

HALL GATE, DONCASTER,

December 24. 1835.

As soon as I could possibly spare time, I avail myself of your kind offer of allowing me to make a few remarks on the function of Marvellousness, in reply to a statement made in an article of your Journal, No. 43, page 276. The writer says:

* Mr Levison entertains unsound and novel opinions respecting the sentiment of Wonder; though he propounds them as established doctrine. He thinks the faculty gives mankind an instinctive faith,* &c.* It will be presently proved that this opinion is not so novel as the writer seems to suppose. Before, however, I enter upon a defence of that part of my own article which might appear novel, I would premise that I used the term *marvellousness* in my *Mental Culture*, because I thought the views which Dr Spurzheim entertained upon it were most correct, and my only fault or merit was an endeavour to trace the manner of the operation of this faculty in a mind uncultivated—for the purpose of proving that its *elementary* tendency was *faith*; and because, in civilized man, actions are more compound and influenced by opinions and dogmas early inculcated, and improved by the experience and knowledge of physical and moral science. I considered the organ not only gave a love for the marvellous, &c., but that *faith* depended on it.

Dr Spurzheim named it in the first instance "Supernaturalité," and attributed to it a belief in the *wonderful*—the *marvellous*—the *surprising* (étonnant), and also in mysteries and miracles, &c., and these opinions he retained in his English editions, when he altered the name to *Marvellousness*; distinctly stating, from his increased observations, that this faculty contributed to *religious faith* more than veneration did. Now, in my work on *Mental Culture*, I have intimated a similar opinion, and endeavoured to prove this simple proposition, that *Marvellousness* acting without true knowledge was liable to a childish or ignorant credulity—an opinion which is not at variance with the deductions of Mr Combe in his views of *Wonder*. But, at the conclusion of my own article, page 68. of *Mental Culture*, I made one assertion which seems to have been misunderstood, and, therefore, in the remaining portion of this communication, it will be my endeavour to render my *novel* notion clearer and better illustrated.

The statements made, page 68. of my work, are in these words: "*Yet when this sentiment (Marvellousness) is controlled by reason, it appears essential to give credence to what we regard as fundamental truth;*" and that *faith* was required in what we

* It is proper that the reader should see the whole passage. "He thinks that this faculty gives mankind 'an instinctive faith' in the recurrence of natural phenomena of which a regular and unbroken series has for a long time been observed. 'Possessing this sentiment of natural belief,' says he, 'we are not now under the necessity of reconvinving ourselves that the operations of nature, which we observe, are uniform and constant: we feel certain that they are so,' (p. 63). Facts, it humbly appears to us, are wholly at variance with such an idea of the function of the organ of Wonder—an idea in support of which Mr Levison offers not the shadow of an argument. Observation proves, that the larger this organ is, the less confidence have men in the uniformity and constancy of the operations of nature, and the more are they disposed to expect the supernatural interference of occult beings.—EDITOR."

designate "philosophical pursuits." Therefore my present object is an endeavour to illustrate, "that in all subjects of a speculative kind *Marvellousness* is principally concerned, and that in scientific investigations it is an essential auxiliary." For, although it is said *conviction* depends on the intellectual faculties, yet *belief*, *credence*, faith, &c., as parts of the mental process, seem to me to depend on the Marvellousness.

My own experience and observations have misled my judgment if it prove not as just stated, when nature is consulted—when numerous facts will confirm my conception of the elementary function of this organ to be faith.

All things which are cognizable by the external senses may seem at first to require little of faith, but it will be obvious that this is not precisely the case; for many of the *phenomena* in the sciences embraced under the generic term Natural Philosophy are not, like mathematical truths, so demonstrable as not to admit of a difference of opinion. When the senses are impressed in their respective manners, and their impressions are transmitted to the perceptive faculties, we take cognizance of things, &c.; and by frequent repetition of such impressions, and by comparing them as to their similarity or difference, we deduce some general inference. Let me illustrate this, to prove that *something* besides the intellect enters into our inductive process. Example: When we observe heads with towering foreheads, and the individuals are benevolent, and that the contrary takes place when the head is low, we should be justified by this species of evidence to conclude, *that the elevated head at the anterior and superior portion of the anterior lobe gave a tendency for kindness, sympathy, and mercy!* But when asked how pain and suffering should affect this part of the brain and no other? we must have recourse, from not knowing the *modus operandi*, to *believe* that it was, because persons who have *benevolence* large are invariably affected by scenes of suffering, whilst those who are comparatively deficient of this organ are indifferent spectators in similar circumstances. If it is even admitted, that whatever the intellectual powers cognize may be considered as bringing conviction, we cannot reject the probability, that whatever depends on any thing like *faith* in investigating physical truths requires the aid of Marvellousness:—this *sentimental* conviction is opposed to *positive* conviction; in the latter is comprehended such axioms as "the whole is greater than a part," &c.; and the former is intimately concerned in all abstract reasonings, or in systems formed on even what may be regarded as solid *data*: the theories of geologists form a striking comment on the latter position.

We select another example from physical science. When a magnet is placed near a piece of iron, it is said to attract it.

Now, if the word *attract* means any thing, it is, that the magnet *pulls* the iron—this is inferred from the observed effects, *as the iron moves to the magnet*: To explain this we say, the attraction is occasioned by the magnetic fluid; which was *believed* by philosophers from the time the statement was first made, although until very recently such a fluid was merely conjectural, until seemingly proved by the electro-magnetic experiments; and even now we have but a *learned* ignorance as to its real nature. Similar observations may be applied to the nervous system and the various *phenomena* of nervous action.

The words *marvellousness* or *wonder*,* which are nearly synonymous in all languages, do not explain the notion of that process in the mind which predisposes our assent to half glimpses of knowledge, but the active sentiment of *faith* aids us in every circumstance. In the pursuit of information man is longer a child than his self-esteem would induce him to suppose—for if we were obliged to prove all things before we yielded our assent, life would pass in the attainment of a very very small portion of human knowledge. Do we not receive information during childhood almost *passively*, and as little is actually comprehended of what is told us, even when we appear to give our whole attention—but yet we adopt it, because we entertain a respect for our parent or our tutor; and it is even so in after life.

My first impression that *faith* or *belief* was owing to what is called Marvellousness, was induced by numerous observations. All the heads of persons with strong credulity, have the superior and lateral portion of the frontal bone spread out, looking like a flat shelf: the followers of Johanna Southcote may be cited as proving this statement; you are aware that they considered that defunct lady to be the mother of the *true* Shiloh, and that although years have passed away and this prophecy is falsified, yet these *believers* are certain that the time is only delayed to put their faith to the test. I visited one of their chapels at Sheffield about three years since, and was particularly struck that every true *Southcotarian* had the organ of Marvellousness very large;—nor could I be deceived in the true disciples of Johanna, as each who claimed such honourable distinction had a beard, or, if too young, the hair of the head screwed up in a sort of French *curls*. Self-esteem was also largely developed in these persons. It was laughable to observe the contempt which they showed to any *beardless* visitor. Part of the service was performed by a woman, who read that portion of *Leviticus* which contains the command, “The corners of the beard ye shall not clip.” The preacher was a modest sensible sort of a person for

* I do not intend to call the organ in my public Lectures *Sentiment of Faith*, but speak of it indifferently as Marvellousness or Wonder.

a Southcotarian, and he did not allude once to the *monomania* of the true Messiah.

I have repeatedly noticed persons with good anterior lobes, but with *marvellousness* large, great believers in occult and mysterious doctrines; and others, with moderate intellect and their *faith* strong, repudiating every thing of an intelligent kind, and enforcing with much zeal the importance of faith! The Swedenborgians illustrate my first statement, and the Antinomians, Ranters, &c. the latter position. The Swedenborgians have generally good intellectual faculties, but their Marvellousness is very large. In the portraits of Baron Swedenborg we observe a similar combination. He was the author of many scientific works, the *Regnum Minérale* in 3 vols., besides many others on physiology and medicine. His disciples believe, with their founder, "that the Lord manifested himself to him (the Baron), and opened unto him a sight of the spiritual world, and enabled him to converse with spirits and angels." They also believe that Swedenborg had all the *arcana* of Heaven and Hell exposed to him; and in their "Doctrine of Correspondencies," they literally believe *that whatever pursuit or calling we have exercised during our earthly residence, we shall spiritually exercise in a future state*. Upon the nature of the soul—they suppose it an immaterial fac-simile of the general and particular contour of each individual, in their form, stature, facial lineaments, &c. Yet, amidst much such kind of speculation they entertain many sublime views of God and his providence;—they are highly moral, and have generally a very strong predilection for scientific pursuits. It is their naturally strong intellect which constantly forces them to contemplate the things of the visible and material creation (which they regard as a natural revelation), and from which they derive the *data* for their peculiar religious notions:—they *materialize* spiritual speculations, and *spiritualize* known *phenomena* in the material world. The other sects alluded to above, present the converse of this: they depreciate all positive knowledge, from a mental obtuseness, and in their dreams of the future they act from no other *data* than their own absurd fancies; hence it is that their notions are so gloomy and irrational.

It is not a very rare occurrence to meet with individuals, who, even if they are more advanced in knowledge than their associates, are mentally struggling to reconcile their matured notions with their early ones, and even if they seem to overcome the latter, it is rarely a complete victory, as much of their early impressions lurk behind, and witness at once the weakness and strength of such a person. We have often seen instances of such early *belief* cling to the philosophic doubter with great tenacity,—so that even his very doubts do not seem any thing

else but amiable weakness, the living proof of the potency of his early impressions. If such are the conclusions and compromises during the vigour of the intellect, let the mind become sick, as when a *morbid* action of the brain is induced, and then he returns to his early associations, and he believes in their reality as if they were demonstrable truths.

Dr Johnson believed in ghosts, because he had been frightened when a child with stories of the horrible—his powerful intellect may have combated such notions, but he could never disengage his mind from the potency of their influence: and Blake (who illustrated Blair's Grave, and Young's Night Thoughts) believed in the entity of the personages created by his morbid mind, and which he conjured up with a magician's power; he is said to have been very angry if disturbed while sketching his *ideal* sitters, among whom were Moses, Aaron, Christ, St Paul, and many of the worthies of olden time. In the heads of Johnson and Blake the organ of Marvellousness was very large. The great lexicographer believed also in dreams as partial revelations, and was also a fatalist, in the sense this doctrine is regarded by the Orientals.

Now, it appears to me, from these and numerous other observations, that all notions of an occult kind are addressed to this faculty (Marvellousness), and that their powerful influence on the mind arises from the fact, that we imbibe such particular ideas during infancy, and that they are accredited because communicated by persons we regard and look up to as some unerring authority. In this way our *faith* is stimulated to action. For whatever creed or notion we receive in childhood, such opinions remain more or less vivid in proportion to the size of *Marvellousness*, and in the ratio of the *intellect*. When the first predominates, the person goes on to the end of his existence without a single doubt disturbing the even tenor of his thoughts. On the other hand, persons with good reasoning faculties doubt the reality of every thing that occurs to them, even matter of fact evidence. The case of the late Mr James Bullus of Howden, in this county, which I communicated in your Journal, vol. v. p. 480, illustrates my last position: "*He saw ghosts and did not believe in them,*" and he had an excellent anterior lobe, but the organ of Marvellousness so very deficient, that the convolutions appeared scooped out at each side. This and similar cases confirm my notion that *faith* or *belief* cannot be supplied by any process of the intellect. Mr Bullus was an unbeliever of religious dogmas—he laughed at them as dreams of fools, or the imperfect conceptions of grown up children:—in short, he was a consistent doubter, for I verily believe that even in the ordinary events he doubted his own experience. If he had had

less perceptive faculties, he might have become a BERKELEYAN PHILOSOPHER, instead of the SPINOZA of his village.

I could bring forward a great mass of further evidence that my notions are verified as to the true function of this organ, in the success of charlatans, in all departments; but I have occupied you longer than I had anticipated. Yet I must intrude a few minutes longer, just to recapitulate some of the previous statements, "that belief is a sentiment depending on what we called 'instinctive faith,'—that *Marvellousness* and *Wonder* express only some of its modes of action; and if there is any difference in the meaning of the terms now in use, it is only in degree or intensity. That the first employed by Dr Spurzheim is used to indicate any thing mysterious, or the occurrence of some unaccountable event; whilst the term employed by Mr Combe indicates the notion of children or ill-informed adults when they behold any novelty—whether it should be a frightful hurricane, a tremendous storm, or some curious invention in art or science.

Many interesting cases are in my possession, should you be disposed to receive another short paper in some future number. I am, Sir, with great respect, your obedient servant,

J. L. LEVISON.

We are disposed to think that belief is in every case an intellectual operation, though frequently modified in its character by various of the affective powers. Belief that an occurrence has happened, or will happen, seems to be a conception of Eventuality, accompanied by the notion of past or future time; and, in like manner, belief in a fact that is not an event or relation, appears to be a conception of Individuality. The chief affective faculties by which the character of these conceptions is modified, are Wonder, Hope, Veneration, Cautiousness, and Self-Esteem. Causality, also, has much influence.

When *Wonder* is inordinately strong, there is a powerful tendency to believe in the marvellous; the strange, the occult, the surprising. We know a gentleman with the organ large, who confesses that the more wonderful a circumstance related to him is, the more apt is he to believe it. It is among the ignorant that this effect is most likely to happen; for by them the suggestions of the sentiment are in a very slight degree counteracted by knowledge. "Wonder," says Lord Kames, "is the passion of savages and of rustics. . . . The more supernatural the facts related are, the more wonder is raised; and in proportion to the degree of wonder is the tendency to belief among the vulgar."* To a similar effect Montaigne observes: "Things unknown are the principal and true subject of imposture; forasmuch as, in the first place, their very strangeness lends

* Sketches, B. i. sk. iv. § 2.

them credit," &c. "Nothing is so firmly believed as what we least know; nor are any people so confident as those who entertain us with fabulous stories, such as your alchymists, judicial astrologers, fortune-tellers, and physicians."*

Hope, when very powerful, disposes men to believe on slight grounds what they wish to happen or to be the case. This sentiment is rightly denominated "*credulous hope*" by Tibullus—

"*Credula vitam*

Spes fovet, et fore cras semper ait melius."

It facilitates belief in the existence of a state of happiness beyond the grave. By persons in whom the organ of Hope is moderately developed, the evidence of that existence is more critically scrutinized than by individuals differently constituted. Burns, whose Hope was moderate, expresses himself thus: "One thing frightens me much; that we are to live for ever seems *too good news to be true*. That we are to enter into a new scene of existence, where, exempt from want and pain, we shall enjoy ourselves and our friends without satiety or separation—how much should I be indebted to any one who could fully assure me that this was certain!" Wonder, we may remark, was a feeling by no means deficient in the mind of Burns.

Those who have much *Veneration* are prone to listen with implicit faith to whatever proceeds from the mouth of revered Authority.

From *Cautiousness* arises facility in giving credit to what is feared. A very timid person in a storm at sea is much more apt than a courageous individual to believe the assertion that the ship will assuredly be wrecked. And as Hope disposes to belief in a happy eternity, so perhaps does Cautiousness to faith in a miserable one. Both faculties are aided by Wonder in this.

Inordinate *Self-Esteem* renders people credulous of whatever tends to their own aggrandisement; in weak-minded men, and even in some belonging to a different class, it causes the grossest flattery to be swallowed and believed. This is well expressed by Gay, in his eighteenth Fable:

"But flattery never seems absurd;
The flatter'd always take your word;
Impossibilities seem just;
They take the strongest praise on trust;
Hyperboles, though ne'er so great,
Will still come short of self-conceit."

Dr Spurzheim seems to have regarded belief as an intellectual operation, and to have, like us, considered Wonder as only a modifying cause. His words respecting this sentiment are, that it "*exerts a very great influence over religious conceptions.*" Now conception is a mode of action of the intellectual faculties alone.—EDITOR.

* Essays, B. 1. ch. 31. Cotton's Transl.

ARTICLE IX.

CASE OF JOHN ADAM, EXECUTED AT INVERNESS, ON THE
16TH OCTOBER 1835, FOR THE MURDER OF HIS WIFE.

THE murder committed in Ross-shire, in April 1835, by John Adam, on the person of his wife, was one of the most atrocious that have been recorded in the annals of crime. The body of the murdered woman was discovered by some persons employed in planting trees on a tract of waste land through which the road from Inverness to Dingwall, by Kessoch Ferry, passes. The deed having been committed after it was dark, the murderer did not observe that some parts of the dress remained uncovered by the materials he had thrown over the body, from the walls of the ruined cottage within which, it would appear, the poor woman had been killed. By means of a part of a veil the body was discovered. As an old road passed close to the spot, it is probable that, the woman being a stranger, it had been described to her as a near cut, in order to induce her to pass the inclosure. The selection of the spot seemed clearly to have been made with a view to the murder; and this circumstance induced some to conclude, at the time of the discovery, that the murderer could not be far off. Advertisements describing the person and dress having been promptly dispersed, some persons from Inverness were induced to come to Dingwall, and by them the body was identified as that of a woman who had lodged with them. They stated circumstances which led to the apprehension of Adam, who had lived some time in Dingwall under the name of Anderson, with a young Englishwoman, Dorothy Elliot, who passed as his wife, and had behaved uniformly well: She was useful to the public authorities, and appeared to be truly penitent. No attempt to flee was made by Adam, when the body was discovered. When brought into the apartment where the dead body lay, he denied all knowledge of the person, and scarcely a symptom of agitation was visible, even when desired by the procurator-fiscal to take hold of the cold hand (which he did), and say whether he had ever held that hand before. From information received from the people with whom the woman had lodged at Inverness, it was ascertained that her friends lived at Montrose. Some of them were sent for and came immediately to Dingwall, and identified the body as that of Jean Brechin, their relation, and Adam as the man to whom she had been recently married. He still denied all knowledge of the woman and her relations. The following is the substance of the judicial declarations which he made, taken from the *Inver-*

ness Courier newspaper of 23d September 1835, and which formed part of the proceedings of the trial:

"The prisoner's declarations were then read. The first was taken by Mr Cameron, procurator-fiscal, before Mr Mackenzie, Sheriff-substitute, on the 14th April. In this the prisoner professed to give an account of his whole life. His name, he said, was John Anderson, and he had never been known by any other. He was born at the Townhead of Dalkeith; he mentioned the names of his teachers at school, and of the several masters whom he had afterwards served in different capacities; that, in 1829 or 1830, he went into the service of a Mr Crichton, the tenant of New Barns, three miles east of Cupar Angus, with whom he continued until about 1831 or 1832, when Mr Crichton's lease expired, and that gentleman took the farm of Barnhill, 3½ miles from Nottingham, and the property of the corporation of that town. Here the declarant had L. 40 per annum of wages; but Mr Crichton becoming bankrupt, his servants were discharged, and he (Adam) travelled north. He was never a soldier. He brought with him the sum of L. 55, the accumulation of his earnings while with Mr Crichton. About the new year of 1834, he said he married, by license, Dorothy Elliot, the daughter of Edward Elliot, a publican in the town of Mansfield, who accompanied him north. His intention was to obtain employment as an overseer, but, failing in this, he went to Dingwall, and worked at such labour as he could obtain. He remained in Dingwall till the beginning of March, when he went south to see his friends at Dalkeith, and received L. 70 from his mother, as his share of his father's succession; he also lifted L. 40 from his brother, being a sum he (the declarant) had given to him when he came from Barnhill. He denied all knowledge of the deceased Jean Brechin, and had never, he said, been at Montrose. He had received some furniture and clothes left him by an aunt named 'Janet Bunton;' he acknowledged being in Inverness about the furniture; but he denied that he had ever been in a house in Chapel Street. This declaration of the prisoner was very long, and contained a multitude of minute details. The *second* declaration was dated two days afterwards, April 16, and was also taken in presence of Mr Mackenzie, Sheriff-substitute. It was substantially the same as the first, and contained a distinct denial on the part of the accused of all knowledge of the deceased, and her relations in Montrose. The *third* declaration was taken before Mr Sheriff 'Tyler, Inverness, on the 7th of May, and was wholly different from the former. In this he said his name was John Adam, and not John Anderson; that he was a native of the parish of Lintrethen, county of Forfar; that his mother is at present the tenant of Craigieloch in the same parish; that he never was a farm ser-

went in England; that in 1881 he enlisted in Glasgow into the 2d Dragoon Guards, but deserted from the regiment while stationed at Duffield in Derbyshire, in March 1884; that he induced Dorothy Elliot to accompany him, on his promising to marry her; that they travelled to his mother's house at Craigie-loch, and thence to Inverness and Dingwall, but he was never formally married to the said Dorothy. He acknowledged visiting Jean Brechin in Montrose about Martinmas last, as he wished, he said, to get repayment of some money he had lent to her before he joined the Dragoon Guards; but Jean Brechin refused to give him the money until he came back to marry her. Accordingly, as arranged between them, he went back to Montrose in the end of February or beginning of March, stopped about a fortnight, was married to Jean Brechin at Laurencekirk, and came to Inverness, where he left her. He obtained the Bank receipts from Jean Brechin, one for L. 96 and the other for L. 15, on the 9th of March, two days before their marriage. He never told Dorothy Elliot the true cause of his absence in the south, nor of his having been married to Jean Brechin. He visited Jean three times at Hector Mackintosh's lodgings, Inverness, and a fourth time on the Monday se'ennight after the Saturday upon which he had the furniture brought to Dingwall. On this occasion when he (the declarant Adam) was about to set out for Dingwall, Jean took him aside and told him that she did not wish to remain any longer in these lodgings as they were cold, and that she would therefore pay them and leave them. He said she might take lodgings in any other part of the town she preferred. Jean settled for her lodgings, and came with declarant towards the Ferry, carrying with her a reticule basket and umbrella and a bundle; on their arriving at the Windmill, the declarant observed that the boat was about to start, and then took leave of Jean and hurried on to the Ferry, and she returned to the town. He had never, he said, seen Jean Brechin since the said Monday evening unless the corpse shewn to him by the procurator-fiscal was her's; but the features were so much altered and disfigured, that the declarant cannot say they were those of Jean Brechin. [The reading of these declarations caused a strong sensation in Court. The last agreed with the evidence on many points up to the fatal day on which the deceased, for the last time, was seen with the prisoner.]"

The third of these declarations was made after Adam saw it would be useless to make any effort against the testimony of the clergyman who married him to Jean Brechin, and the witnesses from Montrose, from his native parish, and from the regiments from which he had deserted. It was proved that, under pretence of providing a proper habitation, Adam had persuaded his wife to remain at Inverness till it was ready. In the mean time he had

got possession of her money and furniture. He had spoken to Dorothy Elliot of a plan he had of going to America to settle as an emigrant; and proposed that she should return to her family until he was settled, when he would come back and marry her. The probability is, that he had this scheme in view; for it is not likely he could have imagined that the disappearance of his wife could remain long unnoticed, though her body might have remained undiscovered. The murder appears to have been deliberately and skilfully planned; and every thing seems to have been arranged for his departure before it was committed, as he had taken the money from the office of the National Bank, where he had deposited it.

With respect to his general character, Dorothy Elliot stated that he was not irascible, but reserved, proud, and sometimes sulky. He was resolute and vindictive. He never failed to execute what he had resolved upon, or said he would do; and when satisfied by Dorothy that he was wrong, he would persist, because he had said it. He was sober; she never saw him but twice intoxicated while at Dingwall, and never heard him swear or use an improper expression. On the night, as was ascertained, of the murder, he came home in a state of great exhaustion, being scarcely able to stand, and was morose and averse to speak. He has all along shewn much regard for Dorothy Elliot, and expressed gratitude for attention shewn to her.

He persisted in asserting his innocence from first to last, in the face of the strongest circumstantial evidence, and of the fact that from the time he said he had last parted with his wife, he had made no inquiry about her. Even on the scaffold he declared that "he was not afraid to meet God on the ground of his innocence." After the execution, however, it was stated by a young man named Sutherland, who had been confined with him for theft, that about three weeks before the trial Adam confessed the murder to him, but made him take an oath that he would not divulge the secret till after the execution, if such should be the result. Great efforts were made to induce him to confess his guilt, but without effect. Indeed, we are informed that the unceasing and injudicious importunity of numbers of the clergy and other persons, was enough to disgust and sour a much less determined temper than his. It is extremely doubtful, however, whether a mind so constituted could have been brought to confession, had even the most consummate knowledge of it been brought to bear on the predominant feelings. The last visit of the unfortunate Dorothy Elliot (towards whom, as we have said, he evinced something like genuine attachment), it was hoped, might have moved him. During the interview her words and manner were powerfully affecting. She tried him in every possible way—made strong and even eloquent ap-

peals to every feeling of human nature, such as one would have thought might have melted a heart of stone—but his was of iron. He maintained an indifferent and dogged, yet respectful, manner to the last.

Of his previous and early history, the following account has been obligingly furnished by the Reverend Mr Cannan, minister of Lintrethen, in Forfarshire.

“The family from which Adam was descended have been tenants of the Airlie family in this parish for at least three hundred years. They have uniformly been a quiet, religious, moral, and industrious race of men. His father had this character to a remarkable degree. He died when his unfortunate son was about fourteen or fifteen years of age; and the latter being under little control, we may decide with a good deal of certainty what his natural dispositions were.

“Before this event, however, his father was for many years infirm, and he had been under little control, so that when he was deprived of him, his character did not alter much. From his childhood up to the nineteenth year of his age, he was generally considered mild, peaceable, obliging, merry, free from malice, honest, forgiving, and not addicted to swearing or intemperance. Although he shewed no contempt for religion, he did not evince any sense of religious obligation. He attended church regularly, and about his nineteenth year became a communicant.

“His observance of religious ordinances, however, arose more from habit and custom than from any interest he took in them. He scarcely ever spoke in either one way or another about religion. Almost the only failing, besides his religious indifference, for which he was noted, was a constant practice of concealing the truth when it affected him, and of fabricating lies. The fabrications, however, which he invented, were not got up with any view of injuring the peace of the neighbourhood, but to amuse and entertain his companions. His conversation was in general very frivolous, and he appeared not to be in any way concerned as to his prospects in the world. But with all this carelessness, during the few years that he was from home serving some farmers, he did his work with willingness, and obtained the approbation of his masters. He was also a great favourite amongst his fellow-servants, on account of his humorous turn, and his readiness to assist any of them. He was at school for several years, but showed a great disinclination to learn: he frequently remained away many days without the permission of his parents, and was very much in the practice of inventing false excuses, to escape the lash of the teacher. If he was guilty of doing any thing contrary to the rules of the school, he never failed to put the blame on some other person. He was nevertheless respectful to his teacher and to his parents.

" A new era in his life commenced when he was about nineteen or twenty. His passion for women began to show itself in the most violent manner. Having now got the charge of his mother's farm, and his time being at his own disposal, he wandered away almost every night, visiting females. He remained so late, and was so fatigued with his rambles, that he often lay in bed till 12 or 1 o'clock on the following day. This parish is entirely agricultural, and there were no haunts of infamy to entice him away, and I never heard that he had any companions to give him bad advice. Two women, one of them a deaf and dumb person, and daughters of two elders in the parish, charged him with being the father of the children with which they were pregnant. As he knew very well that the deaf and dumb girl could not establish his guilt, he denied the charge she made against him, but confessed to the other. It was almost universally believed that he seduced both. The children resemble him in a very remarkable degree. It was given out, and with much truth I believe, that he had intercourse with many other women in this neighbourhood. He had a most uncommon faculty of flattering and deceiving the female sex, and, notwithstanding the injuries he did to many, yet he was more a favourite with the young women of the district than any other person.

" His conduct was so generally disapproved of by the grave and decent part of the community, that he considered it necessary to leave the parish: another circumstance also had its effect in thus determining him. He had become so indolent, and given his thoughts so entirely to women, that his mother's small farm of twelve acres became nearly useless; and she and the rest of the family accordingly wished him to go away for a while. Up to this period he was very obliging to his neighbours, and respectful to his mother. Although she scolded him, yet he never said any thing harsh in return. The reproofs which she gave him for his idleness and the ruin he was bringing upon her, did not in the least degree disturb him, or alter his conduct. His thoughtlessness was quite proverbial, and I suspect he felt very little the power of conscience at any time. About his twenty-first year he went to the neighbourhood of Brechin, where he first met the woman whom he afterwards married and murdered. She was housekeeper to his master, and he paid his addresses to her then; but as she was much older than he, it is supposed his motive was to procure better feeding than the rest of the servants.

" He went afterwards to Aberdeenshire, where he remained for two or three years. During that period no new dispositions in his character were indicated; he still, however, adhered to his old practice of flattering and deceiving young women. It was understood that this was the cause of his leaving tha

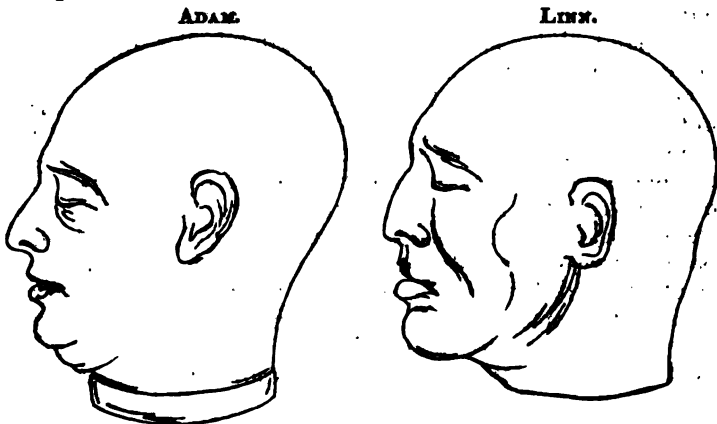
country and going to the neighbourhood of Glasgow and Edinburgh. We know very little of his behaviour while there. He enlisted in 1891, and visited this parish only twice while he was in the army. He was quite prodigal of his money, but gave very little of it to assist the women whom he had seduced in the maintenance of their children; and I am not aware that his mother received any assistance from him during his absence. He never was considered to be avaricious. When he deserted he came down to his mother's, and staid eight days. This shewed great thoughtlessness; for, two days after he was gone, I received a letter from the War-Office, inquiring whether or not he had come hither. He might have known that information of his desertion would be soon transmitted to his native parish, and that in all probability it would have reached me sooner. Instead of telling his friends that he had deserted, he stated that he had married a rich wife, who had bought his discharge, and a great many other lies, which indicated a good deal of self-conceit; and although they knew that he was very much addicted to lying, yet, so expert had he become in that art, that on this occasion he imposed upon them. He went about at the same time telling the neighbours of his wealth and gallantry, and deceived them also. He did bring a considerable sum of money with him, which he was suspected of having stolen. Before leaving this place he committed another act of dishonesty. The friends of one of the women whom he seduced, hearing that he had brought money with him, were anxious to be compensated for the maintenance of his children; and as he did not shew any disposition to pay his arrears, they sent Sheriff-officers to arrest him. When apprehended, he gave twenty pounds, and prevailed upon his brother to sign an obligation for the board of the children until they should be able to support themselves. Without this the woman's friends would not let him go. His brother afterwards began to think that he had been too rash, and was anxious to be relieved of the obligation. John soon relieved him, but in a very unprincipled way. He took his brother and his brother-in-law down to the house of the man who had ordered him to be seized, and said, as he was going away next morning, he was anxious to shew his brother-in-law the document. The man who had it produced it, and no sooner had John got it into his hands than he tore it to pieces. As it was Sunday, the injured party did not like to use violence towards him. Next morning he decamped by five o'clock, telling his friends he was going to England by the coach, whereas it was afterwards found out that he had bent his course, with his female companion, on foot, over the Grampians. His conduct in this fraudulent transaction, and the place which he selected to murder the woman Brechin, indicated some ingenuity. He never was known to shew any in-

genuity before, except in fabricating idle stories, in concealing the truth, and in deceiving young women."

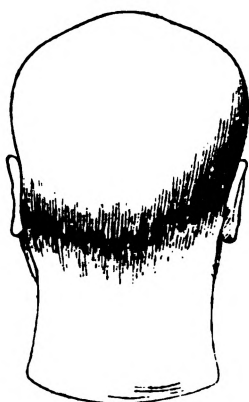
The age of Adam at the time of the murder was thirty-one; that of Jean Breehin about fifty. He is described as "a tall, handsome man." His marriage was solemnized at Laureneekirk, on the 11th of March, by Dr Cook the minister of that parish, well known as an ecclesiastical historian. The pair then proceeded to Inverness, and shortly afterwards the murder was perpetrated. A cast of Adam's head was taken by Sir George S. Mackenzie, assisted by Dr Nicol and Provost Cameron of Dingwall. Owing to an accident which happened to the mould on one side, the cast is to be regarded as only approximating closely in form to the actual head.

Before being made acquainted with the details of Adam's life and character, and having merely heard that he had committed a very brutal murder, we naturally anticipated to find in the cast a representation of the worst form of head—broad, low, and largely developed in the occipital region. The organs of the propensities, however, we found, though in general amply developed, not so to a very inordinate extent; while in the coronal region a considerable development of Benevolence and Veneration appeared. Such being the case, we instantly concluded, that, however atrocious the act for which he suffered, the tenor of Adam's life would prove to have been of no extraordinary kind, and that the murder would be found to have been perpetrated from strong motives in addition to that arising from Destructiveness, and not for the gratification of mere love of slaughter. This anticipation we afterwards had the satisfaction of seeing fully confirmed by the Reverend Mr Camman's account.

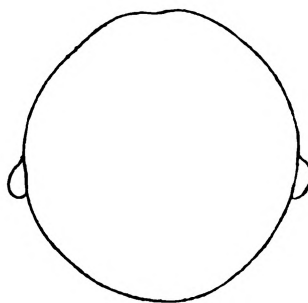
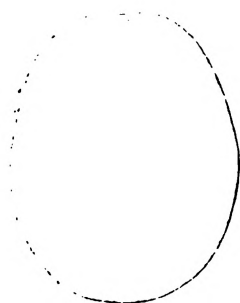
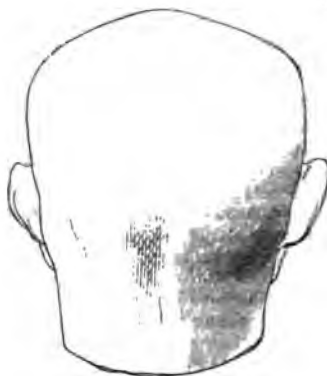
We subjoin three views of the cast, and, as a contrast to them, three views of the head of John Linn, an Irish pugilist and parricide.



ADAM.



LINN.



The following is a table of the dimensions of the cast of Adam's head, and development of the different organs.

1. Dimensions.

	Inches.
Greatest circumference of Head,	22 $\frac{1}{2}$
From Occipital Spine to Individuality, over the top of the head,	14
..... Ear to Ear vertically over the top of the head,	13 $\frac{1}{2}$
..... Philoprogenitiveness to Individuality,	7 $\frac{1}{2}$
..... Concentrativeness to Comparison,	7
..... Ear to Philoprogenitiveness,	4 $\frac{1}{2}$
..... Individuality	4 $\frac{1}{2}$
..... Benevolence,	5 $\frac{1}{2}$
..... Firmness,	5 $\frac{1}{2}$
..... Destructiveness to Destructiveness,	6
..... Secretiveness to Secretiveness,	6 $\frac{1}{2}$
..... Cautiousness to Cautiousness,	5 $\frac{1}{2}$
..... Ideality to Ideality,	4 $\frac{1}{2}$
..... Constructiveness to Constructiveness,	5 $\frac{1}{2}$
..... Mastoid process to Mastoid process,	5 $\frac{1}{2}$

2. *Development of the Organs.*

1. Amativeness large,	19	18. Wonder rather full,	12
2. Philoprogenitiveness rather large,	17	19. Ideality rather full,	12
3. Concentrativeness rather large,	17	20. Wit or Mirthfulness full,	14
4. Adhesiveness full,	15	21. Imitation full,	15
5. Combativeness moderate,	11	22. Individuality full,	15
6. Destructiveness rather large,	17	23. Form rather full,	13
7. Secretiveness large,	18	24. Size full,	14
8. Acquisitiveness rather large,	17	25. Weight full,	14
9. Constructiveness full,	14	26. Colouring rather full,	12
10. Self-Esteem large,	19	27. Locality full,	15
11. Love of Approbation large,	18	28. Number rather full,	12
12. Cautiousness large,	18	29. Order rather full,	13
13. Benevolence full,	15	30. Eventuality full,	14
14. Veneration rather large,	17	31. Time full,	14
15. Firmness large,	19	32. Tune rather full,	13
16. Conscientiousness rather full,	13	33. Language rather large,	16
17. Hope rather full,	13	34. Comparison rather full,	12
		35. Causality rather full,	12

SCALE.—Idiocy, 2; very small, 4; small, 6; rather small, 8; moderate, 10; rather full, 12; full, 14; rather large, 16; large, 18; very large, 20.

Murderers may be divided into three great classes. The *first* comprises the naturally blood-thirsty—men directly actuated by an overpowering Destructiveness. Many instances of this class of criminals are on record. Several are quoted in our last number, p. 500, and the following particulars mentioned by Dr Caldwell in his *New Views of Penitentiary Discipline*, furnish a good illustration of it. "In some individuals," says he, "the instinct of Destructiveness is like that of a tiger. Nothing can appease it but blood. We possess the skull of a man who was executed, at the age of about thirty, for the last of nine murders, the whole of which he acknowledged he had committed from an inherent love of slaughter. He murdered as an amateur. The flowing of blood he declared to be delightful to him. Hence he never failed to cut, from ear to ear, the throat of his victim. In the case of his last murder, he would probably have escaped detection, had it not been for this horrid sanguinary propensity. After having proceeded several miles from the place of his felony, he turned back to cut the throat of him whom he had murdered, and was apprehended. His whole animal compartment, but especially in the region of Combativeness and Destructiveness, was unusually large." The character of Linn is of a like description, and the shape of his head corresponds. The basilar and occipital regions, in which are situated the organs of the animal propensities, are extremely large, while the top of the head is comparatively deficient. We intended to insert an account of Linn in the present article, but are compelled by want of space to reserve it for our next number.

In the *second* class of murderers may be included those who are blood-thirsty from circumstances; that is, whose Destructiveness, though not in itself habitually of inordinate strength, is roused by provocation, or disagreeable affections of other organs generally, according to a law expounded and illustrated at great length in our 45th number, article third. In such cases, the passion usually has the form of resentment, which subsides with the disagreeable sensations that produced it. David Balfour, executed at Dundee on 2d June 1826, for the murder of his wife, belongs to this class of criminals. His head, of which there is a cast in the collection of the Phrenological Society, indicates no extreme preponderance of the organs of the propensities over those of the moral powers. In fact, although always a man of strong feeling, he bore a respectable character for many years; and he was goaded to the commission of the crime by his wife's long-continued misconduct, which preyed grievously upon his mind.* Othello may be referred to as another illustration. Jealousy—indeed every intensely disagreeable emotion—has the effect of rousing Destructiveness:

*"Jealous he grew; and jealousy supplied
His mind with rage, unsoothed, unsatisfied."*

Crabbe.

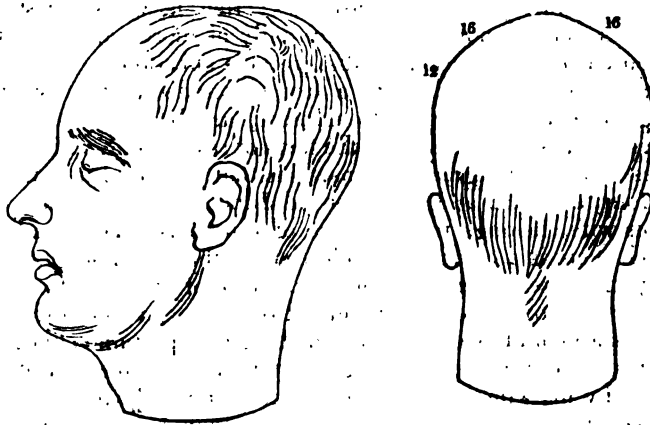
The *third* class of murderers is composed of persons who commit the crime, not from the excitement of passion, or any purely destructive impulse, but as the only or readiest way of removing an obstacle to the accomplishment of a much desired end,—such as obtaining possession of money, or effecting an escape from confinement or annoyance. The Thugs or Stranglers of Central India, whose profession it is to murder travellers for the sake of plunder, exemplify this class well.† David Haggart, executed at Edinburgh on 17th July 1821, for the murder of the jailor at Dumfries, may be taken as another, though less striking, example. His purpose was not to murder, but merely to stun his victim, in order to facilitate escape from the prison; and, on hearing a boy tell that the blow had been fatal, his better feelings suffered dreadfully. "The words," says he, "struck me to the soul; my heart died within me; and I was insensible for a good while: on coming to myself I could scarcely believe I had heard them; for the possibility of poor Morrin's death had never entered into my mind."‡ Benevolence was well developed in Haggart's head, and Destructiveness was not excessive.

* Phren. Journ. iii. 303.

† Ibid. viii. 627.

‡ Life of D. Haggart, Edin. 1821.

HAGGART.



It appears to us that Adam's case partakes of the character of the second and third classes, chiefly the third. That he does not fall within the first, is abundantly obvious from the statements of Mr Cannan and Dorothy Elliot, and also of the person by whom he was employed as a labourer at Dingwall. All these concur in representing his habitual temper as the reverse of ferocious. "From his childhood up to the nineteenth year of his age," says Mr Cannan, "he was generally considered mild, peaceable, obliging, merry, free from malice, honest, forgiving, and not addicted to swearing or intemperance;" and his employer, in the evidence given at the trial, represented him as having been, during the preceding twelve months while in his service, "a steady, industrious, sober, harmless, and inoffensive man; witness never saw a frown on his face." We are farther told by Mr Cannan, that, when his mother scolded him, "he never said any thing harsh in return." These are not indications of a mind naturally and inherently savage; and we are of opinion, that the idea of murdering his victim arose much less from any direct malevolence or cruelty towards her personally, than from his being unable to devise any better way by which he could rid himself of an obstacle to the gratification of his selfish desires. There is too much Destructiveness and too little morality to have revolted at such a way of attaining his end; and his mind may have been reconciled to it by her age and homely appearance. Macbeth murdering Duncan is an analogous case. The two motives, unconnected with Destructiveness, by which Adam was chiefly actuated, appear to have been, 1st, a desire to get possession of the woman's money; and, 2dly, a wish to free himself of her society, which was far inferior in attractions to that of Dorothy

Elliot. We have sometimes thought that, when the feeling of the love of life is weak in an individual, the crime of murder is regarded with less detestation and horror than by persons differently constituted; and it is not unlikely that some portion of the apparent callousness of Adam proceeded from such a cause. Firmness was so strong, that having resolved, in one of his sullen moods, and under the influence of the motives adverted to, to commit the murder, he would persist in carrying his resolution into effect, even though conscious of its criminality at the time. Indeed it was explicitly stated by Dorothy Elliot, that he never failed to execute what he had resolved upon or said he would do, and, even when satisfied that he was wrong, persisted in effecting his purpose.

We ought now to enter upon the consideration of the details of Adam's character and cerebral development; but our space being exhausted, we must confine ourselves for the present to a very few remarks. Our readers will easily perceive how closely the particulars given above correspond with the leading features in the development of Adam's head. The effects of Amativeness, Firmness, and Self-Esteem, which are the largest organs, appear at every step of his history. Secretiveness large and well cultivated, combined with Conscientiousness only rather full and Self-Esteem large, was the origin of his unprincipled fabrication of lies, and disregard of the rights of others when placed in competition with his own. Veneration was sufficient to antagonize Self-Esteem so far as to render his behaviour respectful; although, being associated with moderate Wonder and Reflection, it was never strongly directed to any religious object. Under the dictates of Self-Esteem and Secretiveness, combined with a moderate endowment of the reflective faculties, he appears to have thought his schemes and movements unfathomable by other men; and in this way Cautiousness was apt to be on some occasions lulled into repose. The obstinacy with which he denied his guilt was very remarkable; and in accordance with this, and the general tenor of his character through life, the organ of Firmness (as is remarked in the *Inverness Courier*) "was so prominent, as to give the head something of a conical appearance. We know," it is added, "that one or two gentlemen who were opposed to Phrenology, have acknowledged that the case of Adam almost made them converts to the truth of this science."

MISCELLANEOUS NOTICES.

EDINBURGH.—On 3d December, the following gentlemen were elected office-bearers of the Phrenological Society for the ensuing year:—The Honourable Douglas Gordon Hallyburton, M. P. *President*;—Sir G. S. Mackenzie, Bart., Dr Francis Farquharson, Bindon Blood, John Syme, *Vice-Presidents*;—Charles Maclaren, H. T. M. Witham, Dr John Scott, Phineas Deseret, Dr Patrick Neill, James Simpson, *Councillors*; Dr William Gregory, *Secretary*;—Robert Cox, *Conservator of the Museum*. The following donations were presented, and the Society's thanks voted to the donors:—Cast of the head of Mary Ann Burdock, executed at Bristol on the 15th April 1835, for the murder, by poison, of Mrs Clara Ann Smith; and casts of two Peruvian skulls, one from the Temple of the Sun at Pachacamac, and the other from an ancient Peruvian tomb at Huacho, an India town north of Lima—all presented by Samuel Stuchbury, Esq. Bristol; cast of the skull of a mechanic at Alyth, presented by the Dundee Phrenological Society; skull found in a stone-coffin in a cairn at Nether Urquhart, Fife, 16th March 1835, presented by the proprietor of the estate; Eloge Funèbre de S. M. Don Pedro, and Manuel des Maladies Veneriennes, both by Count Godde de Liancourt, presented by the author; Annals of Phrenology, No. 5, presented by the publishers; two old skulls found at Gogar near Edinburgh, presented by Dr J. R. Sibbald; cast of the brain of the whale lately exhibited by Dr Knox in Edinburgh, and mask of the late Rev. J. Brown Paterson, minister of Falkirk, both presented by Mr Anthony O'Neill; bust of Dr Hahnemann, the founder of homœopathy, presented by Dr Hirschfeld of Bremen; cast of the interior and exterior of the skull of Dean Swift, presented by Dr R. T. Evanson, Dublin; duplicates of the same, and cast of the skull of Esther Johnson, or "Stella," presented by Dr Houston, Dublin; cast of the head of John Adam, executed at Inverness, on 16th October 1835, for the murder of his wife, presented by Sir G. S. Mackenzie, Bart.; cast of the head of George Campbell, executed at Glasgow on 29th September 1835 for murder, and skulls of a magpie and a starling, presented by Dr Robert Macnish; cast of the skull of Michael Pickles, executed about twenty years ago at York, presented by Dr Jubb, Halifax. The Secretary read a letter from Dr Evanson, Secretary of the Dublin Phrenological Society (published in our last Number), relative to a proposed British Association for the Advancement of Mental Science; and the meeting expressed their cordial agreement in the resolution passed by the Dublin Society as to the desirableness and propriety of such an Association. With regard to the time and place of meeting, however, various opinions were entertained. Mr Hewett Watson suggests that the meetings ought to be held alternately in London, Edinburgh, and Dublin, where phrenologists are numerous, and the best collections exist.

LONDON.—In the *Lancet* of 19th December 1835, there is an interesting account of the proceedings of the London Phrenological Society, at the meeting on 2d November. Four skulls had been transmitted to Sir James Macgrigor by Dr Stewart, principal medical officer of the army in the Mauritius, with the following letter, dated 27th December 1834:—"Sir, I am commissioned to forward to England, and to your care, the skulls of four human subjects, which are considered of sufficient interest to claim the attention of all lovers of phrenological science. This I am directed to do upon condition that they shall be presented to the Phrenological Society of London, upon an engagement to furnish a copy of the result of their examination. Should they decline agreeing to this condition, it is requested that they may be forwarded to the cultivators of the same science in Edinburgh, and with the like injunction. The inclosed sealed packet contains matter relating to these skulls. This packet is to be retained in your possession unopened, until the report of the Society to which they are presented shall have been received; it is then to be opened, and the contents to be at your disposal; the observations of the Society, or a certified copy thereof, to be transmitted hither for the information of all concerned in this island. The heads are numbered, and the re-

marks upon them, contained in the inclosed packet, bear corresponding numbers. With the assurance that the interesting nature of the subject will, with you, be admitted as a sufficient apology for thus appealing to you in prosecution of a branch of knowledge now so generally and so highly cultivated, I have the honour to be, Sir, your most obedient humble servant, **AS. STEWART, M. D.**" The Society, as a body, never draw inferences from heads; but Dr Elliotson individually undertook the task. The skull No. 1. he described to be that of a gentle, open, and inoffensive person, free from glaring vice, though probably not a splendid instance of active virtue. From No. 2. he inferred pride, obstinacy, selfishness, deceit, cruelty, and quarrelsomeness, as the leading characteristics; from No. 3, that the individual "would be exceedingly cruel, would fear nothing, would yield to nothing, and would be proud and selfish in the highest degree; and his vanity and caution must have been as striking as any part of his character. Veneration is large, so that he might have felt deferences for those who were evidently his superiors." Of No. 4. it was stated—"This is by no means a bad skull. The individual might have been of a very respectable character, though not intellectually distinguished." Dr Elliotson's notes (which are here necessarily abridged) having been transmitted to Sir James M'Grigor, the packet mentioned in Dr Stewart's letter was forwarded to the Society, containing accounts of the characters of two of the individuals to whom the skulls had belonged; these characters having been furnished by the Chief Judge of the Mauritius, Edward Blackburn, Esq. a zealous phrenologist. Upon the characters of the other two individuals it appears that no particular observations had been made. Nos. 1. and 3, were stated to be the skulls of a Government apprentice and a female slave, both of whom died a natural death, and of whose characters nothing is mentioned; No. 2. to be the skull of a cunning, jealous, ferocious, and licentious negro, convicted of a barbarous attempt to murder a female; and No. 4, to be the skull of an Indian murderer of very brutal dispositions. It thus appears, as Dr Elliotson stated, that there were two skulls of ordinary persons, and two of very depraved persons, and that the phrenological characters perfectly agreed with the biographical; the two former having probably been sent merely to occasion difficulty and put Phrenology to a severer test. While, however, one ordinary skull and one bad skull answered to the characters respectively given of them in the MS., it is remarkable that the other two skulls indicated each the character that was given of the other in the MS. by which they were accompanied. Dr Elliotson remarked that there was no possibility of mistaking the character of the skulls, and that, phrenology being true, he had no doubt that the skull marked 4 should have been marked 3, and that skull 3 should have been marked 4. He added that he had written to the Mauritius to this effect, confident that it would be discovered, either that a mistake had been made there, or that the skull had been wrongly marked, in order the more fully to test Phrenology. Two sketches of each skull are given in the *Lenox*.

NEWCASTLE.—Extract from the *Newcastle Chronicle* of 19th December 1835:—"The first meeting of the Phrenological Society was held on the 7th instant, in the Lecture Room of the Literary and Philosophical Society, and was very numerously attended; Mr T. M. Greenhow in the Chair. At the request of the Committee of the Society, Mr J. Fife consented to deliver an address on the elementary principles of Phrenology. Mr Fife observed that he should best advance the objects of the Society by directing attention to the elementary principles on which Phrenology was founded; and, upon the present occasion, he proposed to adduce those evidences of its truth which were drawn from works published long before the promulgation of the theory, or advanced by men who desired to refute it, though philosophers, poets, and artists, from the earliest periods, had assented to the common observation that intellect in its highest state was invariably accompanied by a peculiar configuration of the head. Mr Fife exhibited casts of the skulls of various of the most barbarous and uncultivated nations, as also of some of the lower animals most resembling man, and pointed out the marked differences between them and those of the inhabitants of civilized countries—a difference so constant and uniform as to make it a subject of great importance to persons disposed, from unacquaintance with Phrenology, to question the soundness of

the foundation on which that science is based. He explained in a condensed and luminous manner, how from the mode in which the head is balanced on the body, the proportionate quantity of brain lying in the anterior part of the cranium regulated the attitude; an instance illustrative of this is the forward position of the head, ascribed by Homer to the wise Ulysses; accounted for by a predominating proportion of his brain lying in the anterior part of his skull, or seat of intellect, and this development of the brow appearing to cause his head to droop in a forward direction; thus characterizing the poetical expression of dignity in the contour of the Greek statue—a proof for the ancient poet having been an accurate observer of nature. The ancient Greeks have invariably attended to the shape of the head in the representations of their gods; and we observe by the specimens of their statuary which remain to us, that their *basu ideal* consisted in an upright and spacious forehead, widely different from those found in their figures of natures and fabulous monsters. Painters, whose art consists in accurate delineation of nature, have always represented the brow as the seat of intellect and intelligence, and the Italian and Flemish masters in particular have constantly and uniformly done so. Mr Fife related, that having on one occasion made a remark on some of the features of a Christ on the Cross, painted by an artist of his acquaintance, he argued that all the features were similar to what had been adhered to by artists from time immemorial—that, founded on a minute observation of nature, a particular outline had been carried out as the delineation of wisdom, piety, and benevolence. Shakspeare, Milton, and others, have associated dignity and intelligence with large and upright foreheads, and, as uniformly, the villain and the idiot with a contrary configuration. Mr Fife traced the progress of the studies and investigations of physiologists and anatomists in the middle and towards the close of the last century, which gradually led to the discovery of Phrenology by Dr Gall. He detailed the manner in which Gall so successfully demonstrated the anatomy of the brain; the circumstances which led to his discovery of the separate organs; and the opposition he met with from the Court of Vienna, lest his new view should lead to the doctrine of Materialism,—an apprehension which Mr Fife finished his address by shewing, in the most satisfactory manner, to be equally absurd and unphilosophical. Mr Fife proposed at some future period to go more into the details of Phrenology, and to answer, severally, the objections of the most plausible writers against the science. His address manifested an intimate acquaintance with the subject, and was particularly interesting to persons commencing the study of Phrenology. On the motion of Mr Turner, the following resolution was then passed, and the Secretary was requested to communicate it to Mr Combe:—“That the Phrenological Society of Newcastle, at this its first meeting, desires to testify its cordial respect to George Combe, Esq., and its acknowledgment of the great obligations which its members feel themselves under to that gentleman, for the information which they have derived from the excellent course of lectures lately delivered by him in this place; and particularly, for the effective means which he afforded to the establishment of this society, by the collection of busts, &c., obtained by means of his public lecture.” It was then announced that at the next meeting Mr M. H. Rankine would read a paper, entitled ‘Some remarks on the doctrine of Helvetius and his followers, respecting the causes of inequality in men’s minds, as controverted by facts and Phrenology.’” We learn that the subsequent meetings of the Newcastle Phrenological Society have been numerous attended, and that the interest excited by Phrenology in that town continues to increase.

BELFAST.—Extract from the *Belfast Guardian*, 5th February 1836:—Another public meeting of the Belfast Natural History Society, (the fourth of the present session) was held in the Museum on Wednesday evening the 13th January. Nearly two hundred persons were present, and a paper was read by Mr Grattan on the busts of Sir Walter Scott, Lord Byron, and Thurtell, the murderer of Mr Weare, considered phrenologically. Some extremely valuable remarks were made in the course of the evening by Dr Drummond, President of the Society and Professor of Anatomy and

Botany in the Royal Belfast Academical Institution, who expressed his full conviction of the truth of the science of Phrenology, and instanced some important facts, illustrative of the subject, which had come under his own observation. In speaking of Thurtell, Mr Grattan fell into an inaccuracy which a gentleman who was present corrected next day in the following interesting communication:—"In order to remove one stain from the *blue jackets*, I must acquaint you that the noted Thurtell was a Lieutenant in the Royal Marines, and not in the Navy. He served in that rank on board his Majesty's ship *Defence*, 74 guns, and in the return of the fleet from the *Baltic*, in December 1811, that ship and the *St George*, 98 guns, were totally wrecked on the West coast of N. Jutland; the crews of these two vessels amounted to about 1100 men at least, of this number only *twelve* persons were saved, among whom was the unfortunate individual mentioned: so true in his instance our nautical proverb came to pass, that 'he who is born to be hanged will never be drowned.'

FAREHAM, 25th December 1835.—Mr Miller of Emsworth, delivered an admirable lecture on Phrenology, in the Hall of our Institution, on Tuesday evening last. The lecturer urged his audience to free their minds of such moral defects as ignorance and prejudice, which frustrate sincere and honest research, and to give the science candour of reception and impartiality of investigation. The three grand principles of the science were then discussed, *singulatim et seriatim*, viz. first, that the brain is the organ through which the mind manifests itself; secondly, that the brain is a congeries of organs possessing a plurality of faculties; and, thirdly, that size, other things being equal, is a measure of the power of the faculty. Anatomy, physiology, genius, insanity, dreaming, somnambulism, with the evidence of many eminent authorities, all were made to contribute to the support of the principles of the science, the progress of which at the present day is so rapid, and becoming so widely extended, as calls for every individual to devote his mind to ascertain the soundness of its doctrines, what are its pretensions, its tendencies, and what is its utility, especially in reference to education, legislation, insanity, mental philosophy, and morality. The influence of circumstances and education was fully admitted in modifying human character; and though they never did or could create a faculty, yet they would strengthen it when in existence, and afford opportunities for action. The ignorance of phrenologists was freely confessed, as to the nature of the *thinking* principle, and all discussion on a subject beyond the reach of human comprehension reprobated. The lecturer concluded by declaring his belief that Phrenology was founded on the solid foundations of truth—and as truth is the basis of religion, both Phrenology and Religion would be found to support and consolidate each other mutually and harmoniously; that every individual was competent to examine and decide for himself; and his chief object on the present occasion he declared was to excite reflection, induce observation, challenge scrutiny, and inspire a disposition for the love of *facts*, either to confirm or refute the science of Phrenology. The audience, which was as numerous as on any former occasion, and comprised many of the most respectable inhabitants, listened with the greatest pleasure; while the cordial thanks that were awarded to Mr Miller, shewed how warmly they approved the sentiments delivered.—*Hampshire Independent*, 26th December 1835.

WORCESTER.—We observe, in the January number of our able contemporary *The Analyst* (which has now become a quarterly instead of monthly publication), a notice of the proceedings of the Worcester Literary and Scientific Institution, embodying a detailed report of a lecture on Phrenology by E. A. Turley, Esq., being the fifth delivered by him in that institution. "The lecture," says the report, "occupied more than an hour, and, in its course and on its conclusion, was repeatedly greeted with applause. There was not a whisper of dissent noticeable; and it may be not unreasonably inferred that the unanimous approbation resulted from a concurrence of opinion. The mode of argument was well calculated to elucidate the profound physiological science comprehended in this very interesting subject. The oral evidences were successively illustrated by a series of portraits and casts. These, and the re-

Searches displayed in the exposition, evinced the deep study bestowed on the subject. Those evidences are now submitted to the public, and all classes are interested in affording them a dispassionate consideration. As the benefit of mankind is the object, open discussion must be a public advantage; and the friends of truth, on either side, have powerful motives for promoting a calm, impartial decision. No person of candour and good sense will reject a proposed improvement without full and sufficient inquiry, nor persevere against an unbiassed refutation. The inestimable value of education is a general theme, and in the late session it occupied the wisdom of Parliament. Perhaps no system ever offered to the world, opened a more important field for investigation, than the probable effect of Phrenology on education, morals, and manners."

FORFAR.—"It gives us much pleasure to learn that a society has been established in this place for promoting the study of Phrenology. The means for attaining this end are—1st, the formation of a library illustrative of its doctrines; and 2d, the procuring of a set of casts, &c., for experimental practice. It is gratifying to know that the prejudices against which Phrenology has so long struggled are at length giving way, and that an earnest desire for information on this interesting science has become more prevalent, not only here, but generally throughout the country. Instead of being assailed with unmeaning ridicule, it is now viewed as an important system in the philosophy of the human mind; and the longer it is pursued with a desire to learn, the better will it stand the test of inquiry. It is proposed that essays on the principles and practice of the science shall be read by the members at their monthly meetings. These essays will either be original or selected; and as the society already includes amongst its members several professional gentlemen, their knowledge of anatomy, so important in the study of Phrenology, will be brought to bear on the subject. In the mean time, we wish the institution every success, and shall rejoice to hear of its usefulness."—*Montrose Review*.

In December last this Society consisted of about thirty members, among whom are the Sheriff-substitute, Town-clerk, and other gentlemen of the legal and medical professions. At the first meeting Dr Murray gave a lecture on the osteology of the cranium, and at the second Dr Allan submitted some remarks on the structure and physiology of the brain.

MONTROSE.—Mr W. A. F. Browne has been requested by the Directors of the Scientific Association here, to deliver twelve lectures on Phrenology, and has accepted the invitation. He has received also requisitions to lecture in Forfar and Kirriemuir.

AMERICA.—Several numbers of the *Annals of Phrenology* have failed to reach us, though regularly published. We hope to be able to give some account of their contents in our next. The following is extracted from a letter dated Albany, N. Y., 1st March 1835:—"Mr Price of St Paul's Episcopal Church, where I attend on Sundays, has been delivering a course of sermons on the evidences of Christianity, and said at the close of them, that he would take the liberty of recommending a few books to those of his hearers who might be inclined to follow out the subject. The first book mentioned was Combe on the Constitution of Man."

A paragraph, copied from the *Gazette Medicale*, relative to the head of Lacenaire, a French criminal, has lately appeared in several English papers. It states that the head of that individual has an excellent configuration, wholly at variance with his character. Such averments are exceedingly common, and uniformly turn out to have been either dishonestly or ignorantly made. We have instituted an inquiry into the facts of the case, and confidently anticipate a similar result in the present instance. The writer of the paragraph seems to look for bumps alone as the signs of strong propensities; for he speaks of the cranium presenting a "remarkable smoothness of the two sides, and particularly in those parts which are said to correspond with robbery and murder." Did it not occur to him that a smooth surface is as compatible with great development of certain regions of the brain, as the extensive plains among the Andes are with an altitude of many thousand feet above the level of the sea? [Since the preceding remarks were sent to

the printer, we have received an answer to our inquiry from a phrenological friend in Paris, who has examined the skull of Lacenaire. His remarks are these:—"Veneration small; Benevolence moderate; Imitation very large; Destructiveness, Combativeness, and Secretiveness, very large; skull very broad; Cautiousness large; Acquisitiveness very large; Amativeness large; skull very thin at Acquisitiveness and Destructiveness. M. Dumoutier is to have, in a few days, an article in the *Lancette*, utterly refuting the *Gazette Medicale*." Such is the *true* version of the circumstances—listen now to the *Gazette*:—"Lacenaire, whose cold-blooded cruelty and want of feeling, under the most frightful circumstances, has astonished and disgusted all France, was phrenologically endowed with all the qualities of a good, kind, mild, sensible, and religious man, holding injustice and robbery in horror, and a hundred thousand leagues from being an assassin. Thus there is a marked development of all the anterior and superior parts of the cranium, and as remarkable a smoothness of the two sides, and particularly in those parts which are said to correspond with robbery and murder. The organs of Benevolence and, above all, Veneration are largely developed." We call upon those journals which have given currency to the falsehood now to publish the truth.

PHRENOLOGICAL QUACKS.—We are glad to perceive that our Phrenological Contemporary has taken these gentry in hand. It would be disgusting, if it was not so absurd, to witness the mountebank performances of some persons who profess Phrenology. They thumb the heads of gaping or of laughing audiences at sixpence or a shilling each, and pronounce, ore rotundo, the elaborate characters of Styles and Noakes, who, fifty to one, have got no characters at all. We have been at some of these exhibitions, and a more complete travesty of a science we never in our lives have seen. We hope the philosophical phrenologists will put this egregious humbug down.—*Medical-Chirurgical Review*, Jan. 1836.

We have received several phrenological pamphlets by Dr Caldwell of Lexington, Kentucky, containing much important matter, to which we shall advert more fully hereafter. A reprint of his *Thoughts on Physical Education, and on the Means of Improving the Condition of Man*, will shortly appear in Edinburgh. We anticipate that this impressive, eloquent, and eminently practical treatise, will have a wide circulation in Britain, and contribute to give its author that celebrity to which he is so justly entitled.

Dr Brigham's Remarks on the Influence of Mental Cultivation and Mental Excitement upon Health, of which we expressed a very favourable opinion in our 45th Number, has been reprinted by Messrs John Reid and Co. of Glasgow, with many valuable notes by that talented phrenologist Mr Robert Macnish. The extensive circulation which this work is obtaining cannot fail to be productive of great improvements in the treatment of children in their early years.

A translation of Mr Combe's *Elements of Phrenology*, by Dr Foschi, has recently been published in Paris.

Although by far the greater part of our present Number is occupied by the communications of correspondents, a few are still unavoidably postponed, along with several articles by the conductors themselves. Among others are the communications of Mr Grattan, Dr Maxwell, and Dr Inglis; and Mr George Hancock's reply to Mr Watson. We entreat correspondents to study brevity above all things, as by the absence of this qualification the chance of insertion is considerably diminished.

The verses from Galashiels are defective in structure, and not quite suitable for our pages. The sentiments expressed are, however, excellent.

We despair of finding room for the communication of our respected correspondent, C. T. W.. The subject has already been so largely treated of in the *Phrenological Journal*, that we are forced to give a preference to articles on more novel topics.—Mr Saunders's little work, "What is Phrenology?" has been received.

Notices of the Journal of the Phrenological Society of Paris, and of The Moral Reformer, are deferred for want of room.

EDINBURGH, 1st March 1836.

INDEX

TO THE NINTH VOLUME.

- Abbott, Jacob, review of his "Teacher," 280.
- Abercrombie, Dr John, on the means of improving our knowledge of mental philosophy, 124.—on its utility, 125.
- Abyssinians disfigure their persons in testimony of grief, 421.
- Achilles, grief of, at the death of Patroclus, 422.
- Acquisitiveness, 63, 240, 246, 272.
- Activity and power of mind, 116, 118, 262, 267, 403.—activity of the brain generally in proportion to that of the muscular system, 117.
- Adam, John, murderer, case of, 644.
- Adaptation of the human constitution to this world, 9.
- Addison quoted on boisterous and retiring characters, 154.
- Adhesiveness, 59, 411.
- Alimentiveness, cases of its voracious activity, 136, 460.
- Alison, Dr W. P., on the functions of the nervous system, 477.
- Allison's theory of Taste, Burns's opinion of, 74.
- Alyth Phrenological Society, 190.
- Amativeness, 60, 133, 188, 226, 383, 400, 486, 525, 542. See *Conatellum*.
- America, Phrenology in, 92, 191, 216, 286, 302, 383, 477, 517, 661.
- American Indians, their revengeful disposition, 411.
- Analyst, The, 566.
- Andral, Professor, on the harmony of Phrenology with general physiology, 507.
- Anger, how excited, 410, *et seqq.*—from what faculties arising, 501.
- Animals, comparison of the brains of different species of, fallacious, 514.
- Annals of Phrenology, reviewed, 216, 383, 477, 566. Quoted, 433, *note*, 517.
- Anthony, St, compared with an insane patient in the Montrose Asylum, 301.
- Antiphrenological essay by the Rev. Charles Findlater of Newlands, 238.—answer thereto, by Mr Walter Tod, 241.
- Aphorisms, The Book of, reviewed, 23.
- Apollonius, phrenological allusion in, 383.
- Arbroath, Mr W. A. F. Browne's lectures in, 379.
- Argument, warmth in, 416.
- Armstrong, Rev. Mr, his address on Phrenology at the Dublin Phrenological Society, 229.
- Arnold, Professor, his opinion of Phrenology, 50.
- Association, proposed, for the advancement of Mental Science, 281, 558, 561, 657.
- Authors, irritability of, 410.
- Bacon, Lord, quoted on boldness, 154.—on anger, 410.
- Bailey, Dr, of Blois, on the means of forwarding the progress of Phrenology, 511.—his reply to M. Leuret's objections to Phrenology, 513.
- Barbarous, savage, and civilized states of man, 360.
- Barlow, Dr, his opinion of Phrenology, 382.
- Barrow, Dr, on the employment of reason in religious matters, 225.
- Bashfulness, 155.
- Beauty, Alison's theory of, 74.
- Beechey, Capt., skulls brought home by, 287.
- Belfast, Phrenology in, 680.
- Bell, Sir Charles, his opinion as to the inutility of mutilation of the brains of animals, 122.—his discoveries of the functions of the nerves, 197.
- Bell, Dr Andrew, the original inventor of the Madras system of education, 42, 191-2.
- Bellingeri, his claim against Sir Charles Bell, 198, *note*.
- Benevolence, large in the head of Burns, 67.—does not neutralise Destructiveness, *ib.* 308, 417.—very large in the head of Kustache, a Negro, 134.

- Bewick, Thomas, his organ of Form large, 635.
- Bible and Phrenology, 335.—interpretation of the bible, 371, 393.
- Bilious temperament, 112, 308.
- Blood, its circulation in the brain varies according to the degree of mental activity, 223, 426, 427, 473.
- Blumenbach quoted on the cerebral circulation during sleep, 223.
- Bonaparte's head, 86, 132.—his ambition, 414.
- Boston (U. S.) Phrenological Society, 286, 384.—infant schools in, 453, *note*.
- Bottex, Dr, 133.
- Bouillaud, Professor, 131.
- Boyle, Hon. Robert, his character, 418.
- Brain, case of injury and disease of the, 17.—its quality in the poet Burns, 54.—its activity generally in proportion to that of the muscular system, 117.—mutilation of the brains of animals an unphilosophical method of ascertaining the functions of different parts, 122.—cerebral fibres, 122.—brain of Cuvier very large, 138.—at what time does assimilation go on in the brain? 165, 176, 318.—its texture immature before puberty, 221.—cases where its exposure shewed a diminution of its sanguineous circulation during sleep and mental repose, 222-3. See *Blood*.—Small size of the brain of the bull-dog, 287.—circumstances which influence the power and activity of the brain, 403.—brain at different periods of life, 426.—dyspepsia often caused by cerebral disease, 431, 487.—insanity disease of the brain, 447.—is its structure always obviously changed in insanity? 454.—effects of its disease on the skull, 468, 470.—education the physical training of the brain, 484.—light thrown on its anatomy by Dr Gall, 513.—comparison of the brains of different species of animals a fallacious proceeding, 514.—weight of Dr Spurzheim's brain, 567.—case where the mind was weakened by injury of the, 569.—what is the purpose of its duplicity? 608.
- Brigham, Dr Amariah, on the influence of mental cultivation and mental excitement upon health, reviewed, 424.
- Brinvilliers, Madame, a French criminal, 511.
- British Association and Phrenology, 120.
- British Cyclopædia on Phrenology, 573.
- Broussais on Phrenology, 132, 511.
- Brown, Dr Thomas, quoted on the sense of resistance, 104.—on resentment, 408, 422.—on indignation, 417.—on the pain of balked curiosity, 419.
- Browne, Mr W. A. F., remarks by him on two cases of cerebral disease published by Dr Moir, 162.—his lectures in Dunfermline and Arbroath, 285, 379, 634.—on religious fanaticism, 289, 532, 577.—account of his lunatic asylum, 475.
- Bruce, Rev. J. C., system of education pursued at his Academy in Newcastle, 545.
- Burns, Robert, essay on the character and cerebral development of, 52.
- Butler, Bishop, on the employment of reason in religious matters, 224.—on the adaptation of the human mind to virtue, 386.
- Caldwell, Dr, on the admission of the principles, but denial of the details of Phrenology, 50.—his vindication of Phrenology against the North American Review, 217.—review of his thoughts on physical education, 481.—his view of anger controverted, 501.—his description of destructive preachers, 502.—character of, by the Rev. Timothy Flint, 572.
- Cambuslang, conversions of, 577.
- Campbell, George, murderer, his head and character, 553.
- Caribs, characteristics of the, 90.
- Carmichael, Andrew, his controversy with Mr Machish on the proximate cause of sleep, 164, 318.—summary of his theory on that subject, 325.
- Cautiousness, 66, 406, 415, 503.
- Cerebellum, epilepsy considered by Dr Epps a disease of the, 168.—case in which it is said not to have existed, 226.
- Cevennes, persecution of the Protestants of the, 594.
- Chambers's "Information for the People," notice of treatise on mental philosophy in, 269.
- Chambers, Robert, quoted on cruelty, 416.
- Charrua Indians, heads and character

- of the, 189.—disfigure their persons in testimony of grief, 421.
- Children, brains of, 426.—precocious, 427. See *Education*.
- Christian Phrenology, three lectures by the Rev. Henry Clarke, reviewed, 335.—Wardlaw's Christian Ethics reviewed, 385.—the Christian Physician, 566.—Christian Examiner and Phrenology, 566.—Christian Pioneer, 232, 284.
- Christianity. See *Religion*.
- Civilization, its effects on the physical characteristics of races, 101.—Phrenological standard of, 360.
- Clarke, Rev. Henry, review of his lectures on Christian Phrenology, 335.
- Cleanliness, love of, 263.
- Clergy, their labours why so inefficient, 30.
- Cleverness different from talent, 28.
- Climate, its effects on the human constitution, 98.
- Cobbett's advice to lovers as to the signs of activity of mind in girls, 117.—his sarcastic disposition, 411, *note*.—his opinion of infant schools, 432.
- Colouring, organ of, 438.—large in Oriental nations, 307.
- Combateness large in the head of Burns, 61.—Mr R. Cox on the elementary nature of the faculty, 147.—distinguished from Destructiveness, 159.—Mr Levison on, 274.—excited by intoxication, 306.
- Combe, George, how far his views of the natural laws are borrowed from Dr Spurzheim, 187.—his lectures in Edinburgh, 189, 284, 279, 570; in Newcastle, 519.—German translation of his System of Phrenology, 191.—his work on the Constitution of Man, 270, 376, 480, 575.—Objections to his views of Concentrativeness, 333.—his visit to the lunatic asylums and prison at Newcastle, 519.
- Combe, Dr Andrew, review of his Principles of Physiology, &c. 74.—on the treatment of the insane, 70.—on the importance of physiology with reference to education, 620.
- Comparison, Mr Hancock on the functions of the organ of, 435.—Mr Watson on, 494.
- Concentrativeness, remarks on, 330, 612.
- Conscience, Dr Wardlaw and Sir Jas. Mackintosh on, 394.
- Conscientiousness, 70, 275, 394, 416, 623.
- Constancy, whence, 617.
- Constructiveness, function of, 207, *note*, 274, 624.
- Contradiction, love of, 187-8.
- Conversions of Cambuslang, 577.
- Cooper, Sir Astley, case of exposure of the brain quoted from, 223.
- Corruption of human nature, doctrine of the, 341, 385.
- Costiveness excites Destructiveness, 420.
- Courage, 149, 274.
- Courtship, phrenological, 572.
- Cowards why generally cruel, 415.
- Cowper quoted, 158, 251, 333, 408, 499.
- Cox, Robert, on the character and cerebral development of Burns, 59.—on the elementary nature of Combateness, 147.—on the heads of two Swedish Laplanders, and the skull of a criminal, 322.—on the mutual influence of the faculties, and the modes and laws of action of destructiveness, 402, 498.
- Cranimeter, 141.
- Cretins, their heads, 49.
- Criminals, cases of, 328, 508, *et seq.* 524, 553, 644.
- Criminal legislation, 367, 506.
- Cruelty, 499. See *Destructiveness*.
- Cupar Phrenological Society, 571.
- Cursing, a manifestation of Destructiveness, 409.
- Cuvier, head and brain of, 132, 138.—his treatment of Gall, 138.
- Dean, Amos, his lectures on Phrenology reviewed, 392.—on Concentrativeness, 330.
- De Fouchy, Mons. his faculty of Language deranged by a blow near the eye, 118.
- Depravity of human nature, doctrine of the, 341, 385.
- Destructiveness large in the head of Burns, 63.—is not neutralized by Benevolence, 67, 308.—distinguished from Combateness, 159.—excited by intoxication, 306.—Mr Cox on its uses, and the laws and modes of its action, 402, 498.—its utility, 407.—its sphere of action more extensive than the name indicates, 407.—roused by disagreeable affections of other faculties, 408, 654.—cases of its excessive and morbid action, 500, 663.
- Details of Phrenology, 635.
- Denville, James, 91, 133.

- Disease, philosophical treatment of, 455.
- Disputation, love of, 187-8.
- Diversity, natural, of human minds, 230, 243, 263.
- Dog, small size of the brain of the bull-dog, 287.
- Dream, singular, 272.—invention in dreams, 573.
- Dublin, Phrenology in, 190.—Dublin Phrenological Society, 229, 558.
- Duelling, barbarous, 369.
- Duff, Rev. Alexander, his speech on the mode of converting the Hindoos, 443.
- Dumoutier, Mons. 139.
- Duncan, James Foulis, on the means of facilitating the study and improving the treatment of insanity, 200.
- Dundee Lunatic Asylum, 144, 472.—Phrenology in Dundee, 225, 576.
- Dunfermline, Phrenology in, 285.
- Dunstone Lodge, Lunatic Asylum, 521.
- Dyspepsia often caused by cerebral disease, 431, 487.
- Edinburgh Society for the diffusion of moral and economical knowledge, 576.—Edinburgh Reviewer and Dr Spurzheim, 526.—Edinburgh Philosophical Association, 284.
- Edmondson, Richard, on the functions of the organs of Weight, 143, 203, 524, and Constructiveness, 536.
- Education, review of Mr Simpson's work on the Necessity of Popular, 28.—must precede religious instruction, 30.—moral training necessary 33, 430.—classical education too exclusively attended to, 5, 33.—instruction of children in mental and political philosophy, 36.—study of civil history, 37.—should national education be free or paid for? 38.—proposed code and board of education, 40.—ought religion to be taught in national schools? 41.—Dr Bell the original inventor of the Madras system of education, 42, 491-2.—review of Dr Combe's Principles of Physiology applied to the improvement of education, &c. 74.—review of "The Teacher," by Jacob Abbott, 256.—utility of mental philosophy in relation to, 261, 465, 482.—how dull boys ought to be treated, 263.—severity, whether to be used in, 264.—strictness of discipline, 266.—system in, 267.—essay-writing at schools, 267.—details ought to be long dwelt on, 268.—teachers apt to become arrogant, 268.—greatly modifies the natural dispositions, 264, 489.—utility of the study of literature, 266.—does education tend to increase or diminish crime? 267.—is genius the result of? 303.—hints on the formation and conduct of a Model Normal school, 397.—review of Dr Brigham on the influence of mental cultivation and mental excitement upon health, 494.—mental precocity generally a sign of disease, 427.—tasking, 428, 429.—Dr Brigham on infant schools, 429.—play-ground ought to be there most attended to 433.—infant schools in America, 483, *note*—the mental faculties improvable only by improving their organs, 482.—Dr Caldwell on infant schools, 485.—system of education at the Rev. J. C. Bruce's academy in Newcastle, 545.—errors in religious education, 574.—cheap lectures to the working classes, 576.—Dr Combe on the importance of Physiology with reference to, 620.—physical, 23, 26, 424.—Dr Caldwell on physical, 481.
- Educational Magazine, notices of, 472, 566.—quoted, 574.
- Edwards, Dr W. F., review of his work on the physiological characters of races of mankind, considered in their relations to history, 97.
- Egyptian mummy, skull and probable character of an, 556.
- Elliotson, Dr, 91.—his examination of skulls from the Mauritius, 666.
- Ellis, Dr, his mode of treating insane patients at Hanwell Asylum, 44.
- Encyclopædia Britannica, life of Dr Galt in the, 286.
- Engledee, Dr, his lectures on Phrenology in Portsmouth, 571.
- Ennius quoted on hatred, 415.
- Envy, whence originating, 413.
- Epps, Dr, case of epilepsy by, 183.—case of injury of the brain, 569.—his lectures, 570.
- Equilibrium, faculty of, 194, 624.
- Ereking, Rev. Ebenezer, account of his wife's illness, 377.
- Esquirol's lunatic asylum, 316.
- Ethics and Phrenology, 285.
- Eustache, a negro, his head and character, 134, 150.
- Eventuality, pain of balked, 412.
- Example greatly modifies the natural dispositions, 265.

- Executions, love of witnessing, 562.
 Expression of the eye, 26.—of the countenance, 54.
 Faculties, primitive or elementary, nomenclature of the, 160-1, 407.—how to be determined, 151, 395.—different directions of each, 368.—Mr Cox on their mutual influence, 402.—improvable only by improving their organs, 482, 621.
 Faith, Mr Levison on a supposed organ of, 636.
 Fall of man, 387.
 Fanaticism, observations on, by Mr W. A. F. Browne, 229, 432, 577.
 Farcham, Mr Miller's lecture on Phrenology in, 660.
 Fatalism, objection that Phrenology leads to, answered, 303.
 Feeling, sense of, 311, 350, 539, 541.
 Ferussac's bulletin, case of diseased cerebellum quoted from, 226.
 Fickleness, whence, 617.
 Fifth-monarchy men, 302.
 Fighting, love of, whence, 159.
 Findlater, Rev. Charles, anti-phrenological essay by, 233.
 Firmness, 70, 618.
 Foissac, Dr, 138.
 Force, mechanical, faculty for the perception of, 193, 349, 634.
 Forfar Phrenological Society, 661.
 Form, organ of, case of William Manuel, a precocious child, in whom it is very large, 192, 344.—large in Thomas Bewick, 635.
 Fossati, Dr, 139, 605.
 Fox, George, at one time probably insane, 535.
 France, crime and education in, 367.
 Fraser's Magazine on Phrenology, 95.
 Pretfulness, what, 423.
 Friends, their bitterness towards each other after a quarrel, 416.—grief for the death of, sharpens the temper, 421.
 Future state, Burns on the existence of a, 69.—tendency to believe in a, 643.
 Gall, Dr, his message on deathbed to Cuvier, 139.—his method of ascertaining the functions of the different parts of the brain, 147-8.—on the means of determining the fundamental faculties, 161.—whether he borrowed from Herder, 184, *note*, 188.—account of him in the *Encyclopædia Britannica*, 268.—his letter to Retzer in 1798, 306.—light thrown by him on the anatomy of the brain, 513.
 Gambling, 369.
 Games, action of Combativeness in, 163.
 Game-laws, 307.
 Genius not the result of education, 303.—irritability of men of genius, 416, 487.—unfavourable to longevity, 487.
 Geology, its connexion with religion, 2, 16, 303.
 Germany, Phrenology in, 191.
 Gheel lunatic village, 86.
 Glasgow, Phrenology in, 91, 189, 265, 474, 570.
 Gibbon, William, case of derangement of the faculty of Language, by, 515.
 Golden, silver, brassy, and iron-ages, 360.
 Gordon, Dr John, his controversy with Dr Spurzheim, 596.
 Gottfried, an amateur murderer, 500.
 Grattan, John, his case of derangement of the faculty of Language, 471.—Phrenological essay read by, 660.
 Greek too much studied at Cambridge, 5.
 Greeks, how far civilized, 362.—Phrenological allusions in: Homer and Apollonius, 363.
 Greenock Phrenological Society, 282.
 Lectures in, 571.
 Gregory, Dr John, on the mutual influence of mind and body, 38.
 Grief excites Destructiveness, 421.
 Guerry, Mons., his tables showing the parts of France in which crime shotwds most, 207.
 Haggart, David, 664.
 Haller the father of modern physiology, 462.
 Hancock, George, on the functions of the organs of Comparison and Wit, 435.—comments on his views, by Mr H. C. Watson, 494.
 Hancock, William, jun., on Concentrativeness, 617.
 Hanwell Lunatic Asylum, treatment of patients in, 44, 192, 377.
 Happiness, what, 408.
 Hatred, whence originating, 443.
 Hate, different sizes of, for persons of different ages and ranks, 290-3.
 Head, large when mind very powerful, 48.—this exemplified in the case of Robert Burns, 56.—three classes of heads; good, bad, and middling, 55.—Dr Sarlandière's instru-

- ment for measuring the head, 141.—whether it attains its full size at seven years of age, 220.—hatter's measurement of, 221.—tapering head of Thersites, 383.—heads of idiots and infants, 506.—hints about examining heads, 517.—cases where dispositions were inferred from heads, 459, 512, 520, *et seq.* 553.
- Health, physiology applied to the preservation of, 74.—review of Dr Brigham on the influence of mental cultivation and mental excitement on, 424.
- Heart, emotions popularly referred to the, 236.
- Henderson, W. R., his bequest for the benefit of Phrenology, 575, 575.
- Henin, a French pilot, 510.
- Herbivorous animals not destitute of Destructiveness, 406, *note*.
- Herder, whether Gall borrowed from, 184, *note*, 188.
- Hereditary transmission of talents and dispositions, 27.—Dr Edwards on the transmission of physiological characteristics of races of mankind, 97.—effects of the mixture of races, 69.—hereditary rank and titles, 367.
- Hindoos, is their Benevolence large? 273.—how convertible to Christianity, 443.
- Hippocrates, his opinion of insanity, 449.
- History, how hitherto written, 37.—the physiological characters of races of mankind considered in their relations to, 97.
- Hobbies, 615.
- Helm, Mr., his controversy with Mr Owen, 489.
- Homer, his genius innate, 303.—his description of the head and character of Thersites, 363; of the grief of Achilles, 422.
- Hoppe, Dr., on Concentrativeness, 612.
- Houston, Dr., on the authenticity of the skulls of Swift and Stella, 603.
- Hunger sharpens the temper, 420.
- Ideality large in the head of Burns, 70.—cultivated by the study of literature, 265.—ought to be gratified, 374.—is Destructiveness roused by offending it? 418.
- Ideler, Professor, of Berlin, his opinion of Phrenology, 191.
- Idiocy, case of, 126.—Dr Voisin's observations on the heads of idiots, 506.
- Imitation greatly modifies the natural dispositions, 264.—Mr Levison on the faculty of, 276.
- Incendiarism, propensity to, 500.
- Independence, love of, 65, 413.
- Indigestion often caused by cerebral disease, 431, 487.
- Infant schools, Dr Brigham on, 429.—Cobbett's opinion of, 432.—how they ought to be conducted, 433. Dr Caldwell on, 485.—Mr Owen the originator of, 490.
- Infants, heads of, 506.
- Inhabitiveness. — See *Concentrativeness*.
- Injure, propensity to, 159, 407.
- Insanity, cases of, 17, 118, 133, 149, 204, 334, 459, 471, 515, 520-3.—account of Hanwell Pauper Lunatic Asylum, 44.—Dr A. Combe on the mode in which the insane ought to be treated, 76.—lunatic village of Gheel, 85.—Dundee Lunatic Asylum, 144, 475.—notice of Scipio Pinel's "Physiologie de l'Homme Aliéné," &c. 269.—improvement effected by the elder Pinel in the treatment of, 259, 316.—fanaticism considered as a form of, 289, 532, 577.—Mr J. F. Duncan on the means of facilitating the study and improving the treatment of, 309.—Mr Noble on the application of Phrenology to the investigation of, 447.—absurd opinions formerly prevalent respecting it, 449.—monomania, 453.—philosophical treatment of insanity, 455.—its effect on the skull, 468-470.—Montrose Lunatic Asylum, 475.—cases of destructive insanity, 500, 501.—the sense of feeling often apparently obtuse in the insane, 539, 541.—insanity on one side of brain, and not on the other, 611, *note*.
- Intoxication, how does it peculiarly excite Combativeness and Destructiveness? 306.—a mark of barbarism, 369.
- Ireland, Phrenology in, 477. — See *Dublin. Belfast*.
- Irish, how convertible from Popery, 444.
- Irving, Edward, 597.
- Itinerant phrenologists, 382, 479.
- Jealousy, whence originating, 413.—excites Destructiveness, 654.
- Jesuits and Jansenites, controversy between them, 537.
- Jews, their physiognomy..the same

- now as in ancient times, 98.—testified grief by rending the garments, 422.—on credulity, 642.
- Kames on moral training, 33.—on cruelty and harshness of manners, 411, *note*, 498.—on credulity, 642.
- Lacenaire, skull of, 661.
- Lamarque, head and character of, 137.
- Lancaster, Joseph, his controversy with Dr Bell, 42, 191-2.
- Lancet, the, on the mastication of food, 287.
- Language, faculty of, affection of it from injury of the brain, 17.—its derangement from a blow near the eye, 118.—Mr W. A. F. Browne on two cases published by Dr Moir, 162.—case of William Manuel, a precocious linguist, 344.—case of derangement of, by Mr Grattan, 471.—another case, with pain above the eyes, by Mr Gibson, 515.—insanity of the unknown tongues, 593.
- natural and artificial, 236, 248.
- Laplanders, heads of, 328.—their character, 329.
- Lauder, Mr W. Tait's lectures on Phrenology in, 380.
- Laws of nature, Mr Sedgwick on the, 2, 3.—their independent action, 12, 376.—Dr Spurzheim's work on the, 187, 223.
- Legislation, 372.—criminal, 367, 509.
- Lemoine, a French criminal, 508.
- Leroy, J. A., his observations on the skull of Madame Tiquet, 511.
- Leuret, Mons., his arguments against Phrenology, 513.
- Levison, J. L., 94.—letters from, 181, 271.—on marvellousness, 636.
- Linguists often shallow-minded, 26.
- Linn, a parricide, 651.
- Locality, 275, 419; in landscape painters, 139.
- Locke on moral training, 33.
- London University, Phrenology in the, 91.
- Longevity of philosophers, 486.
- Loudon, J. L., quoted on Phrenology, 287, 5/3.
- Love of Approbation, 66, 275, 414, 622.
- Lunatic Asylum, 44, 77, 144, 192, 269, 289, 309, 475, 519, 521.—lunatic village of Gheel, 85.
- Luther's conflict with Satan, 301.
- Luxury and refinement of civilization, their supposed enervating effects, 373.
- Lymington, Phrenology in, 91.
- Lymphatic temperament, 111.
- Mackenzie, Sir G. S., on the faculty of mechanical force, 211, 349.—his prospectus of a British Association for the advancement of Mental Science, 281.
- Mackintosh, Sir James, remarks on his views of conscience, 394.
- Macnish, Robert, notice of his Book of Aphorisms, 23.—his controversy with Mr Carmichael on the proximate cause of sleep, 164, 318.
- Manchester, Phrenology in, 91, 260, 480.—case of an idiot in, 126.
- Manuel, Wm., a precocious child, case of, 192, 344.
- Mastication of food, 287.
- Materialism, answer to the objection that Phrenology leads to, 304.
- Mauritius, skulls from the, 657.
- Medical Gazette, 288.
- Medicine, history of, 450.
- Medico-Chirurgical Journal, defence of Dr Spurzheim quoted from the, 526.
- Menstruation, the temper irritable during, 421.
- Mental philosophy, Dr Abercrombie on its utility and the means of improving it, 124-5.—its utility in reference to education, 251, 465, 482.
- Metaphysicians, their discordant and absurd views, 249, 269, 449.
- Mezzofanti, linguist, head of, 231.
- Mind, whether in itself improvable, 483.—whether clogged by matter, 485-6.
- Miracles as an evidence of revelation, 444.—at the tomb of Abbé Paris, 538.
- Misery, what, 405.
- Moir, Dr, remarks on two cases of cerebral disease published by, 162.
- Monomania, 453.
- Montaigne quoted on ferocious cowards, 160.—on the cruelties practised in the French civil wars, 499.—on the love of cruel amusements, 502.—on credulity, 642.
- Montbar, a bucaner, 417.
- Montrose Lunatic Asylum, cases of fanatical patients in, 289, 532, 677.—account of, 475.
- Moral sentiments, what faculties entitled to be so named, 343.
- More, Hannah, on the religious utility of affliction, 378.
- Moscatti, Marquis, 288.
- Mummy, skull and inferred character of a, 356.
- Munster, siege of, when occupied by fanatics, 534.

- Murder**, *love of*, 509.—three classes of murderers, 653.
- Muscles**, nerves of the, 197, 478.—muscular power very great in some animals, 515.
- Mutilation of brains of animals** unsatisfactory, 122.
- Mutual influence of the mental faculties**, 402.
- National character**, the cause, not the effect, of national institutions, 247.—national jealousies and antipathies, 368.—national education, 38.
- Negroes**. Head and character of Eustache, 134, 510.
- Nerves of sensation and motion**, 197, 478.
- Nervous temperament**, 114.
- Newcastle**, Mr. Combe's lectures in, 519.—his visit to the Lunatic Asylums and prison there, 519.—Mr. Bruce's academy in, 543.—Newcastle Phrenological Society, 571, 658.
- New Zealanders** disfigure their persons in testimony of grief, 421.
- Nicknames**, 27.
- Noble, Daniel**, on the temperaments, 109, 262.—his essay on the means of estimating character, 264.—on the application of Phrenology to the investigation of insanity, 447.
- Nomenclature of the mental faculties**, 150, 407.
- Normal school**, hints for the formation and conduct of a, 397.
- North American Review**, Dr. Caldwell's answer to the, 217.
- Notices**, miscellaneous, 91, 189, 284, 379, 474, 570, 657.
- Oppose**, **Combativeness** the propensity to, 152.
- Opposition to Phrenology**, beneficial results of, 303.—motives of opponents, 486.
- Organization and mind**, 396.
- Organs**, cerebral, their mutual influence, 499.—by what their power and activity are influenced, 468.
- Owenism and Phrenology**, 469.
- Pain** a mode of action of the faculties, 404.—rouses Destructiveness, 408, *et seq.*, and Combativeness, 423.
- Painters**, 139.
- Paris**, Abbé, miracles at his tomb, 538.
- Paris Phrenological Journal**, 131, 382, 506.
- Pathology**, whether useful to Phrenology, 94.
- Patterson, Robert**, on the skull and probable character of a mummy, 356.
- Peevishness**, 157-8, 423.
- Perpendicularity**, perception of, 142, 208, 624.
- Persecution**, religious, its origin, 414, 418.—for witchcraft, 416.
- Peru**, remarkable skulls found in the upper parts of, 123.—Cowardly and ferocious dispositions of the Peruvians, 160.
- Philoprogenitiveness** strong among the Caribs, 22.—the organ large in Burns, 61.
- Phrenological Society**, proceedings of the, 86, 189, 285, 474, 657.—Of London, 657.—of Forfar, 661.—of Warwick, 87, 190, 380.—of Manchester, 91, 126, 269, 480.—of Paris, 131, 382, 506.—of Alyth, 190.—of Dublin, 229, 568.—of Greenock, 286.—of Boston, U. S., 286, 384.—of Stirling, 379, 477.—of Glasgow, 474, 570.—of Dundee, 570.—of Cupar-Fife, 571.—of Newcastle, 571, 658.—of Portsmouth, 672.—Edinburgh Ethical Society, 88, 189, 474, 570.
- Phrenology**, unreasonably neglected, 6.—Tiedemann's and Arnold's opinions of it, 48.—Dr. Caldwell on the admission of its principles by those who deny its details, 50.—in London University, 91.—the British Association and, 121.—its progress in Paris, 137, 511.—its utility 156, 243.—Professor Ideler's opinion of, 191.—Annals of, reviewed, 216, 383, 477, 566.—in what spirit usually opposed, 218, 508.—antiphrenological essay by the Rev. Charles Findlater, with answer thereto by Mr. Walter Tod, 233.—principles of, 242.—its utility in education, 251, 254, 620.—review of Mr. Dean's Lectures on, 302.—Beneficial results of opposition to, 303.—Answer to the objection that it leads to materialism and fatalism, 304.—relation between phrenology and Christianity, 335, 385.—Verses in praise of, 381.—Dr. Barlow's opinion of, 382.—phrenological allusions in ancient Greek writers, 383.—not to be neglected with impunity by medical men, 458.—case illustrative of its utility, 459.—Dr. W. P. Alison's opinion of, 478.—Owenism and, 469.—Austral on its harmony with general physiology, 507.—Dr. Bailly on the means of forwarding its progress, 511.—M. Leuret's arguments against, 513.—Phrenological quacks, 517, 662.

- Phrenological courtship, 572—details of, 635.
 Physical Education. See *Education*.
 Physiognomy, 236, 348.
 Physiology applied to the Preservation of Health and Improvement of Education, by Dr A. Combe, 74, 620.—and by Dr Brigham, 424.
 Pinel, Scipio, notice of his "Physiologie de l'Homme Aliéné," &c., 259.—improvement effected by the elder Pinel in the treatment of the insane, 269, 316.
 Pleasure and pain, modes of action of the faculties, 404.
 Plutarch quoted on anger, 410.
 Poets, the best not produced in the most beautiful countries, 26.
 Pope quoted, 420.
 Portsmouth, Phrenology in, 571.—Phrenological Society of, 572.
 Power, lust of, 413.
 Power and activity of mind, 110, 118, 262, 267, 403.
 Precocious children, 427.
 Prichard, Dr J. C., objections of his to Phrenology, 48.
 Prince, H. J., his account of William Manuel, 344.
 Prophecy as an evidence of revelation, 445.
 Pursuit, love of, 613.
 Quacks, phrenological, 517, 662.
 Rammohun Roy, 96, 232.
 Raphael's skull, 92.
 Religion, connexion of geology with, 2, 15, 393.—science not hostile to, 15, 224, 388, 444.—education necessary as a preliminary to religious instruction, 31.—errors in religious instruction, 41, 574.—on the use of reason in relation to, 224, 343, 370.—Mr W. A. F. Browne on fanaticism, 289, 532, 577.—human responsibility, 305.—relation between Phrenology and Christianity, 335.—creeds, 371.—light thrown upon the dispensations of Providence by the doctrine of the independence of the natural laws, 376.—religious utility of affliction, 378.—origin of religious persecution, 414, 418.—church of Scotland's India mission; true mode of propagating Christianity, 443.—evidence of revelation derived from miracles and prophecy, 444-5.—case of strong devotion combined with dishonesty, 469.—Dr Caldwell's description of a stormy preacher, 502.—conversions of Cambuslang, 577.—methodism, 583.—unknown tongues, 593.
 Resentment, 406, *et seq.*, 498.
 Resistance, mechanical, faculty for the perception of, 193, 349, 624.
 Retzer, Dr Gall's letter to, 565.
 Ricketty children often mentally precocious, 428.—their minds excitable, 460.
 Romans, how far civilized, 362.
 Sanguine temperament, 112, 368.
 Sarlandière's craniometer, 141.
 Satire and sarcasm, whence, 411, *note*.
 Savage, barbarous, and civilized states of man, 360.—custom of savages of disfiguring their persons on the death of a relation, 421.
 Schools. See *Education*.
 Schwartz, G. M., letter from, 328.
 Science not hostile to religion, but the reverse, 15, 224, 343, 370, 388, 444.
 Scott, William, quoted on Combative-ness, 152, *et seq.*—his views of Comparison and Wit, 435.
 Secretiveness, 64, 329-30.
 Sedgwick's discourse on the studies of the University of Cambridge, reviewed, 1.
 Self-Esteem, 275—strong in Burns, 64.—generally strong in teachers and clergymen, 258.—its offence a frequent occasion of anger and revenge, 412.—emotions resulting from, 413.
 Sensorial power, 173, 178, 322.
 Servants, 27.
 Shakspeare quoted, 409, 410, 412, 418, 414, 416, 420, 431, 499.
 Sheep not destitute of Destructiveness, 406, *note*.
 Simeon Stylites compared with an insane patient in the Montrose Asylum, 297.
 Simpson, James, review of his work on the Necessity of Popular Education, 38.—on the faculties for mechanical resistance and force, 193. Hints by, for the formation and conduct of a Model Normal School, 397.—examined by the Committee of the House of Commons on Irish Education, 460.
 Size not a measure of power in comparing the brains or muscles of different species of animals, 516.
 Skull, parallelism of its tables, 222.—changes occasioned in it by old age