ANNALS

OF

PHRENOLOGY;

TO CONSIST OF

ARTICLES FROM THE EDINBURGH, PARIS, AND LONDON PHRENOLOGICAL JOURNALS, AND OF SUCH ORIGINAL PAPERS AS MAY BE SELECTED AND APPROVED.

No. 4.

DECEMBER, 1834.

BOSTON:
MARSH, CAPEN & LYON.
1834.

Digitized by Google

CONTENTS.

ART. XXIII. Paris Phrenological Society (Lancet.)....................401
XXIV. An Essay on the Character and Cerebral Development of Robert Burns (Ph. Jour.)....................408
XXV. Opinions of Tiedemann and Arnold respecting Phrenology—Inconsistency of the Antiphrenologists.(do)436
XXVI. Method of moulding and casting Heads, Masks, &c...442
XXVII. Allusions to Phrenology in the 'Last Days of Pompeii.'.459
XXVIII. Phrenological Analysis of Eloquence. (Ph. Jour.).....464
XXIX. Simpson on Popular Education. (Ph. Jour.).......493
XXX. Cases of Deficient Perception of Colors (Ph. Jonr.)..513
XXXI. Cuvier.. 526
NOTICES. Sociey's Cabinet.—Bust of Spurzheim. —The Annals..... 528

PROSPECTUS

FOR PUBLISHING

A QUARTERLY PERIODICAL

TO BE ENTITLED

ANNALS OF PHRENOLOGY.

TO CONSIST OF

ARTICLES FROM THE EDINBURGH, PARIS, AND LONDON PHRENOLOGICAL JOURNALS, AND OF SUCH ORIGINAL PAPERS AS MAY BE SELECTED AND APPROVED BY THE 'BOSTON PHRENOLOGICAL SOCIETY.'

Since the visit of DR. SPURZHEIM to this country, 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, to ascertain its bearings, upon the Physical, Moral, and Intellectual condition of man.

'I speak literally, and in sincerity, when I say, that were I at this moment offered the wealth of India on condition of Phrenology being blotted from my mind forever, I would scorn the gift; nay, were everything I possess in the world placed in one hand, and Phrenology in the other, and orders issued for me to choose one, PHRENOLOGY, *without a moment's hesitation, would be preferred.'*

GEORGE COMBE, ESQ. *of Edinburgh.*

Each number will contain 128 octavo pages, with such engravings as the subjects introduced may require. The work will be printed on fine paper and in the best style.

Price $3,00 per annum, payable on delivery of the first number

Any person becoming responsible for five copies, will be entitled to the *sixth* copy *gratis.*

All letters and communications must be addressed *(post paid)* to

MARSH, CAPEN & LYON, *Publishers.*
133 *Washington Street, Boston.*

Digitized by Google

ANNALS OF PHRENOLOGY.

NO. IV.—DECEMBER.—1834.

Art. XXIII. — *Paris Phrenological Society.*

We place before our readers an account of the proceedings of the Phrenological Society of Paris, at its 4th annual meeting, held August 22d, 1834. The translation is taken from the Lancet, published in London.

Phrenologists will rejoice, and their opponents will be surprised to find that Andral, the most distinguished Pathologist of the age, is President of the Paris Phrenological Society.

He has given the subject of Phrenology a patient examination, and declares that '*the relation which exists between the configuration of the cranium and the different propensities of man, are the result of evidences which amount almost to certainty.*'

It is also gratifying to learn that the French Government takes an interest in the science. The king has recently expressed his conviction that the application of its principles, in criminal legislation, '*would render a great service to mankind.*'

It is truly ludicrous to hear some of our *professional gentlemen* say — who are either too proud or too indolent to investigate the science themselves — '*that Phrenology is going down in Europe.*' We may assert, without exaggeration, that there is hardly a distinguished physiologist, in Europe, who does not generally or

Digitized by Google

particularly admit the fundamental principles of the science. We do not except even those who some years since labored hard to prove Phrenologists *insane*, and their science a system of '*real hypocrisy*,' and '*quackery*.'

The visit of Dr. Voisin to the prison at Toulon, and his selection, and recognition, by aid of phrenology, of 13 out of 22 persons confined for rape, is an interesting and important part of the paper: truly, the marks of the beast were not in their *foreheads*. But we will no longer detain our readers from the article itself.

Phrenological Society of Paris.—Annual Meeting, Aug. 1834. M. Andral, *President.*

The expectation of a discourse, *ex cathedrâ*, on the head of Napoleon Bonaparte, assembled a numerous collection of phrenologists at the annual meeting of the Society at the *Hotel de Ville*. Unfortunately M. Froissac, who was charged with the duty, was prevented from appearing. M. Dumoutier, who undertook to supply his place, had not sufficient time to make the researches necessary for a complete investigation of the subject. The meeting, however, on the whole, was so interesting, as to induce us to lay a report of it before our readers.

The President (the celebrated M. Andral) opened the meeting by a short review of what had already been done in phrenology, and pointed out what still remained to be done, in order that many principles laid down by the science should obtain the authority of facts. As to the basis of phrenology, that is to say, the relation which exists between the configuration of the skull, and the different moral and intellectual faculties of man, M. Andral showed that it was supported by so many strong presumptions as nearly to merit the rank of a certainty.

M. Casimir Broussais, as a secretary of the Society, was charged with the duty of giving an account of the labors of the Society since the last public meeting. He commenced by observing that the time when a doctrine required the greatest num-

Digitized by Google

ber of proofs, was that when its enemies showed themselves most active in attacking it. During the year which had just passed, the Society had collected a certain number of facts which served to confirm it in the belief of the opinions it had always advocated. After a few other observations, M. Broussais proceeded to pass in review about 20 heads which had been examined phrenologically, and exhibited plaster casts of each. The first head exhibited was that of a child eleven years of age, affected with hydrocephalus. This disease does not of necessity exclude all intelligence; but in order that the individual affected should preserve his mental faculties, it is indispensable that the volume of the head assume an increased development, proportionate to the quantity of fluid contained in the skull: by this means the effects of pressure are counteracted, and the functions of the brain, though in general more or less altered, may remain with some degree of activity for a considerable time. But in the case to which M. Broussais directed the attention of the meeting it was quite different; the skull in fact was two or three times smaller than natural, instead of being enlarged: hence the substance of the brain was reduced to a mere nothing, and the child, as a necessary consequence, was a complete idiot. M. Broussais next showed two brains taken from the dog species; one the brain of a spaniel bitch, which was remarkable for her intelligence; the other taken from one of her pups, the only one of a whole litter which was totally inapt to receive any education. The speaker pointed out the striking difference of proportion between the two brains, and particularly the absence of *educability* in the grown pup, while the organ was very prominent in the mother. Passing to an examination of the heads of individuals whose lives had been stained by crime, &c., M. Broussais indicated the incontestable predominance of those regions allotted by phrenologists to the passions and instincts, at the expense of those where the intellectual faculties and sentiments are situated. Thus, in the head of Lemaine (who lately assassinated the servant of Madame Dupuytren) he drew the attention of the audience to the enormous magnitude of the occipital region, and the length of the

Digitized by Google

bi-temporal diameter. In the skull of Lemaine, the organs of *Self-Esteem*, *Love of Approbation*, and *Justice*, are small. The murderer, however, was not without some share of Benevolence; he asserted, with the utmost constancy, the innocence of Gilliard, accused as an accomplice, who was afterwards acquitted. The organ of Veneration is sufficiently marked on the cast, and it is to be observed that he demanded the succors of religion at his last hour with much earnestness. The next cast exhibited was taken from the head of a young man still alive, 21 years of age, detained at the *Bicetre*. At eight years of age he commenced to steal from his parents; at nine he robbed his neighbors; and at ten, as he himself confessed, he conceived the project of murdering his aunt. The animal organs are very prominent in this cast; the forehead is retiring, and the superior region of the skull very narrow. He is a distinguished thief, and is stimulated to remarkable deeds by his *Self-Esteem*. This organ, which is very developed, has often excited him to break the loom at which he worked in the prison, to get rid of orders which he considered as tyrannical.—The heads next examined by the secretary were those of two suicides — one twenty years of age, an ironmonger; the other, aged thirty years, the chief of an establishment at the *Messageries Royales*. The first blew out his brains because his sister was unhappy in domestic affairs; the second drowned himself because his wife was a drunkard. In both these heads the organ of *Love of Life* is very little pronounced; *Benevolence* predominates as well as *Courage* and *Destruction*. Another individual, in whom the organ of *Love of Approbation* is great, is Thouvenin, the bookbinder. This man frequently ruined himself to satisfy his *amour propre*, and the passion of his trade by which he was so strongly possessed. There was something analogous to this in the organization of the musician Choron, who has just died. Pre-occupied solely by his love for music, Choron neglected every thing else: one day he met in the street a child who sung a popular air in a manner that pleased him; he brought the infant immediately home, and installed him in his house. His wife, less enthusiastic than the musician, demanded

Digitized by Google

where he was to get money to support this new guest. 'Calculating soul,' (*ame venale*,) said the artist, 'while I think of a tenor, you think of your soup.' The head of Choron does not present a great development of *Ideality*, but we can distinguish the organs of *Veneration* and *Perseverance*; these explain his laborious efforts to become master of an art which he had not studied when young, and the almost exclusive taste he showed for religious music.—The attention of the meeting was now drawn by M. Broussais to two heads in which *Courage* and *Benevolence* were well marked. One of them, Hennin, is well known for his devoted attempts to save the passengers from the shipwreck of the *Amphitrite*, at Boulogne. The second, an inkeeper at Vilette, is commonly called 'the saviour,' from the number of persons he has rescued from drowning. The last individual to whom M. Broussais referred, presented the organ of *Benevolence* in an excessive degree, so much so as almost to render the upper region of the forehead deformed. The cast was taken from the head of a young negro, named Eustache, remarkable for numerous acts of benevolence, and the development of the cerebral organ corresponded with that virtue. Though possessed of a large fortune, he had completely dissipated it in gifts made without reflection or judgment: if *Circumspection* and *Firmness* had existed to counterbalance his predominant sentiment, we should have had a model of physical and moral beauty in the head of this unfortunate youth. After a short episode, in which M. Broussais attacked, with warmth, the enemies of phrenology,

Dr. Voisin gave an account of a visit which he made in the year 1828, to the galleries at Toulon, under the authority of the Minister of the Marine. His sole object in this visit was to establish the existence of the organ of *Rape*. The number of individuals confined amounted to 372, and he had to select amongst them 22 who had been condemned for the crime above mentioned. Having examined the posterior region of the head in all, he selected from the ranks 22 individuals, and on referring to the registers it was found that amongst the 22 individuals so selected, 13 had actually been condemned for rape; the remaining nine had been incarcerated for different crimes, but they had been marked

Digitized by Google

in the registry as requiring a special *surveillance* in regard to their morals.

M. Fossati followed, and delivered some interesting observations on musical talent, which depends on an organ situated above the external angle of the eye, and produces the square forehead so remarkable in celebrated musicians. When we would wish to designate a musician of high taste, &c., we are in the habit of saying, 'He has an exquisite ear;' but this manner of appreciation is quite erroneous. When Beethoven placed himself before a piano, his fingers ran along the notes, but never struck them; that would have been useless, as he had completely lost the sense of hearing: he was perfectly conscious of what he executed, through the internal organ of the brain, although the instrument remained as much without sound, as the player himself was deaf. The organ of the *Measurement of Time* is as necessary to a good musician as that 'of the relation of tones,' and singers have especial need of the organ of *Construction*. The mask of Weber, analyzed by M. Fossati, presented a remarkable development of the inferior and middle parts of the forehead, whence this composer was essentially predisposed to labor, and the study of the masters in the art. Although Litz has, according to M. Fossati, some analogy with Weber, yet he feared this young artist, with all his talent, was not capable of producing any thing to be compared with works of a higher order. If to the organs which refer specially to music be added a predominance of the spirit of criticism, this mixture gives rise to musical censors, as the speaker showed by several examples.—The skull of M. Paer, another musician and composer, presents a strong disposition to poetry, and a great development of *Imitation*, and hence his music is eminently dramatic. As to Rossini, his enormous head seems to unite all the organs, all the qualities necessary to form a perfect musician of the highest class. The lateral development of his forehead explains how he has been able to make such an immense progress in instrumentation; and the sense of language, also very well marked, shows how he has composed to French words without ever injuring the prosody.

Digitized by Google

The discourse of M. Froissac was now expected with some little anxiety, and we were not slightly disappointed to hear that for some reason or other he was unable to attend. We were, however, occupied in lieu thereof, by examining the Emperor Napoleon's hat, the 'very hat' which he wore at Waterloo. It was brought by a gentleman, who permitted the company to examine it at their leisure, and those who tried it on, which some did, declared their conviction that Bonaparte's head was much larger than it is generally represented to have been. In place of M. Froissac's discourse,

M. Dumoutier analyzed the mask made by Dr. Automarchi, immediately after the death of Napoleon, and deductions were drawn by him in a sense quite opposite to those contained in a commentary lately published on the subject. The mask taken by Dr. Automarchi is not quite complete; it gives the face, forehead, and upper part of the head, as far as the organs of *Firmness* and *Veneration.* Spurzheim admitted thirty-five organs on each side of the head, and since his time two additional ones have been discovered. M. Dumoutier passed in review these several organs in the head of Napoleon, and drew attention to such as presented any remarkable degree of development. He particularly distinguished those organs which enable the individual to seize and judge of 'dimensions, form, space; those of number and classification; that which enables one to remember places, relative situation, and events.' The organs of *Judgment, Intelligence,* properly so called, and *Comparison,* were extremely developed; that of *Causation* feeble. On the summit of the head, the organs of *Benevolence* and *Veneration* are well developed, and that of *Poetry* is very considerable. In the inferior region the *Love of Possession* is very visible, as also the *Desire to Dissemble.* On the contrary, the organs by which a man is drawn towards life, &c., are very small. In conclusion, M. Dumoutier remarked, that, on the whole, the head of Napoleon gave indications of a high genius, and in a physical point of view was a model of beauty.

Digitized by Google

Art. XXIV.—*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 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

* 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!

Digitized by Google

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 sapientiæ, 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 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, 1*st*, To the *general size* of his brain; 2*dly*, To its

Digitized by Google

quality and activity; and, 3*dly*, 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.
Greatest circumference,	22¼
From Occipital Spine to Individuality, over top of skull,	14
From Ear to Ear, vertically, over top of skull,	13
From Philoprogenitiveness to Individuality (greatest length,)	8
From Concentrativeness to Comparison,	7⅛
From Ear to Philoprogenitiveness,	4⅞
From Ear to Individuality,	4¾
From Ear to Benevolence,	5½
From Ear to Firmness,	5½
From Destructiveness to Destructiveness,	5¾
From Secretivenes to Secretiveness (greatest breadth,)	5¼
From Cautiousness to Cautiousness,	5½
From Ideality to Ideality,	4⅜
From Constructiveness to Constructiveness,	4½
From Mastoid process to Mastoid process,	4¾

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 ardor 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

Digitized by Google

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, wether 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

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

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

Digitized by Google

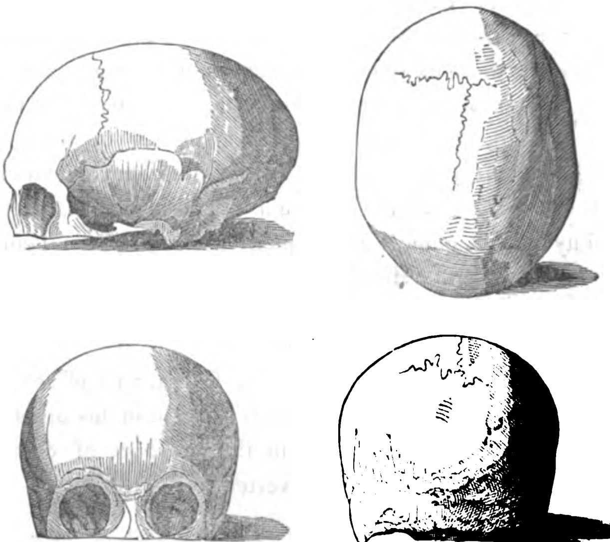
an exactly opposite description, and indicate a preponderance of the moral feelings and reflective intellect. The *third* is composed of heads in which the two orders of organs are pretty equally balanced. A man whose head belongs to the first of these classes is naturally endowed with base, selfish, 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, shows 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.

* 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.

Digitized by Google

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,	15
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. Coloring, 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 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 facul-

Digitized by Google

ties happen to have the ascendency. 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 illustraitions of it, the cases of Samuel Johnson and Robert Burns; and the cast now under consideration shows 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:—

* 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.

Digitized by Google

> '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 vigor, 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 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

Digitized by Google

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 favored 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

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

Digitized by Google

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 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.'

* Phren. Journ. vol. iii. p. 82.

Digitized by Google

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 dare say 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.'*

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.

*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.

Digitized by Google

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 vigor 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 Cunning-

Digitized by Google

ham, '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,

Digitized by Google

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 unhonored 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

Digitized by Google

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 favor, be strong. The indifference with respect to money, which Burns occasionally ascribes to himself, appears therefore to savor 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 be-

Digitized by Google

fore 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 humor, 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 everywhere, 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 honor to whom honor is due; he

Digitized by Google

meets, at a great man's table, a Squire Something, or a Sir Somebody; he knows the noble landlord, at heart, gives the bard, 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 showed 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 Smollet'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 everything, 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.

Digitized by Google

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 emi grating to Jamaica, are thus recorded by himself: — 'Before leaving my native country forever, 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, honor 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, show 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

Digitized by Google

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*, blasted with a deep incurable taint of hypochondria, which poisons my existence.' And again, in a letter to Mrs. Dunlop : 'There is a foggy atmosphere native to my soul in the hour of care ; consequently the dreary objects seem larger than life.' He always looked forward with gloomy 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 : 'Mankind are 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 alloy 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 recollect 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

Digitized by Google

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:—

> 'Inhuman man! curse on thy barb'rous art,
> And blasted be thy murder-aiming eye;
> May never pity soothe thee with a sigh,
> Nor ever pleasure glad thy cruel heart!
>
> 'Go, live poor wanderer of the wood and field,
> The bitter little that of life remains:
> No more the thickening brakes and verdant plains
> To thee shall home, or food, or pastime yield.
>
> 'Seek, mangled wretch, some place of wonted rest,
> No more of rest, but now thy dying bed!
> The sheltering rushes whistling o'er thy head,
> The cold earth with thy bloody bosom pressed.
>
> 'Oft as by winding Nith, I musing wait
> The sober eve, or hail the cheerful dawn,
> I'll miss thee sporting o'er the dewy lawn,
> And curse the ruffian's aim, and mourn thy hapless fate.'

The individual who thus received the malediction of Burns for the very common offence of shooting a hare, related to Allan

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

Digitized by Google

Cunningham the circumstances from which this poem took its rise. 'The hares,' he said, often came and nibbled our wheat-*braird;* and once in the gloaming — it was in April — I shot at one, and wounded her; she ran bleeding by Burns, who was pacing up and down by himself, not far from me. He started, and with a bitter curse ordered me out of his sight, or he would instantly throw me into the Nith. And had I stayed, I'll warrant he would have been as good as his word, though I was both young and strong.' (Lockhart, p. 199.)

It was Benevolence which made Burns, in the stormy nights of winter, bethink him on 'the owrie cattle and silly sheep;' and lament the cheerless condition of the little birds, which in milder seasons delighted him with their song.

Some may be surprised to be told that Veneration was a powerful sentiment in Burns. That such was the case, however, there seems to be no room for doubt. The feeling was there, though its direction was not, in all respects, the one which it commonly takes. In early youth, as he tells in his letter to Dr. Moore, he was a good deal noted for an 'enthusiastic idiot piety;' and he afterwards studied with great avidity those excellent works, *Derham's Physico* and *Astro-Theology*, and *Ray's Wisdom of God in the Creation.* Professor Stewart says, 'He had a very strong sense of religion, and expressed deep regret at the levity with which he had heard it treated occasionally, in some convivial meetings which he frequented.' Allan Cunningham states, that at Ellisland 'he performed family worship every evening.' (Lockhart, p. 194.) It was chiefly of natural religion that Burns was an admirer; for it is well known that he entertained sceptical opinions. The Old Light Clergy heartily disgusted him; and he rejected the Calvinistic doctrines of original sin, and the eternal punishment of the wicked. But his Wonder and Veneration being large, he had naturally a leaning towards things invisible,* and both in his letters and his memoranda makes very frequent allusions to the Deity.

* 'To this hour, in my nocturnal rambles, I sometimes keep a sharp look-out in suspicious looking places; and though nobody can be more sceptical

Digitized by Google

'My idle reasonings,' he says, 'sometimes make me a little sceptical; but the necessities of my heart always give the cold philosophings the lie.' The cold philosophings, however, at times bore the ascendency; and he seems to have had strong doubts of the existence of a future state. Here the relative deficiency of his Hope is apparent. 'I hate,' says he, in a letter to Mr. Cunningham, 'I hate a man that wishes to be a deist, but I fear, every fair unprejudiced inquirer must in some degree be a sceptic. It is not that there are any very staggering arguments against the immortality of man; but, like electricity, phlogiston, &c., the subject is so involved in darkness, that we want data to go upon. One thing frightens me much; that we are to live forever, 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!' His religious creed is thus stated in another of his letters: — 'Your thoughts on religion shall be welcome. You may perhaps distrust me when I say it is also *my* favorite topic; but mine is the religion of the bosom. I hate the very idea of controversial divinity; as I firmly believe that every honest upright man, of whatever sect, will be accepted of the Deity.' 'I despise the superstition of a fanatic, but I love the religion of a man.' — Burns's Veneration was displayed in his strong jacobitical feeling, and his reverence for Sir William Wallace. He did not venerate many of his contemporaries, as he thought himself at least the equal of most of them. But men of high rank, who showed him attention, he regarded with much respect. No one, however powerful his Veneration may be, ever reveres those whom, under the influence of other faculties, he

than I am in such matters, [devils, ghosts, witches, &c.] yet it often takes an effort of philosophy to shake off these idle terrors.'—(Letter to Dr. Moore.) To his friend, Alexander Cunningham, he declares his conviction that there exist '*senses of the mind,*' if I may be allowed the expression, which connect us with, and link us to, those awful obscure realities — an all-powerful and equally beneficent God, and a world to come beyond death and the grave.'

Digitized by Google

despises or dislikes. This faculty was doubtless the source of the emotion which he displayed on visiting the tomb of Bruce at Dunfermline. Finally, it is improbable that without naturally strong religious feelings, Burns could have been the author of *The Cotter's Saturday Night.*

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 fervor 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

Digitized by Google

his lower feelings within the bounds of candor 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 fervor 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, favorable to every thing great and noble.* There is scarcely any earthly object

* 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.'

Digitized by Google

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 humor. The former is well described by Lockhart as a 'peculiar vein of sly homely wit.' Humor depends on the organs of Secretiveness, 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

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.'

Digitized by Google

humorous productions, such as *The Two Dogs, The Holy Fair, The Jolly Beggars*, 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 favorite 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 manifestations of which I am entirely ignorant. He was fond of travelling,

Digitized by Google

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 honored 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 pleasures rise;
>   Or plaintive *Martyrs*, worthy of the name:
> Or noble *Elgin* beets the heav'nward flame,
>   The sweetest far of Scotia's holy lays:
> Compared with these, Italian thrills are tame;
>   The tickled ears no heart-felt raptures raise;
> Nae unison 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. Thomson, '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

Digitized by Google

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, as 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 clangor 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 Jews' 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 has 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 endeavored to give an impartial account of the character of Burns, and to trace its various features to the radical mental faculties 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.

Digitized by Google

Art. XXV. — *Opinions of Tiedemann and Arnold respecting Phrenology — Inconsistency of the Antiphrenologists.*

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 to 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 Hiedelberg, 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* (showing 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

Digitized by Google

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 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* distension. 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 show 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

* Cyclopædia of Practical Medicine, article TEMPERAMENT, xxi. p. 174.

Digitized by Google

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 favor 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 adverting 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

Digitized by Google

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 everything. What are "principles?" Generalizations of "details," and nothing more. They are but aggregates or classifications of recognized 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

Digitized by Google

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 recive 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 reflection 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."

Digitized by Google

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 unfavorable; in plainer English, *whose head was badly formed.* Neither Homer's Thersites, whose cranium was "misshapen," nor any of Shakspeare's personages, with "foreheads villainously 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 favorably disposed to that of Phrenology; nor will those whose brains are so ponderous behind and light before, that their heads seem in danger of tilting 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 Hiedelberg.

*** Caldwell's New Views of Penit. Dis. &c. Phila. 1829. Pre. pp. 5 and 6.**

Digitized by Google

Art. XXV. — *A Description of the Method of Moulding and Casting Heads, Masks, Medallions, &c.*

Messrs. Editors—In accordance with your request, I send you a description of the manner of taking casts of heads, masks, &c., hoping that phrenologists will use the hints it affords, to form collections of casts illustrative and confirmative of the doctrines which they have espoused. If individuals of this country, interested in phrenology, will only take the pains, they may easily, and at a comparatively small expense, have such cabinets as are exhibited in the European cities — a cursory examination of which has brought many an anti-phrenologist to believe in the sublime truths of phrenology, and has silenced the opposition of many cavilers. Many have visited the cabinets of the Edinburgh and London societies, and those of Deville and of Vimont, to scoff, but have left them to restrain their incautious tongues, or to study the science with impartiality. Louis Philip, King of the French, during his late visit to the cabinet of the Paris Phrenological Society, while acknowledging the truths of the science and mentioning the immense advantages which would accrue from a knowledge of them, remarked that phrenology would soon do away some of the great errors in criminal jurisdiction, particularly that of capital punishment.

The article which follows was originally written for the 'Scientific Tracts.' Although several additions have been made, it was not deemed expedient to alter its phraseology in any essential manner, as it was particularly written with a view to conciseness. Nothing, if we except the last description of taking busts, is stated that has not been tried, not by experiment alone, but by considerable practice. S.

An attempt has been made to give, in a few words, a practical account of the manner of making figures, and also the moulds

Digitized by Google

in which they are cast. If the attempt has been successful, the writer will not deem the short time spent in preparing it wasted.

To the amateur, antiquary, painter, surgeon, and the different artists, it would be useless to mention the various uses of this art; for they, and they alone, know the advantages it can afford them in their several pursuits.

MATERIALS AND APPARATUS.

Before proceeding to the subject, it will be well to mention the articles and apparatus which are requisite. For casting and making moulds, the following materials are used, viz: plaster of Paris, (or native sulphate of lime,) sulphur, wax, fish-isinglass, tinfoil, and tin. The plaster is prepared by being ground very fine, and is afterwards boiled or baked, as is required for coarse or fine casting. By this means the water of crystalization is expelled. When an article of an extra fineness is required, the plaster is again passed between the stones of the mill and sifted. The nicest will resemble the finest wheat flour. The moisture of the atmosphere will injure it, if it is exposed to its influence; therefore it, and every other description of dampness must be guarded against. For medallions and ornamental figures, the plaster cannot be too fine and white; for moulds, a coarser sort will do. Figure-casters prefer for use that which is the slowest in hardening; the reason is, that it enables them to cast more figures at one mixing. For some purposes — as for taking masks — it cannot harden too quickly.

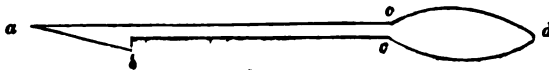
When water is added to this impalpable powder, it supplies the place of that expelled by the process of baking, and causes it to reassume the solid form without shrinking or warping. Plaster already prepared for casting can be obtained at a trifling expense, in every large city. In this, there are several mills exclusively devoted to the purpose of preparing it for casting and stucco-work.

Although plaster is generally used for casting figures and making moulds, nevertheless, for some purposes, other articles are much better. Sulphur is much used for taking moulds from coins, medallions and bass-reliefs, on account of the exact and

Digitized by Google

minute impression which it is capable of receiving. Tin-foil and tin are used when sulphur would injure the medals to be copied. Wax is much used for imitating fruit and flowers, and for some parts of plaster moulds, where it would be difficult to use the gypsum. Isinglass and common glue have likewise their appropriate use. These articles can be obtained from any druggist.

Fig. I.



The utensils necessary for casting are always at hand: viz. bowls, spoons, knives, &c. For trimming casts, it would be well to have an instrument (see fig. I.) about eight inches long, the edges of which, from *a* to *b*, and from *c* to *d* around to *c*, are sharp; from *b* to *c* the instrument should be round, that it may be held more conveniently by the operator. This can be made by any smith, from a piece of steel, or from brass, which is much better, on account of its not rusting. The bowl used, should have a spout or nose, like that of a pitcher, in order to direct the material, when required, in a small stream. The other necessary things will suggest themselves.

MANNER OF MIXING PLASTER AND WATER.

One of the most important parts, and perhaps the most difficult of casting, is to mix the plaster and water properly. This is done as follows: — As much water as is necessary to be used is put into the bowl; the plaster is then shaken into it from the hand or a spoon, *without stirring*, till no more can be moistened by the water. In this situation it is suffered to remain about one minute, until the plaster is free from air; this can be known by the ceasing of the mixture to bubble; by this means small holes are prevented from occurring in the casts, which is a very desirable object. The contents of the bowl are then stirred together and used. In casting hollow figures, the mixture should have the consistency of cream; for making moulds, it should be less fluid. The plaster must be used as soon as it is well mixed; if not sufficiently fluid the

Digitized by Google

mixture can be diluted, but this must be done when it is first stirred, else it will be filled with lumps.

MANNER OF MAKING MOULDS.

The mode of making moulds differs according to the objects to be copied. For instance, any thing soft and pliable, like parts of the human body, may be easily taken at once, as the object can be delivered from the cast without injury to either; whereas, from a hard body, as a marble bust, many pieces are required. Each manner will be described separately.

Moulds from a soft and yielding substance.—In making a mould from a soft and yielding substance, it is necessary first to lubricate the object well with a mixture of oil and tallow. The oil is used to prevent the plaster, when hardened, from adhering too tenaciously to the object to be copied; and, without the slight adhesive power of the tallow, the liquid plaster would be apt to run off as fast as put on. After having put the oil and tallow on delicately and thoroughly with a brush, the plaster must be mixed with the water, and laid on. At first, there should be only a thin coat, in order to prevent distortion, which would ensue, if much of the heavy material were to be heaped on. After the plaster has become somewhat firm, enough should be put on to give the mould a tolerable degree of strength. When hard, the object must be carefully removed, after which it is ready to be seasoned, the process of which will be described in its proper place.

Moulds from flat surfaces of hard bodies.—Moulds from flat surfaces of hard bodies are made in precisely the same way as the last described.

Moulds from *medallions* are best made of sulphur. The mode of making them is this:—First, the medal, if it is of plaster, must be seasoned; then a rim of sheet tin, of about half an inch in width, must be placed around it, and be kept in place by a cord. The medal must next be delicately oiled with a little olive oil. Thus prepared, it must be held to the fire till it is quite warm; after which the melted sulphur must be poured upon it, and allowed to get nearly cold. Just before it is cold, if a little freshly-mixed

Digitized by Google

plaster is cast upon the sulphur, it will cause the mould to separate itself from the medal, and, besides, will give it additional strength. Moulds thus made require no seasoning, and give beautiful impressions.

If the process be reversed, (the plaster cast being the mould instead of the model) and a little protoxide of iron, more commonly known as *crocus martis*, mixed with the sulphur, the cast will resemble, in a very great degree, a bronzed medallion. The addition of the protoxide is said to give more strength and durability to the sulphur, rendering it less liable to crack by the sudden application of warmth, and thereby increasing its value for making moulds and casts.

Fig. II.

Moulds from hard and irregular bodies.—Moulds from hard and irregular bodies, as from figures, busts, &c., consist of many pieces, and on that account are more difficult to make than those above described. They are made piece by piece, in the following manner: — First, one piece must be made as was directed above, while describing the manner of making moulds from flat surfaces of hard bodies, care being taken that the mould will separate from the object without damage to either. This piece must be trimmed smoothly at the edges, and a few holes, or, as they are technically called, *keys*, must be made in the edges, that

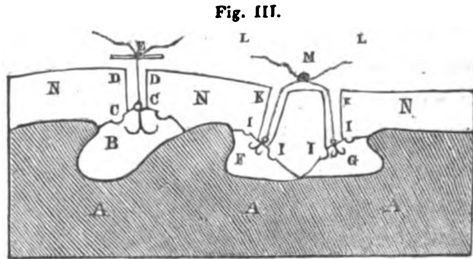
Digitized by Google

the other pieces may make a good joint with it, and the parts of the mould be more easily kept together. The piece thus finished must be placed on the object exactly in its first position, and its edges well greased, to prevent its adhering to the piece to be cast next. Another part is now to be cast, and served in the same way until the whole mould is completed. One example will give a much better idea of the process. Let A (Fig. II.) be a bust, from which a mould is required to be taken. In the first place, the bust (A) must be well brushed over with oil; the plaster (B) is then put on by a spatula or spoon, and, as it grows hard, is heaped on, until the piece is sufficiently thick to be strong. This piece, (B) as can be seen from the figure, covers a part of the bust extending from F to H. After having become hard, it is removed from the bust and trimmed, as stated above. Another piece (D) is made on the opposite side of the bust, extending from G to I. When it has become hard, it is removed and trimmed smooth. Small round depressions (c) are made in all the sides trimmed, (except the bottom in this case) to serve the purpose of keys, with the instrument described above and shown in Fig. I. These two pieces, thus made, are to have the trimmed edges well greased; they are then to be put upon the bust in their former places, and secured firmly by a cord. A third piece (E) must then be cast and trimmed as the pieces B and D, care being taken not to move the pieces B and D, as when hardened they are to form a water-tight joint with the piece E. This third piece will have small round protuberances on the extremities which come in contact with the other pieces, and which correspond to their depressions, and serve to keep them all firmly together, when put in their proper position without the bust. Small depressions must now be made in the front and back edges of the piece E, at the places marked C. Having proceeded thus far, the three pieces must be greased and placed upon the bust, which will then have the appearance that is represented by Fig. II. To finish the mould, the front and back, respectively, must be greased, and plaster afterwards cast upon them. When sufficiently hardened, these pieces must be removed from the bust, and put together

Digitized by Google

without it. In this situation they will form a hollow mould, which must be seasoned, as will be mentioned hereafter, before it will be ready for use.

Fig. III.



It sometimes happens that internal pieces, as B, F, and G, of Fig. III, are required. These must be made first, and, while the plaster is soft, a loop of wire must be placed in each of them. The keys, (C, C, and I, I,) must not be forgotten. These pieces, when hard, must be removed, trimmed smooth, and well greased. A little glazier's putty must next be put around the loops of wire, and the pieces be replaced. The piece N, N, N, must be cast next; when hard it must be removed, and the holes D, D, and K, K, bored entirely through it, where the loops of the internal pieces will come, or rather, where the putty made depressions. The internal piece (B,) is fastened to the piece N, by passing a string through the loop of wire and the piece N, and by tying the string to a stick at E, which is afterwards twisted round. The pieces F and G are fastened in a similar manner by the strings L, L, which form a knot at M. The letters A, A, A, of the figure represent the object from which the mould described is supposed to have been required.

In making moulds of plaster it is often necessary or convenient to form the sharp angles of wax. To do this, the place to be occupied by wax must be first filled with some soft substance, as lard or soap. The portion of the mould above this must then be made of plaster. When this has hardened, it must be removed, trimmed, and a large hole bored through it; the lard which was used to fill the cavity must then be removed, and the piece of

Digitized by Google

plaster replaced. Thus prepared, the melted wax, which should not be hot, must be poured through the hole of the piece just made, and, on cooling, it will form the angle required. If a little rosin is mixed with the wax, the corner will be harder.

Moulds of Isinglass and Glue. — Among the articles for making moulds, isinglass and common glue were mentioned. They can be used as follows: — Dissolve the isinglass or glue in brandy, by a slow fire. The article to be copied must be oiled; then the solution must be poured upon it, and suffered to remain until it is hard. This, though sometimes used, is an inferior mode of copying medals, seals, and coins.

Moulds from tin-foil and tin. — Moulds are made from tin-foil and block-tin, by pressing the material upon the article to be copied. This requires great pressure and must be done with a machine. Silver and bronzed medals, which would be defaced by hot sulphur, are copied in this manner.

MANNER OF SEASONING MOULDS.

After moulds have been well made, the next process is to season them, so that they may not absorb the oil that is put on them to prevent their adhering to the figures which are cast in them. This process is quite simple, and is performed in the following manner: — The plaster mould is allowed to become perfectly dry. Two or three weeks are required for this purpose, unless artificial heat is used. When perfectly dry, the mould is to be well soaked with *boiled linseed oil,* put on very delicately with a brush or sponge. In this state the oil is suffered to dry in the pores of the plaster: when sufficiently dried, another coat must be put on very delicately, and perhaps a third; and when these last coats of oil have become dry, the pores will all be filled, and the mould sufficiently seasoned. Every time the mould is used, it must be lubricated with a mixture of equal parts of oil and tallow.

When the mould must be broken to pieces, as is the case in taking casts of living heads, it need not go through this course of seasoning, but may be prepared in the following manner: — A

Digitized by Google

thick lather, made from common brown soap, must be put on the mould, very faithfully with a brush. This simple process will prevent the mould from absorbing the oil, when an attempt is made to cast. Although this last way is very convenient, and saves much time, (for the mould need not dry before it is thus prepared, and may be used immediately afterwards,) nevertheless, the mould is apt to be soft, and consequently easily broken, and many of its fine parts lost; therefore, except in the case mentioned, or when only two or three casts are required, the process first described had better be employed. Some artists, instead of seasoning their moulds at all, and oiling them each time they are used, prefer to throw into them a thick suds, made from soft soap and hot water; after having turned them round once or twice, they throw out the liquid, and cast in the plaster. This is a very indifferent mode, as the casts are not so clean, and no time or expense is saved by so doing.

METHOD OF CASTING.

Casts from hollow moulds. — When a mould is made and well seasoned, there is nothing easier than to take casts from it. This is done in the following manner: — First, the mould must be gently brushed over with a little of the mixture of oil and tallow, and its different pieces put together and secured in their places by a cord; then, the plaster must be mixed, as described above, care being taken not to have it of too great consistency. All things having been done as described, the liquid plaster must be poured into the mould, which is then turned round several times, till every part of it is lined with plaster. When satisfied of this, the plaster which does not adhere to the sides of the mould must be poured out into the bowl, and be well stirred, to prevent its hardening. After the lapse of a few moments, it is again cast into the mould, and again poured out. This is done several times, until the figure within the mould has attained a sufficient degree of thickness. The plaster which is left after casting the figure, can be put with a spatula around the base of the cast, to make it stronger, and heavier at the bottom. The mould must

Digitized by Google

be left about an hour to stand unmolested ; after which time, the string which binds its parts together may be removed, and the mould piece by piece, taken from the figure. The figure thus cast will be hollow, and of course lighter and more convenient to be transported from one place to another, than if solid. The seams must be removed, and the accidental holes filled up in a manner hereafter to be described.

Casts from flat moulds. — Casts are made in flat moulds by merely pouring the liquid plaster upon them, after they have been oiled, and leaving it to harden.

For taking casts from sulphur moulds, a rim of tin, half an inch broad, is necessary. This rim is put around the mould and secured. Oil is then put upon the mould with a brush, and afterwards liquid plaster, likewise with a brush. Using the brush prevents the occurrence of little holes in the cast, which is a great desideratum in medal-casting, as medals cannot be trimmed and repaired so well that the repairs cannot be detected.

MODE OF CASTING IN WAX.

When *wax* is used for casting, care must be taken that it is not too hot. The mould must be oiled, tied together, and warmed, and the warm wax be thrown in and out of it eight or ten times, until the cast is sufficiently strong. When perfectly cold, remove the mould carefully.

MODE OF COLORING CASTS.

The plaster or wax can be colored by any of the common coloring matters, care being taken that no water be put into those which are to unite with the wax, or glue or gummy matter into those which are used for the plaster. Water and wax will not unite together without a third substance ; and gum mixed with plaster, greatly retards its setting. Of coloring casts more will be said hereafter.

MANNER OF TAKING MASKS.

It is often a gratification to have the masks of our friends ; and as the mode of taking them is very simple, and causes very little

Digitized by Google

inconvenience to the subject, a description of the manner in which they are taken will be briefly given. The individual is made to lie horizontally on his back, with his eyes shut, his hair and eyebrows brushed properly, and well smoothed with pomatum.* A napkin is placed around his head, to prevent the plaster from extending over other parts of the head, and getting into the cavities of the ears. A goose-quill or paper tube is fixed into each nostril by a piece of paper or cotton. Thus made ready, the eyebrows, hair and eyelashes must be gently rubbed over with olive, or with almond oil, which is much pleasanter. The rest of the face need not be oiled, as perspiration will prevent the adhesion of the plaster. The plaster is then put on the face, care being taken not to stop the cavity of the tubes. At first, the face should be but *thinly*, though *entirely* covered with the plaster. When this first coat has become pretty hard, a little more plaster should be laid on, to the thickness of three fourths of an inch. The plaster having become tolerably firm, the quills are to be withdrawn. When hard, the mask can be removed from the face, (the napkin being taken away) by carefully lifting it from the forehead first, and then from the rest of the face. The subject should then wash the plaster from his eyes, before opening them. The plaster would feel more pleasant, and harden quicker, if mixed with warm water. This precaution will take away the shock which is generally experienced, when the plaster is first put on, and which is apt to produce a frown on the expression, which will be unavoidably copied in the cast. The whole process of taking a mask requires only *ten minutes*, and gives, when carefully done, a correct model of the face. This mould from the face can be seasoned with soap, and a cast made in it. To remove the mould, recourse must be had to the mallet and chisel, unless (prior to the plaster being cast into it) it is divided vertically (i. e. from the forehead, between the eyes, and through the nose, mouth and chin,) by a very fine saw. The mould should not be entirely cut through;

* The best preparation for this purpose, is a mixture of common pomatum and sweet oil. The pomatum is melted and the oil immediately blended with it.

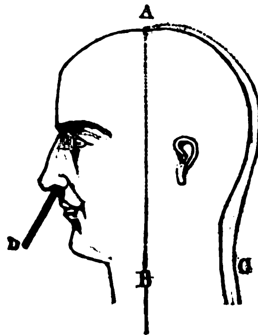
Digitized by Google

all the outline only should be well sawed, and the remainder broken. The roughness of the fracture will serve as a key to retain the pieces of the mouth in their proper places. A smooth cut with a saw will not allow this.

METHOD OF TAKING CASTS OF WHOLE HEADS.

Moulds of the *whole head* are taken in a similar way. The person must sit upright, his hair must be smoothed down by a brush and pomatum, his ears stuffed with cotton, and a tube put into each nostril, as represented by D, in Fig. IV. A small cord must be placed from B to A, and then over the head to the other side corresponding to B. Another small cord (A, C,) must be placed from the line crossing the vertex, and continued down in a median direction to the nape of the neck. The use of these strings is to cut the plaster just before it is hard, and by this

Fig. IV.



means, facilitate the removal of the plaster shell from the head. Having thus made your subject ready, his head is to be *entirely* covered with the liquid plaster. All the plaster to be used must be put on at one mixing, and when it shall have attained the proper degree of hardness, the strings must be removed in a manner which will divide the whole shell into three pieces; one to contain all of the face, excepting the ears; the other two, to contain each an ear and all of the shell between the line A, C, at the back,

Digitized by Google

and the line A, B, from the top of the head to the point B, indicated in the figure. When the plaster is sufficiently hard to retain its shape, it should be immediately removed from the head.

There is a disadvantage in this manner of procedure which annoys some people very much — viz. the dragging down of the cheeks and angles of the mouth by the weight of the plaster, thereby distorting the features, and destroying the likeness.

The mode which is most in use is that of taking the back part of the head first, and afterwards the front. The manner is as follows: — The head is prepared, and the strings adjusted as above described. The person is then made to lean forward and a napkin is placed around his head, and the plaster laid on. When the plaster has attained a proper degree of hardness, it is divided by the string at the back part of the head.* When this part has become sufficiently hard, the person is made to lay on his back (care being taken not to disturb the plaster cast on the back part of his head ;) in this situation, plaster is laid on the remaining uncovered part of his head, as was directed for taking a mask. The string passing before the ears must then be removed, and the plaster mould, which is in three pieces, taken from the head.— This manner is likewise objectionable, as the first piece is seldom held so securely that it will not move, and therefore prevents accuracy. Also the hair above the ears is apt to project so as to make the head in that region wider than truth.

The following method of taking casts of heads will prevent the above-mentioned accidents, and, on account of its simplicity, save much trouble. The subject must lie on his back, as if he was to have a mould taken from his face, the back part of his head to be encased in a wooden box.

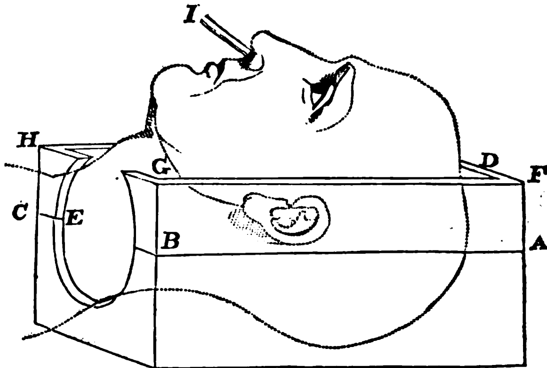
The annexed figure represents a box prepared for this purpose, and which is so contrived that it will separate into three pieces. The box may at first be made whole, and then divided. In this case an horizontal section, A, B, C, (Fig. V.) must be made with a

* The proper time of dividing the plaster is when it can be cut easily by the strings, and yet when the cut edges will not adhere together.

Digitized by Google

saw. This will divide it into two parts, the upper of which must be subdivided by a vertical section at D. A, B, represents the lower edge of one of these pieces, and must be behind the ear; D, F, G, the upper edge of the same, and must be before the ear. In other words, the part A, B, D, F, G, and its opposite E, C, H, D, must each include the whole ear of their respective sides and a portion of the head, of the same width, from the neck to the top,

Fig. V.



E, represents a circular opening in one end of the box to admit the neck. The head of the person must be prepared with pomatum and oil, and the strings adjusted in the direction of G, F, D, H, and B, A, C, so as to divide the mould into four pieces with the aid of another string, which shall correspond to the vertical section of the box at D, and which must be kept in place by them. The tubes I, having been placed in the nostrils, the head is properly prepared for the application of the plaster. This is done as follows: the box is first filled with liquid plaster, and then the face is carefully covered. To cut this mould into pieces, we have only to withdraw the strings, over the edge G, F, D, H, and through the slits at B, A, C, and D. After this division the plaster will soon be sufficiently hard to be removed, which can easily be done.

To get a model of the head from this cast, it first must be pre-

Digitized by Google

pared with soap, as previously directed, and its parts put together so as to form a mould: into this mould the plaster must be cast, until the model within has attained a great thickness; after which, the shell must be removed with a mallet and chisel. In using the chisel, great care must be taken not to destroy the ears of the cast. When the cast is made, it can be put upon a pedestal, the eyes opened and trimmed.

TRIMMING AND REPAIRING CASTS.

It often becomes necessary to fill up accidental depressions in casts. To do this, the surface of the depression is first made rough by any pointed instrument: it is then moistened with water, and plaster is put into it and smoothed over with a knife. If the cast has just been made, and has not become dry, a little of its substance can be scraped off and used for the filling of such defects.

Casts are mended by making the edges to be joined together, rough and moist, and by putting a little newly mixed plaster between them, as a cement. The pieces having been pressed together, the superabundant plaster will be forced out, and can be removed by the knife. When figures are cast in parts, the different pieces are united in the same manner. A very strong cement for repairing alabaster and marble busts, precious stones, and other mineral and hard substances, is made in the following manner, and used as plaster: — Take of glue or gum size, and finely ground plaster, and, for giving color, a little of the powdered substance of the article to be mended, as much as will make a paste of the consistency of cream. One or two days are required for the cement to become hard.

The broken parts of seasoned moulds can be cemented together by a composition of 2 parts of bees-wax and 1 of rosin. This composition must be melted and applied to their broken surfaces; after which they must be heated until the wax is fluid, when they can be pressed together, and the superfluous cement removed with a knife.

After casts have been made, the seams caused by the mould

Digitized by Google

are removed by the knife. They are then put away until they become dry, after which they are smoothed by very fine sand-paper or dogfish-skin, and polished by a Dutch rush. The rush is moistened in water and is capable of giving them an exquisite smoothness.

MODE OF POLISHING, BRONZING, AND PAINTING CASTS.

The following is the method adopted by artists to give their casts a polish which resembles marble. They are first made smooth, and brushed over with a mixture of soap and white wax. A quarter of an ounce of white soap is dissolved in half a pint of warm water, with which an equal quantity of white wax is afterwards incorporated. The casts may be dipped into this solution, or washed with it plentifully. After drying an hour, they are polished by being rubbed with soft linen or flannel. A polish produced in this manner rivals the finest work executed in marble. Other methods are adopted to produce this resemblance to marble, but as the one described is the best, the others will not be mentioned.

If casts are to be exposed to the inclemencies of the weather, they can be made more durable by filling their pores with boiled linseed oil, with which wax or resin has been blended. After this preparation, they can be painted with white-lead or varnished.

There are many modes of bronzing laid down in books, but the following is the most preferred, on account of its simplicity, and the readiness with which all the articles can be procured. The casts must be first trimmed and made smooth. The next step is to cover them well with a size, made of glue, colored with lamp-black. When this size has been permitted to dry, the cast will appear black and without polish, and is ready for a coat of paint, made of varnish* and coloring materials. Perhaps the best color † is made by a mixture of *chrome green* and *lamp-black* well blended together. This must be put on with a brush, and when

* This varnish is made by melting rosin in a cup, and adding to it a sufficient quantity of oil of turpentine to give it the consistency of oil paint.

† A very handsome green is produced by the mixture of chrome yellow and Prussian blue.

Digitized by Google

dry, a little Dutch metal, or, as it is known here, *copper bronze*, must be mixed with a little of the paint or varnish, and rubbed on the most prominent parts of the cast. A coat of copal varnish may be put over all, after the casts are dry. When done well, the plaster figures will resemble those cast in bronze. The cheapest and most satisfactory way, however, is to get articles bronzed by those who are well practised in the art, and to whose profession it immediately belongs, viz. the painters and plaster-casters.

Next to bronzing, the best way to prepare casts is to paint them with dead white paint, i. e. white-lead mixed with other materials in such a manner as to dry without a gloss. Casts painted in this manner soon attain the complexion of human flesh.

Having completed, in a hasty and concise manner, an account of the method by which the whole trade of casting is performed, it is hoped that some advantages may be taken of it by many of the sciences, and especially by that which treats more particularly of man. Much interest is now taken in the fascinating study of Phrenology; and as this science depends upon proofs which must be brought immediately to the sight and touch, it is likewise to be hoped that the few rules which have been here given, and the simplicity of the processes described, will induce all connected with this study to secure for inquirers all cases remarkable for a deficiency or overshare of any faculty.

Digitized by Google

Art. XXVII. — *Allusions to Phrenology, in the 'Last Days of Pompeii.'* [A paper read before the Boston Phrenological Society, January 15th, 1835. By H. T. Tuckerman.]

In the investigation of any science, it is pleasant and useful to mark the impression it conveys and the aspects under which it presents itself to minds, with the characteristics and tendencies of which we are familiar. And the benefit and satisfaction thus derived do not result so much from the idea that the assent or dissent of any individual affects either the truth or the claims of a scientific subject, as from the important fact that all science and philosophy receive more or less of illustration when viewed in connection with the nature they are designed to dignify and improve. 'The authority of all possible truths,' says a great philosopher, 'exists for me only on this ground, that in the free exercise of thought they are evident to me.' But when our object is the investigation and elucidation of a science, while we should not attach undue weight to the authority of human opinion, it will prove, in no small degree, serviceable to our own conceptions and inquiries, to trace out the reciprocal influence exerted between our subject and the general mind. And there are individuals whose mental peculiarities are revealed to us in a manner especially favorable for the species of observation of which I speak: they are the men who are known chiefly through their writings, whose intellectual and moral traits are unfolded in the deliberate efforts of composition, and generally in such a form as is best adapted to their free development. There are, too, peculiar motives for noticing Phrenology in this connection. One is induced by the fact that, in the present stage of the science, opportunities of this kind will necessarily be rare; and for very obvious reasons. Public men, in their conduct and *expressed* opinions, are generally guided by the impulse which Phrenologists call *Love*

Digitized by Google

of Approbation, and therefore, in the existent crude and prejudiced state of the common mind in regard to Phrenology, whatever may be their views, they will find it more in accordance with their interest, either to 'give their thoughts no tongue,' or join in the popular cry raised in its disparagement. Hence we not infrequently see the physician, who perhaps has gathered some of his most valuable ideas from phrenological works, content himself with a smile or shrug, when the science is mentioned; the popular orator, too, finds it a most convenient peg to hang a joke upon, and the literary panderer to general taste, deems it a singularly fine subject for a satirical essay: thus popular characters—or men who aim at popularity—at this period, find it expedient to sneer at, or neglect Phrenology, except when they wish to refer to an available nomenclature of the human faculties, or to delineate or address some principle of humanity, when it proves remarkably convenient to turn to the text-books of a system of mental philosophy, founded upon the existent and well ascertained phenomena of mind.

I am led then, to notice an exception to this general fact, because it may justly be regarded as an instance of independence, and moral courage, such as is highly pleasing to contemplate. It shows us that 'in the quiet and still air of delightful studies,' there are those who not only behold, but are willing openly to recognize 'the bright countenance of truth.' I refer to the incidental allusions to Phrenology in the last, and in some respects, the most able work of Edward Lytton Bulwer. Let me not, however, be misunderstood. The circumstance of which I speak is gratifying, not because it adds materially to the evidence from authority in favor of Phrenology, nor because the sanction of this author, as such, is in anywise important. There is nothing surprising in the fact that an individual, of ordinary habits of observation, should be struck with the testimony to the fundamental principles of Phrenology, presented in the various specimens of ancient statuary preserved in the museums of Italy. The authentic busts of the Roman Emperors, the difference between the cerebral developments of Nero and Trajan, or that observable

Digitized by Google

in the youthful and later representations of the former, the ideal heads of the Grecian Divinities — cast in the mould of ancient genius, so admirably versed in the philosophy of spiritual expression — these alone render the mere fact of observation in no wise remarkable. The noticeable point is that the author should take the unnecessary pains to broach his impressions of the matter, a course not calculated to add one laurel to his wreath of honor, save to that which blooms perennially in his own consciousness of manly integrity in deed as well as in thought. The allusions to which I refer are the following: —

'The countenance of the priest was remarkably unprepossessing — his shaven skull was so low (and narrow in the front) as nearly to approach the conformation of the African savage, save only towards the temples, where, in that organ styled Acquisitiveness, by the pupils of a science modern in name, but best practically known (as their sculpture teaches us) among the ancients, two huge and almost preternatural protuberances yet more distorted the unshapely head.' — (Vol. I. p. 43.)

'In Apæcides, the whole aspect betokened the fervor and passion of his temperament, and the intellectual portion of his nature seemed by the wild fire of the eyes — *the great breadth of the temples when compared with the height of the brow* — the trembling restlessness of the lips, — to be swayed and tyrannized over by the imaginative and *ideal*.' — (P. 57.)

'As the excavators cleared on through the mass of ruin, they found the skeleton of a man literally severed in two by a prostrate column; the skull was of so remarkable a conformation, so boldly marked in its intellectual, as well as its worst physical developments, that it has excited the constant speculation of every itinerant believer in the theories of Spurzheim who has gazed upon that ruined palace of the mind. Still, after the lapse of eighteen centuries, the traveller may survey that airy hall, within whose cunning galleries and elaborate chambers once thought, reasoned, dreamed, and sinned the soul of Arbaces the Egyptian!' — (Vol. II. p. 198.)

These casual references evince Bulwer's respectful recognition

Digitized by Google

of the science. And to my mind this is a satisfactory incident, as tending to show that there is nothing in Phrenology essentially militant with true idealism. This objection has been urged, and, as it appears to me, with no inconsiderable force. There are those who find their improvement and happiness eminently promoted by cherishing an interest in the 'deep things of life,' who delight in the spiritual interpretation of nature, whose minds are excursive, whose temperaments are enthusiastic, who rejoice and almost exist in the exercise of ideality. Such individuals, however much they may be ridiculed by the ultra-utilitarian, present in a singularly beautiful aspect, the perfect benignity of the Creator. It is not merely that a high degree of individual happiness is thus dispensed; but a holy and more universal good is effected. These beings are the priests of a divine art, the radiators of a soothing as well as an illuminating light: they scatter the flowers of sentiment along the common highway, and elevate the lowly tendencies of worldly pursuits. 'Poetry,' says Dr. Channing, 'in its legitimate and highest efforts, has the same tendency and aim with Christianity; that is, to spiritualize our natures.' And it is in the exercise and influence of ideality that we recognize the impulse and result of a true philanthropy. No error is more gross than that which supposes benevolence as an end or purpose necessarily identical with the bestowment of direct assistances, or even with disinterested exertions to ameliorate the condition of the lower classes of society. Holy and heaven-designed as is this work, it by no means comprises the whole sphere of that 'holy ambition of philanthropy' which was so felicitously designated, on a late impressive occasion, as an essential element of human greatness.* To the idealist is assigned no unworthy labor of love.

Now, I should deem it an argument well calculated to lessen the interest of Phrenological inquiries, if, as has been confidently asserted, the fervor and conceptive power of these functionaries is thereby decreased or materialized. And it is because an author

* Mr. Everett's Eulogy on Lafayette.

Digitized by Google

has mingled such expressions as I have instanced, with the very issues of a fervent idealism, that I have taken occasion to direct your attention to the fact in view mainly of the inference deducible therefrom.

Let the moral tendency and intent of Bulwer's writings be what it may, let their literary rank be as high or as low as honest criticism may adjudge, it will not be denied that they are signally characterized by idealism. Indeed, they display, in rare energy and variety, the true spirit of the ideal. To one and the same cause are their chief beauties and alleged defects referable. And it is worthy of notice, in the view I am taking, that the subjects upon which Bulwer's mind most freely and fondly expands itself, are the moving phenomena of human nature. His favorite poetry is the poetry of man, of life, and of the soul. Hence his descriptions of guilt, for which he has been so severely rebuked. He delights to lead us along the high but gloomy pathway of an intellectually great and morally depraved being, because of the sublime pathos excited by the struggles, the thrilling emotions, and the solemn and remorseful imaginings of such a being. Such characters as Falkland and Eugene Aram give scope to his prominent intellectual attribute. To the same source, too, must we assign the various and seemingly inconsistent forms which philosophy assumes in his several works. He apparently describes with equal relish the baseless visions of an exploded system, and the established truths of modern science; and there is often more room for unfolding the ideal in the former than the latter. It is, however, quite unnecessary to dwell upon this well-known characteristic of Bulwer's mind and writings. In his own apostrophe to the Ideal, he exclaims, —

> 'Seraph, thou art within me, Comforter,
> Apostle — preaching holy thoughts and heaven.
> 'Tis not the common turf, or wave, or sky —
> In every herb thy holiness I see,
> And in each breeze thy low voice murmurs by.'

In the view of the Idealist, then, (in the highest and best sense of the term) humanity can lose none of its perfectible tendencies, nor

Digitized by Google

become denuded of any of its truly poetical associations, when regarded in the light of Phrenology. This science, on the contrary, dealing, as it does, in the philosophy of mental and moral expression, and in the natural language, is rife with efficient aids to him who would rightly appreciate, and, with graphic truth, delineate and embody the various principles involved in the nature and conduct of man. And designating the relations between mind and external objects, and the conditions of its manifestation in this world, no inconsiderable light is afforded to guide the lover of his race to the just and discriminating appreciation of human character. Thus it is eminently calculated to subserve the purpose of that important class of writers who aim, by appealing to the universal sympathies of mankind, and by the presentation of truth in the popular forms of fiction and poetry, to elevate and direct into worthy channels, the thoughts of the multitude. Having observed indications of such a view of our science in the late work of Bulwer, I trust the circumstance, from the considerations urged, will be deemed sufficiently interesting to have received the passing notice I have thus imperfectly given it.

Art. XXVIII. —*Phrenological Analysis of Eloquence.* [Read to the Phrenological Society, by Mr. Simpson.]

Principal Campbell, in his work on the Philosophy of Rhetoric, which has long been and still is a standard guide, defines eloquence in its greatest latitude, 'that art or talent by which discourse is adapted to its end;' and quotes Quintilian, '*dicere secundum virtutem orationis;—Scientia bene dicendi.*' Dr. Campbell admits that his definition is much more comprehensive than the common acceptation of the term eloquence, but, nevertheless, adopts it for two reasons. 1st: It is best adapted to the subject of his essays (scarcely a test of the *absolute* correctness of a defi-

Digitized by Google

nition;) and, 2dly, It corresponds with Cicero's notion of a perfect orator, '*qui dicendo, animos audientium et docet, et delectat, et permovet.*' It is plain that Cicero does not warrant Dr. Campbell's very extensive definition; for many a discourse is perfectly adapted to its end which neither instructs, nor delights, nor strongly moves. Cicero, however, calls that an eloquent discourse which, at one and the same time, does all the three; and, as will appear in the sequel, the Roman is more phrenological in his definition than the Scottish rhetorician.

Dr. Blair adopts substantially Campbell's extensive definition. 'To be eloquent is to speak to the purpose;' and 'eloquence is the art of speaking in such a manner as to attain the end for which we speak.' This elegant rhetorician, however, soon limits his definition, which, he says, 'comprehends all the different kinds of eloquence, whether calculated to instruct, to persuade, or to please. But as the most important subject of discourse is action, the power of eloquence chiefly appears when it is employed to influence conduct and persuade to action. As it is principally with reference to this end that it becomes the object of art, eloquence may, under this view of it, be defined, *the art of persuasion.*'

Eloquence, etymologically interpreted, is *speaking out;* in other words, raising the voice to harangue a multitude; and this its original characteristic has, by the figure of speech *senecdochè*, continued to give it a name, whatever degree of 'image, sentiment, and thought,' beyond what belongs to common discourse, from the howling appeal of the savage, through all the stages of reasoning and rhetoric, up to the impassioned yet clear and logical speech of the orator of civilization, is therein comprehended. But the name eloquence has been yet farther extended; it has been borrowed to distinguish a mode of composition and expression where there is neither haranguing nor speaking out; namely, that effusion of imagery and sentiment with which the poet exalts and enriches even his prose, and to which no orator ever reaches who is not a poet. 'Song,' says one of the masters, 'is but the

Digitized by Google

eloquence of truth;' truth to nature, in the widest, the most eloquent sense of that high term.

But the question recurs, What is eloquence in itself—it matters not whether written or spoken, said or sung,— as distinguished from all other kinds of discourse, each kind presumed fitted to its own end? The grand advantage possessed by a phrenological over every other test of the soundness of a theory on any point of anthropology, consists in its instant appeal to the primitive faculties of the human mind, to which faculties the whole of nature bears a definite and easily-observed relation. It is for want of such a guide that the theories, even of the most venerated leaders of the old school, vanish in vague generalities. When Campbell says that eloquence is either 'instructive, imaginative, pathetic, or vehement;' tending 'to enlighten the understanding, please the imagination, move the passions, or influence the will;' when Blair writes, that eloquence 'either instructs, pleases, or persuades,' which is a translation of Cicero's '*docet et delectat et permovet*,' but with the disjunction instead of the conjunction, the reader who thinks phrenologically is left quite unsatisfied. He derives no definite idea from Campbell's enumeration; and on the strength of the phrenological fact, that every faculty of the mind is pleased in its own exercise, he is forced to reject Blair's distinction between teaching and pleasing as necessarily different things, for they are often most closely connected. Cicero avoids this error by using the conjunction; but even Cicero's view is indefinite. The Phrenologist inquires, What is it to be instructed, to be pleased, or to be persuaded? It is to have certain of our primitive faculties in a certain way affected or excited; and a great step will be gained when, dismissing such generalities as instruction, pleasure, and persuasion, we can say, definitely, that eloquence is speech which is ultimately addressed to and excites certain of our primitive faculties in a certain way.

The faculties being all comprehended in the two classes of the intellect and the feelings, eloquence must be addressed to faculties in both or either of these classes. There seems no difficulty in now seeing our way. No one who has listened to true elo-

Digitized by Google

quence, or seen its effect on others, can for a moment doubt that it rouses *feeling;* and that speech which falls short of this effect is not eloquence, whatever may be its distinctive character and merits. But speech which does fall short of exciting any of the feelings must, nevertheless, of necessity put into greater or less activity the intellect of the hearer; in other words, furnish him with ideas, or add to his knowledge, and there stop. A prelection on the facts and phenomena of an inductive science, however it may delight the knowing faculties, is both delivered and heard with all the tranquillity of the intellect, and rouses nothing that can be called feeling. The same is true of logical deduction and mathematical reasoning addressed to yet higher intellectual faculties, the reflecting; these also are listened to without the least admixture of feeling. What, then, it may be asked, is the use to the orator of the intellectual faculties of his hearers? I would answer, Of such use, that he would speak in vain if his hearers had no intellectual faculties; but so he would if they had no sense of hearing: without the ears and without the intellect as the channels, the speaker could not reach the feelings. He must furnish ideas to rouse the feelings; but as the feelings do not form ideas, but merely and blindly *feel,* the speaker must approach them through the channel of the intellect. Now this is a distinction which Phrenology alone clearly points out, and which removes the difficulty under which the rhetoricians of the old school labor. They make no distinction between addressing the intellect ultimately, and addressing the intellect as a medium of excitement of the feelings. When they speak of addressing what they vaguely call the passions, there is nothing in their words, nor in those of the metaphysicians on whose theories they found, to indicate that they even suspected that the passions must be addressed through the medium of the intellectual faculties. It is therefore they hold, and hold erroneously, that one species of eloquence does no more than instruct. They mistake the address to the intellect as a channel to the feelings, for an address to the intellect as the ultimate object of the address, and conclude that there is an eloquence which instructs the intellect, and goes no farther.

Digitized by Google

Whenever it does so, we may rely upon it, it possesses not one quality of eloquence. I by no means deny, that a discourse ultimately addressed to the intellect may have its own peculiar beauties of the highest order: I only contend, that these are something different from eloquence. It has been well said of Euclid's demonstrations, that in more, or fewer, or other words, or words otherwise disposed, they could not have been so well expressed. Such composition pleases, but it pleases intellectually, and moves no feeling. It has likewise been said of Playfair's mathematical expositions, that there is in them an exquisite adaptation to their purpose, which has induced some to call them eloquent. They give intellectual pleasure, but they stir not a single feeling; and therefore it is to misapply a term meant for another thing, to call them eloquent.*

If it be essential to eloquence to move the feelings of the hearer, it is no less essential that the same feelings should be active in the speaker, and be manifested by every means of manifestation. '*Si vis me flere, dolendum est primum ipsi tibi.*'

If we have now arrived at a distinctive idea of that thing called Eloquence, its definition follows naturally; namely, speech, prompted by one or more of the affective faculties or feelings in vivid activity in the speaker, calculated to excite to vivid activity the same feelings in the hearers. Cicero with much propriety uses the word *permovere*. Assuming, then, that the affective faculties are both the sources and the objects of eloquence, it obviously follows, that eloquence must exhibit varieties of character corresponding not only to the number of these faculties, but to their greatly more numerous combinations. It were in vain to follow out the inquiry so minutely; and it is needless, inasmuch as a twofold division of eloquence, corresponding to the twofold divi-

* An ingenious friend has suggested, that such admirably-adapted discourses delight Ideality, which *feels* the exquisite and perfect. If they owe their beauty to this *feeling*, then, on the present theory, they are so far eloquent. I am rather inclined, however, to think, that the intellectually exquisite pleases the intellectual faculties only, and that it is rather to extend the functiou of Ideality to admit its interference.

Digitized by Google

sion of the feelings into the propensities and the sentiments, will suit our present purpose. One license only I shall use, and include in the class of the eloquence of the propensities the lower and selfish sentiments of Self-Esteem and Love of Approbation; a liberty this rather with phrenological classification than with experience; for these sentiments are, *de facto*, very close companions of the propensities, and never fail to characterize the lower species of eloquence. The propensities chiefly addressed by eloquence are Amativeness, Philoprogenitiveness, Adhesiveness, Combativeness, Destructiveness, Acquisitiveness, and Secretiveness. The eloquence of the sentiments comes from and is directed to Benevolence, Justice, Hope, Veneration, Ideality, and Wonder. Cautiousness and Firmness have a bicratic character, and may be found acting along with the propensities or with the sentiments, according to circumstances.

As Phrenology has established an ascending scale of dignity from the lowest propensities to the highest sentiments, we are at once furnished with a coincident meter to estimate the rank of the eloquence which springs from and is addressed to particular feelings. We are presented with a critical gauge by which we can determine, *a priori*, the kinds of eloquence which would respectively move savages, barbarians, civilized men of antiquity, and civilized men of modern times; for it is established phrenological doctrine, that these respective grades of advancement of human society, are terms convertible into others that express the corresponding degree of prevalence, in a given community, of the propensities or the sentiments. The propensities preponderating, we have barbarism; the sentiments, civilization. A speaker cannot manifest feelings which he himself very weakly or scarcely at all experiences; and it is equally plain, that an audience cannot be moved unless feelings are addressed which they possess; and this is true not only with regard to different nations and different ages, but with regard to different classes of the same people. Witness the different character of speeches uttered on the same day in St. Stephen's Chapel and in Palace-yard. It is accordingly true, that we do find the character of the eloquence of any

Digitized by Google

tribe or nation precisely commensurate with its degree of civilization. We are in possession of specimens of savage eloquence — of barbarous eloquence — of ancient eloquence — and of modern eloquence; and I shall now proceed to compare them.

1. The eloquence of the savage addresses exclusively the propensities; and, applying the simplest and most palpable facts as the exciting cause, reaches the propensities by no higher intellectual medium than Individuality. In the very minute account of the Tonga Islands, given by Mariner, who was long resident there, we have several of the speeches of their warlike chief, Finou, and others of the natives. The chief of Vavaoo is assassinated with the connivance of Finou, and as he lay dead, a young warrior, who believed his father had been killed by a conspiracy of the deceased's, rushed forward, and, striking the body several times, thus apostrophized it: — 'The time of vengeance is come! thou hast long enough been the chief of Vavaoo, living in ease and luxury; thou murderer of my father! I would have declared my mind long ago, if I could have depended on others; not that I feared death by making thee my enemy, but the vengeance of my chief, Toobo Toa, was first to be satisfied; and it is a duty I owe the spirit of my father to preserve my life as long as possible, that I might have the satisfaction to see thee thus lie dead.' He then repeated his blows several times. Savage Veneration and Adhesiveness mark this picture; but Self-esteem and Destructiveness form its strongest lights. Counter-revenge, of course, animates the harangue of the adopted son of the fallen chief, which is also given. Vengeance for the same murder calls forth a female orator, who taunts the men with their hesitation. We need not extract it.

2. The barbarian grade shows little or no improvement in moral feeling. The speech of Adherbal the Numidian, the brother of Hiempsal, who was murdered by Jugurtha, is preserved by Sallust; and is stated by that historian to have been poured forth to the Roman senate, to move them to assist him to *revenge* his brother's death, and dethrone the usurper. It is an effusion of unqualified ferocity and selfishness. After inveighing against

Digitized by Google

Jugurtha, with every epithet of vituperation, and painting ***his own*** wrongs as an exiled prince, with, of course, a full detail of his brother's gory wounds and bloody shroud, he thus concludes: — 'So far from having it in my power to revenge his death, I am not master of the means of securing my own life: so far from being in a condition to defend my kingdom from the violence of the usurper, I am obliged to apply for foreign protection for my own person. Fathers! Senators of Rome! the arbiters of the world! to you I fly for refuge from the murderous fury of Jugurtha. By your affection for your children, by your love for your country, by your own virtues, by the majesty of the Roman commonwealth, by all that is sacred, and all that is dear to you, deliver a wretched prince from undeserved, unprovoked injury, and save the kingdom of Numidia, ***which is your own property***, from being the prey of violence, usurpation, and cruelty.' This concluding adjuration was well suited to the Roman senate, and we all know the result; but it is evident, that in no part of it, with the exception of one allusion to Veneration, such as it was among the Romans, does the orator address a feeling of higher rank than the propensities and lower sentiments. The touch was skilfully added to the picture that Numidia was the Roman's own property; but, above every other part of the adjuration, that touch degrades at once the speech, the speaker, and the audience.

Livy has preserved, or composed, (it matters not which for our purpose,) the speech of the elder Brutus over the dead body of Lucretia. This ferocious effusion is too well known to require to be quoted here.

3. The third stage of eloquence is found in that degree of civilization at which the Greeks and Romans arrived; namely, a high attainment of knowledge and advance in reflective culture; but still allied with a decided predominance of the animal propensities and lower sentiments. Perhaps there is no better test of the true level of character of those imposing communities, than is afforded by the kind of eloquence which suited them, respectively. That level is comprised in a word. They had advanced in Intellect, but stood still in Sentiment; they equalled the most

Digitized by Google

accomplished moderns in philosophical acumen and didactic power, while they were but a little beyond the Tonga islanders in practical morality.

In the age of Pericles, the Athenians are held, by a sort of habit of opinion, to have been a highly refined and civilized people; but assuredly they were not civilized in moral feeling. Thucydides has preserved an oration spoken by Pericles, at the public funeral of the first Athenians who fell in the Peloponnesian war; which lengthened and useless bloodshed lies mainly at that orator's own door. After expressing a fear, not unfounded, that the *strangers* present might not assent to his high eulogies on his own countrymen, the orator, this hazard notwithstanding, launches out into the most extravagant praises of the Athenian bravery, of the Athenian government; borrowed by other states, but original at Athens, the grandeur of Athens, the elegant luxury of Athens, the *splendid* beneficence of Athens, the accomplishments of *all* Athenians — 'I shall sum up what yet remains by only adding, *our* Athens, in general, is the school of Greece; and that *every single* Athenian among us is excellently formed, by his personal qualifications, for all the various scenes of active life, acting with a most graceful demeanor.' Then follows an effusion of ultra-extravagant exaltation of Athenian prowess and power. 'It needs no great phrenological skill to perceive that such dull nationality evinces nothing more than the activity to abuse of the inferior sentiments of Self-Esteem and Love of Approbation. Then follows, as may be expected, an eulogy on those who died valiantly for such a country. They have various merits, but one passion there was in their minds *much stronger* than these, *the desire of vengeance on their enemies*. Regarding this as the *most* honorable prize of dangers, they boldly rushed towards the mark, to *seek revenge*, and then to satisfy those *secondary* passions.'*

Such was the sum of Grecian virtue in the age of Pericles; and it never reached higher. When we contemplate the war,

*** These, and the subsequent extracts from ancient orators, are taken from Leland's translations.**

Digitized by Google

too, in which the heroes died, we find it one sought for and inflamed by Athens; carried on by her with injustice, cruelty, and pride; and ending in the most lamentable humiliation that ever visited such outrages on moral sentiment. The other orators of Greece, for they were a numerous corporation, sounded the same notes, all addressed to the war-making faculties; and it is curious that it was always an article in the demands of a successful enemy, that the orators should be delivered up to them; a proof that they were most justly considered as the grand exciters of the warlike propensities in so exciteable a people as the Athenians. It were tedious to cite examples from other remains which have descended to our time; but we cannot omit Demosthenes, who affords a specimen of the eloquence of Greece about a century after Pericles harangued, cheated, and ruined the Athenians. The speeches against Philip are manifestations of the highest *intellectual* power. They are models of political wisdom and just reasoning, with a fertility of resource for his country that must have greatly strengthened his reasonings, and his appeals to the reigning passions of his audience. With the intellectual merit of his orations we of course have nothing to do, farther than in so far as it confirms the position, that a people who are highly enlightened intellectually, may still be low in moral civilization. These able reasonings, which come through the channel of the reflecting faculties, attempt no higher region of the Athenian head than Cautiousness, Love of Approbation, and Self-Esteem. They frequently stoop much lower, to Destructiveness, Combativeness, Acquisitiveness, and Secretiveness; but they never rise higher. 'When there-forefore, O my countrymen! when will you exert your vigor? When roused by some event? When forced by some necessity? What then are we to think of our present condition? To freemen, the disgrace attending our misconduct is, in my opinion, the most urgent necessity. Or, say, is it your sole ambition to wander through the public places, each inquiring of the other, 'What new advices?' Can any thing be more new than that a man of Macedon shall conquer the Athenians, and give law to Greece? 'Is Philip " dead? No, but he is sick." How are you concerned

60

Digitized by Google

in these rumors? Suppose that he should meet some fatal stroke, you would soon raise up another Philip, if your interests are thus disregarded.' After showing, in many powerful ways, that the Athenians themselves were the cause of Philip's success, and again reproaching his countrymen for believing in idle rumors, instead of acting promptly and vigorously, he says, 'Let us disregard these rumors; let us be persuaded of this, *that he is our enemy, that he hath spoiled us of our dominions,* that we have long been subject to his insolence; that whatever we expected to be done for us by others hath proved against us; that all the resource left us is in ourselves; that if we are not inclined to carry our arms abroad, we may be forced to engage here. Let us be persuaded of this, and then we shall be freed from these idle tales. For we need not be solicitous to know what events will happen: we may assure ourselves that nothing good can happen unless you grant the due attention to affairs, and be ready to act as becomes Athenians.' In these short quotations, we may say, is comprised the germ of all the Philippics. It is amplified in various ways, and presented in many forms, and with the advantage of admirable logic; but the insult of the Athenian name is the head and front of Philip's offending, and is protruded at every point to the eyes of the multitude. It is impossible to conceive a more powerful appeal to Self-Esteem, put in words, and, to give it more exquisite point, concentrated in one word, than 'that a Macedonian — a barbarian should subdue Athens!' Athens, of whose estimate of herself the oration of Pericles may serve to convey some idea. No orator ever included more in a single expression than Demosthenes: 'You would raise up another Philip,' might be dilated into several sentences, but with what a loss of force and effect!

We shall search the orations of Demosthenes in vain for higher morality than we have now alleged to belong to them; therefore the high estimation in which they have been held for above 2000 years must be looked for in some other qualities. On these all critics are agreed. He was, if possible, a more consummate *pleader* than even Cicero; his style had a kind of magic and

Digitized by Google

music peculiar to itself, even in the impressive and sonorous Greek, quite beyond the power of translation or description. Even when he had not the best side of the question, his powers of rhetorical deception were unrivalled: his delusive reasoning, when employed, was not detected till it had already produced its effect: by means of subtle insinuation, he steered clear of committing himself by assertion; and he could put a meaning into silence itself more powerful than words could convey. Quintilian says of him, that he had a power of arraying his subject in majestic terror, which alarmed and electrified, without stooping to aggravate, still less to exaggerate. The most prepossessed against the insolence and tyranny of Athens are hurried along, as they read in the original Greek a speech of Demosthenes against the presumptuous barbarian of Macedon; and share, even at this day, that jealousy, disdain, and impatience for action, with which the orator filled the bosoms of the Athenian multitude. Quintilian and Cicero are rivals in the eloquence with which they even describe the powers of Demosthenes; and the moderns have written volumes on that gifted being. But I will venture to say, that in all their pages that vital truth remains undiscovered, — at least, it is unnoticed, that the morality of his orations is not exalted, and that all the witchery of this syren of eloquence — as his rival Eschines called him from the melody of his language — was thrown away upon the baser passions of human nature. We do not require to take part in the controversy about his honesty, his gold cup from Harpalus, his alleged bribes from Persia, or his cowardice at Cheronea. Admitting his good faith, his eloquence would still want the essential element of oratorical supremacy, namely, an appeal to the moral sentiments.

We come now to Cicero, and in his eloquence we shall find the same excellencies and the same essential defect, — a defect which stamps his rank in the scale of eloquence with that of Demosthenes, no higher than intellectually civilized barbarism. The moral sentiments in their purity and supremacy are not found in Cicero; and even if they had influenced himself, they would not have commanded the sympathy of the Romans. It has often been

Digitized by Google

remarked, that Cicero's orations are more agreeable to read than those of Demosthenes. This proceeds from their being higher efforts of literature, embracing a greater variety of subjects, and having a richer apparel of rhetorical ornament; but it is generally held that Demosthenes must have produced the most powerful effect on his audience. It is plain that it is loss of time to compare these two orators, or to decide their pre-eminence, when each was pre-eminent in his own way. The Greek was close, clear, terse, rapid, simple, majestic. The Roman was copious, correct, ornate, magnificent. The Greek carried the citadel by storm. The Roman took it after a regular and most beautifully conducted siege. The pleading of the latter for Milo is one of the most perfect structures of circumstantial evidence which has in any age been addressed to a judge's ear. The chain, not only strong but bright in every link, whereby he proves Clodius the intended murderer, and Milo the brave self-defender, gives evidence of intellectual accomplishment of the highest order; while, as he goes along, he artfully touches the *pride* and *vanity* of the Romans, and directs their *hatred* against Clodius. Pompey he *flatters*, and with great effect interprets the guards that were meant to overawe him into his intended and efficient protectors. But he speaks not to higher feeling; and when, in his peroration, he cannot avoid an appeal to benevolence and justice, which he observes bathed every face in tears except that of the heroic disinterested Milo, there is an artifice, a getting-up, a scenic character about it, which speaks too plainly against the easy every-day excitement of these high feelings which we should find in the breasts of a more moral people. 'By the immortal gods, I wish, (pardon me, O my country! if what I shall say for Milo shall appear impiety to thee,) I wish that Clodius not only lived, but were prætor, consul, dictator, rather than be witness to a scene like this. How brave a man is that, and how worthy of being preserved by you! By no means, he cries; the ruffian had the punishment he deserved, and let me, if it must be so, suffer the punishment I have *not* deserved. Shall this man, then, who was born to save his country, die any where but in his country? Shall

Digitized by Google

he not at least die in the service of his country? Will you retain the memorials of his gallant soul, and deny his body a grave in Italy? Who will give his voice for banishing from this city him whom every city on earth would be proud to receive within its walls? Happy the country that shall receive him! Ungrateful this, if it shall banish him! Wretched, if it shall lose him! But I must conclude: my tears will not allow me to proceed, and Milo forbids tears to be employed in his defence. You, his judges, I beseech and adjure, that in your decision you would dare to act as you think. Trust me, your fortitude, your justice, your fidelity will more especially be approved of by him, who, in his choice of judges, has raised to the bench the bravest, the wisest and the best of men.'

Nevertheless, Milo was banished. Pompey's guards spoke Pompey's will in another sort of eloquence; and this skilful and brilliant appeal,—in which, although there is both fear and flattery, there is some right feeling; although much Secretiveness, yet some justice and mercy,—found no justice, no fortitude, no fidelity, in the already enslaved Forum of Rome.

Cicero's accusation of Verres, who had been Proconsul of Sicily, a monster of injustice and cruelty, who might challenge comparison with the choicest, either in republican or imperial Rome, is throughout, as it could only be, a torrent of accusations, details of enormities, with their clear proofs, and loud, and indignant, and destructive cries for punishment. The climax is, however, topped with an appeal to Roman Self-esteem, even in such a case as this. Gavius Cosanus had been bound, scourged with rods, and crucified, merely for asserting his privilege of Roman citizenship. This is sufficiently shocking; but Cicero's chief horror is, that Cosanus was a Roman citizen! 'O liberty! O sound once music to a Roman ear! O sacred privileges of Roman citizenship! once sacred! now trampled upon! Is it come to this? Shall an inferior magistrate, who holds his power from the Roman people, within sight of Italy, bind, scourge, torture with hot irons, and at last put to the infamous death of the cross, a Roman citizen! Shall neither the cries of innocence expiring

Digitized by Google

in agony, nor the tears of pitying spectators, nor the majesty of the Roman commonwealth, nor the fear of the justice of his country, restrain the wanton cruelty of a monster, who, in confidence of his riches, strikes at the root of liberty, and sets mankind at defiance ?'

May not the thunder of Cicero and the example of Verres have increased, all over the empire, that dread of scourging, or even binding a Roman citizen, which alarmed the chief captain who had bound St. Paul, in ignorance of his privilege.

The storm from Cicero's lips which burst upon the head of Cataline, when he impudently entered the Senate, in the belief that he was yet undetected, has, as a storm, certainly no equal in the history of oratory. In a harangue reproaching a wretch like Cataline, there can scarcely be a nook where the higher sentiments can find shelter. The eloquence of high feeling would as little have suited Cicero's overwhelming denouncement of such a criminal, as it would in our day suit Bow Street and the Old Bailey. It is needless, therefore, to swell this paper, which threatens to be so long, with specimens from that unmitigated roll of thunder, which, while it carried the propensities, the whole animal brain, to fever and phrenzy, broke on a lower region than the seat of mercy, piety, poetry, and hope; like the war of clouds we have seen midway below, when we have reached the clear and serene region of the mountain's summit.

Cicero spent his exile in Greece (for which of their benefactors did not the true barbarians of Rome, as well as of Greece, capriciously exile, and sometimes as capriciously restore ?) in studying the various systems of Greek philosophy. He came back warm from the Porch, a professed, if not a real Stoic. Indeed, where is the example of any of these vague and impracticable theories really influencing a single Greek or Roman to a course of conduct which the higher sentiments would approve? The leaven of that mixture of benevolence and pride, the Stoic philosophy, it has been observed, tended to refine his writings more than his speeches. Had he addressed Stoics in the Senate, the Forum, or the Campius Martius, his speeches would not have been suited to his

Digitized by Google

audience. But it is just because the voluptuous, selfish, and cruel Romans had no sympathy with the human sentiments, that he found himself constrained to limit his address to the reigning inferior feelings. Even when he appeals to justice, to generosity, to compassion, as he did for his old preceptor, thé poet Archias, the offering is debased by so large a proportion of the garbage which is the proper food of vanity and pride, that there is a positive profanation of the first-named elements, in placing them in such alliance.

'Nor ought we,' says Cicero, and it forms the key-note of his pleading, 'to dissemble this truth, which cannot be concealed, but declare it openly; we are all influenced by the love of power, and the *greatest* minds have the greatest passion for glory.'

So far Cicero; and so high, but no higher, Roman virtue.

4. We come now to the civilization of modern times, which excels that of Greece and Rome much less in its intellectual than in its moral qualities. Christianity has wrought this; Christianity from the Reformation; for it was previously abused, in the grossest manner, in the service of the propensities. It is a revelation of the supremacy of the moral sentiments. It came when the earth reeked with blood, when all was selfishness and cruelty. Its first voice on earth was 'Fear not.' Its first promise 'Peace and good-will to men.' It teems in every line and every precept with the essential benevolence of its Author. It has done much to mitigate the selfishness of the propensities; and it is only another proof of the strength of these, that it has not done more. But justice and good-will and veneration are now the foundations of many modern institutions; although still there is much to do; at least, however, these feelings are exercised, and there is an acknowledged delight in exercising them. They are recognixed quite sufficiently for the purposes of the orator, and are the foundations of the highest rank of eloquence.

I wish it could be said with truth, that all modern oratory were addressed to the higher sentiments. Many a harangue in the British senate is disfigured by the propensities yet; many an oration on glory, and victory, and vengeance we yet hear; many

Digitized by Google

more advocating national monopoly and individual selfishness; and not a few expounding and defending diplomatic cunning, lamentably mistaken for political wisdom. Nay, it should make a son of Britain blush to narrate it—we have heard many a speech of sordid Acquisitiveness and hard-heartedness, when not only mercy, but sound policy cried aloud on the other side of the question. Into such speeches, if the present theory be just, we need not look for specimens of eloquence. It would be a moral solecism to do so. But the higher sentiments assert their supremacy in many a speech in the British parliament, and do eradiate the orator's brow with their own proper glory, a glory which never shone on the orators of antiquity. Perhaps the most ample scope for the eloquence of the higher sentiments ever offered to a deliberative body, was afforded to the British parliament, and nearly about the same time, by India and Africa. The independence of America had just been wrung from England, and the lesson thereby taught her, that the physical and moral laws of nature will not bend to a senseless national pride. The most enduring fame of Chatham was founded on the splendid manifestations of the higher sentiments which characterized his appeals in behalf of the injured Americans, contrasted with the paltry selfishness, pride, and petulance of his opponents, who thought it became a great people to persevere in injustice because they had begun, and redounded to the national honor to continue a contest, which for years had brought nothing but defeat and disgrace. The present age could not tolerate the puerile bravadoes and senseless nationalities which were vented in parliament, not only in occasional effusions, but systematically by the ministers of the crown, as the *reasons* for prosecuting the war, in the seventh year of defeat, and a victorious French army actually in America. Events, however, in other words, the Creator's Eternal Will, that injustice shall not prosper, had settled the question. The belligerent generation were forced to swallow the bitter potion of moral humilitation; and their successors, who had none of the blame, now reap the benefit.

There was then time to look to the East, which, forgotten

Digitized by Google

while all the selfish passions took the direction of the West, presented a picture of misgovernment quite unequalled in modern times. Enormous fortunes were amassed, or rather conjured up, in four or five years, by young men, who returned home young men to enjoy them. There was then not that degree of reflection or of light in the public mind to raise the slightest suspicion that such sudden wealth could not be honestly come by; that no adequate value could be given by a half-educated boy in the situation of a resident at a native court, for the half-million with which he returned to England; and that India, no more than other places, is paved with gold, but depends for its riches upon its agriculture and manufactures. While there was thus no sort of check upon public men in public opinion, it would appear incredible to the present generation, in which the sentiments have made a very considerable advance, not only what things were done, but systematically done, in the last, as allowable and sagacious policy by every department of the government, from the first lord of the treasury down to the excise watchman at a soap-boiler's or a distillery. No! the jobbing, the oppression and extortion, the knavery, treachery, and falsehood, which were thought to be the very essence of clever policy, the grosser out-breakings even of which were sure to be screened by a vote of the legislature itself, would not now be believed. In treaties with the native powers in India, what were called 'vague articles,' were inserted systematically, as dexterous and laudable strokes of policy, whereby the nullity of the whole treaty was meant to be produced.

Mr. Burke, in his memorable speech on Mr. Fox's India bill, pledged himself, in parliament, to establish, and did establish, three positions; 1st, That the India Company had *sold* every prince, state, or potentate with whom they had come in contact; 2d, That there was not a single treaty ever made by them which they had not broken; and, 3d, That there was not a single prince that ever put trust in the Company who was not utterly ruined; and that none were in any degree secure or flourishing, but in the exact proportion to their settled distrust of and irreconcilable enmity to the English name.

Digitized by Google

As it was the prevalence of the propensities that produced all this, the evil could only yield to powerful and incessant appeals to the higher sentiments. The former class of feelings were yet too strong to give a chance for immediate improvement, and votes on votes cleared the guilty, and thereby sanctioned the abuses. But the seed was cast into the earth — and let this ever encourage the upright legislator — the mustard-grain of justice and mercy was then sown, which now, like a great tree, shelters India from scorching oppression, and protects every family of her vast population. No more rapid fortunes! No more evasive treaties! No more plunder! No more of the insolent oppression of barbarous conquerors!

But the pestilence was rife when Burke directed his splendid eloquence against it. Quotation of isolated passages from Burke's speech on the India bill can neither do that fine effort of oratorical talent justice, nor illustrate satisfactorily the doctrine of this paper. The whole speech must be read to impress on the mind the superior sentiment which pervades it, and gives it a resistless moral force over all who are blessed with even an average endowment of moral feeling.

Nothing can be finer than the passage in which the orator prefers the Tartar to the English conquest of India; and adds, 'Animated with all the avarice of age, and all the impetuosity of youth, they (the English) roll in one after another, wave after wave, and there is nothing before the eyes of the natives but an endless, hopeless prospect of new flights of birds of prey and passage, with appetites continually renewing for a food that is continually wasting.'

The orator sketches rapidly, but powerfully, the demoralizing effect, even on young men of worth, of the means then held legitimate for amassing sudden and princely wealth, and the change of character to social virtue, on doubling the Cape homewards. 'Here the manufacturer and husbandman will bless the punctual hand, that in India has torn the cloth from the loom, or wrested the scanty portion of rice and salt from the peasant of Bengal, or wrung from him the very opium in which he forgot his oppressions

Digitized by Google

and his oppressor.' After showing the difficulty of a reform, arising from the deep-rooted and wide-spread interests it would affect, he says, 'You hurt those who are able to return kindness and resent injury, while you save those who cannot so much as give you thanks. All these things show the difficulty of the work, but they show its necessity too.' Certainly nothing approaching to the exalted tone of justice and benevolence which pervades the whole of this speech was ever addressed either to the mobs or the councils of antiquity.

I am forced to refer to Mr Fox's published speeches for his share in the same animating debate.

The concern felt by Britain for her Asiatic subjects indicated a great advance of justice and mercy; but still the inhabitants of Hindostan were the subjects of Britain, not utterly beyond the sphere of her sympathies, and in some measure associated with her interests. But justice and mercy to Hindostan yielded in high character to justice and mercy to Africa; in the feelings and happiness of whose sable population Britain had no direct interest beyond the claims of pure benevolence and justice. It was a grand moral spectacle, a nation coming forward and confessing a national crime; vowing its cessation, and offering the most generous reparation. Greece and Rome have nothing in their history like this national manifestation of the supremacy of the moral sentiments. When Wilberforce achieved a name for immortality by his magnificent position, 'that the slave trade is contrary to justice, humanity, and sound policy,' what aspirations of oratorical distinction, what ambition to manifest the higher sentiments, arrayed in all the pride and grace of human speech, must he not have excited in many a generous bosom in that memorable senate! Mr. Fox's speech may well be called a torrent of indignation at the impudent selfishness and injustice, and the merciless cruelty of the slave trade. For this also we must refer to his published speeches.

But no oration for the abolition surpassed Mr. Pitt's, delivered on the 2d of April, 1792, in the power and splendor of the higher sentiments. It has been called insincere, because he did not

Digitized by Google

follow it up with his paramount ministerial influence, and *carry* the measure he so eloquently advocated. It has been defended and well defended, on the ground that it should never be said, that the selfish feelings of political subserviency should have any share in a vote which should be the spontaneous offering of the nation's representatives in the nation's name. None can read the speech, and for an instant believe it insincere. But, at any rate, that question has no place here; for, even were the speech separated from the speaker, it is an oration throughout addressed by the highway of the reflecting powers to the noblest feelings of human nature. I can only afford room for its conclusion :—

'If we listen to the voice of reason and duty, and pursue this night the line of conduct which they prescribe, some of us may live to see a reverse of that picture from which we now turn our eyes with shame and regret. We may live to behold the natives of Africa engaged in the calm occupations of industry, in the pursuits of just and legitimate commerce. We may behold the beams of science and philosophy breaking in upon their land, which at some happy period, in still later times, may blaze with full lustre, and, joining their influence to that of pure religion, may illuminate and invigorate the most distant extremities of that vast continent.'

Our own immediate day finds no falling off in the high-toned eloquence of the sentiments. I cannot withhold one instance, the magnificent peroration of Mr. Brougham's late speech on the state of the law of England; and I am glad to be able to show, by means of the reports, not only the orator's manifestations, but those of his hearers, from the reported effect upon them of the climax of benevolence and justice which he brought to bear upon them.

'A great and glorious race is opened before you; you have it in your power to make your names go down to posterity with the fame of more useful importance attached to them than any parliament that ever preceded you. (*Cheers.*) You have seen the greatest victor of the age, the conqueror of Italy and Germany, who, having achieved triumphs more transcendent than any upon record, said 'I shall go down to posterity with the *Code* in my

Digitized by Google

hand.' (*Loud cheering.*) You have beaten that warrior in the field,—try to rival him in the more useful arts of peace. (*Cries of hear, hear.*) The glories of the regency, gorgeous and brilliant as they were, will be eclipsed by the milder and more beneficent splendor of the king. (*Great and continued cheering.*) The flatterers of the Edwards and Henries compared them to Justinian; but how much more justly may it not be applied to our own sovereign, when to his other glories this shall truly be added. (*Cheers.*) It was said by Augustus, that he found Rome of brick, and left it of marble,—an honorable boast, and one which veiled many of the cruel and the tortuous acts of his early course;—but how much higher and prouder would be the boast of our king, to have it said, that he found law dear, and left it cheap,—(*cheers,*) that he found it a sealed book, and left it an open letter,—that he found it the patrimony of the rich, and left it the security of the poor,—that he found it a two-edged sword in the hands of the powerful, and left it a staff for the comfort of the feeble and the friendless.'—(*Loud and continued cheering.*)

There remains yet another eloquence, which appeals to a yet loftier combination of the human sentiments than the speaker at the bar or in the senate is almost ever called to address; an eloquence utterly unknown to the ancients, and beyond all question paramount among the moderns,—the eloquence of the Pulpit. There are stops in the human instrument upon which the pleader or the senator rarely lays his hand; but the preacher is familiar with the whole compass, and falls short of the spirit of his message, if he fail to avail himself of the entire of its magnificent capacities. If he mellow not the firm touch of Justice with the full swell of Benevolence; if he temper not the note of Fear with all the melody of Hope; if he wake not the loud peal of Wonder, or give not their turn to the milder and richly-varied harmonies of Ideality; if, in fine, he dwell not on the solemn key of Veneration, to which all other harmonies respond as the regulating diapason of all their combinations, till the breathless listener thrills in every nerve, and sheds the pure tear of elevated humanity: if he fail in aught of these, the preacher does not command the whole range of that lofty vantage-ground, the pulpit.

When we attend to the misdirected and spurious Veneration which here and there deforms an oration of antiquity, it is at once clear to us that the deep feeling of *genuine* Veneration is a grand

Digitized by Google

addition to the structure of modern eloquence, and the chief-corner stone of that edifice of progression in excellence which it is the purpose of this paper to develop. Veneration is the very fulcrum of that lever which the preacher wields; and it is a power all its own, which, added to his command of all that other orators employ, gives its ascendency to his over all other discourse. From Veneration emanates the eloquent solemnity of his prayers, the power of his adjurations and appeals, and all that stillness and awe which directs every eye heavenward, as if the Creator himself were speaking through his gifted servant. 'When the Master speaks,' said Massillon, as a thunder-storm almost drowned his voice, and he paused till one peal had passed, only to pause again as another rolled on, 'When the Master speaks,' said he, during an interval of death-like stillness, 'it becomes the servant to be silent.' No one endowed with an average of portion of the faculty can hear this, and require to ask what is the eloquence of Veneration; that eloquence which at once lifts the soul to God's throne, and humbles it at his footstool; points to Omnipotence, and then marvels what is man that Omnipotence 'is mindful of him, and deigns to visit him?'

This paper is already too long for either extended or numerous specimens of pulpit-eloquence, as varied by the sentiments or combinations of sentiments addressed. A very few from Chalmers shall suffice. As he avails himself of the *whole* powers of the pulpit, and to a pitch not exceeded by any speaker in any other field of eloquence, on the principles on which this analysis is built, — notwithstanding settled notions and great names, both of which Phrenology is apt to weigh,—I am led to estimate his composition more highly than that orator of whom I have yet spoken.

There is an eloquence of Ideality, and of Ideality and Wonder, distinct from the eloquence of the other sentiments. Some speakers are, by their organization, determined to the one and not to the other; but Chalmers, although he sometimes appears to address Ideality alone, or with Wonder combined, without the other sentiments, is virtually combining all the sentiments, and produ-

Digitized by Google

cing the deepest moral and religious effect, by the union. Of Veneration, as the key-note, he never loses sight. Although Ideality, for example, predominates, Benevolence Hope and Veneration beam forth in every thought of the following beautiful conclusion of a discourse on 'The expulsive power of a new affection,' in which the preacher shows the insufficiency of arguments drawn from the common topic of this world's worthlessness, and the necessity of offering another, distinct, and much higher attachment:

'Conceive a man standing on the margin of this green world; and that, when he looked towards it, he saw abundance smiling upon every field, and all the blessings which earth can afford scattered in profusion throughout every family; and the light of the sun sweetly resting upon all the pleasant habitations, and the joys of human companionship brightening many a happy circle of society; and that on the other side, beyond the verge of that goodly planet, he could descry nothing but a dark and fathomless unknown. Think you that he would bid a voluntary adieu,' &c. 'But if, during the time of this contemplation, some happy island of the blest had floated by, and there had burst upon his senses the light of its surpassing glories, and its sounds of sweeter melody; and he clearly saw that there a clearer beauty rested upon every field, and a more heart-felt joy spread itself among all the families; and he could discern there a peace and a piety, and a benevolence, which put a moral gladness into every bosom, and united the whole society in one rejoicing sympathy with each other, and with the beneficent Father of them all. Could he farther see that pain and mortality were there unknown, and, above all, that signals of welcome were hung out, and an avenue of communication was made for him; perceive you not that what was before the wilderness would become the land of invitation, and that now the world would be the wilderness? What unpeopled space could not do, can be done by space teeming with beatific scenes and beatific society. And let the existing tendencies of the heart be what they may to the scene that is near and visibly around us, still, if another stood revealed to the prospect of man, either through the channel of faith, or the channel of his senses, then, without violence done to the constitution of his moral nature, may he die unto the present world, and live to the holier that stands in the distance away from it.'

Ideality and Wonder, seasoned with Cautiousness, and finely sustained by Veneration, unite to shed a glory altogether peculiar around those exciting productions, the Astronomical Sermons,

Digitized by Google

which, when delivered, wound up these engrossing feelings to rapture, in a crowded audience, in which mingled a large portion of the rank, the talent, and the taste of the land.* After expatiating in terms of the sublimest eloquence on the *immensity* of creation as revealed by the Telescope, — 80 millions of fixed stars, and every star a sun with its retinue of planets; and what is discovered, baffling imagination as it does, being in all probability a relatively insignificant part of the suns and systems that roll in infinity; so insignificant, that it might be annihilated without being missed in creation, — the orator changes the direction of his hearers' Wonder, and, by a magic word, unfolds the yet more bewildering theme of the *minute* in creation, unfolded, and inferred to be infinite, by the discoveries of the Microscope! It is said by those who heard him, that such was the delight excited by the prospective grasp, which every mind took in, of a creation yet to be displayed, when the microscope was announced, that the solemnity of the place alone restrained a shout of applause. The pin-fall silence was for an instant broken by the stir of a new and unexpected and most intense emotion, and all was again still and breathless attention. 'About the time of the Telescope's invention, another instrument was formed, which laid open a scene no less wonderful to reward the inquisitive spirit of man. This was the Microscope. The one led me to see a system in every star; the other leads me to see a world in every atom. The one taught me that this mighty globe, with the whole burden of its people and of its countries, is but a grain of sand on the high field of immensity; the other teaches me that every grain of sand may harbor within it the tribes and the families of a busy population. The one told me of the insignificance of the world I tread on; the other redeems it from all its insignificance; for it tells me, that in the leaves of every forest, and in the flowers of every garden, and in the waters of every rivulet, there are worlds teeming with life, and numberless as are the glories of the firmament.

* The substance of these discourses formed a sermon preached before his Grace the Lord High Commissioner to the General Assembly; the Judges, Barons, and other public functionaries present.

Digitized by Google

The one has suggested to me, that beyond and above all that is visible to man, there may be fields of creation which sweep immeasurably along, and carry the impress of the Almighty's hand to the remotest scenes of the universe; the other suggests to me, that within and beneath all that minuteness which the aided eye of man has been able to explore, there may be a region of invisibles; and that, could we draw aside the curtain which shrouds it from our senses, we might there see a theatre of as many *wonders* as astronomy has unfolded; a universe within the compass of a point so small as to elude all the powers of the microscope; but where the *wonder*-working God finds room for the exercise of all his attributes; where he can raise another mechanism of worlds, and fill and animate them all with the evidences of his glory.'

The favorite sentiment of the lofty and generous mind of Chalmers is Benevolence; and he loves to accompany it with all the beatitudes and buoyances of Hope. Infinitely varied by the endless illustrations and amplifications of his inexhaustible genius, surrounded and aided and exalted by all the brilliancy of all the other sentiments, Benevolence is the most cherished inmate of his bosom, and out of its fulness his mouth speaketh most eloquently. Kindliness, gentleness, and mercy, are held by him to be the only irresistible engines of man's power over man. A debate on a question where feeling ran high had been conducted and concluded in the General Assembly of the church of Scotland, with that mutual forbearance and courtesy which, of all men, most become divines. The feeling expanded in its most fitting receptacle the heart of Chalmers; and, with a flight of Ideality, too high for any wing but his own, he thus burst forth, in peroration of a splendid tribute to his favorite sentiment: 'Were there, Moderator, between that side of the house and this a wall of brass, fifty cubits high and fifty cubits broad, give me the courtesy and the kindliness of benevolence, and I will overleap it or undermine it.'

But the highest application of his principle of the power of gentleness that gifted preacher reserved for the contemplation of the votaries of religious zeal. Polemical controversy had run

Digitized by Google

high in the north of Ireland, and the *odium theologicum* had, with its baleful influence, gone far to stifle all the charities of neighborhood, when Chalmers appeared at Belfast; and, at the opening of the Presbyterian chapel there, the disputants and their partizans flocked to listen to the most powerful preacher the world has yet seen, as he gave forth for his text the invaluable precept, 'The wrath of man worketh not the righteousness of God.'

To illustrate 'the way in which the great message from heaven to earth may be darkened, and altogether transformed out of its native character by the conflict and controversy of its interpreters,' he takes the analogy of a message of free and unqualified kindness from some earthly superior, handled by the bearers of it in the same way. The message of good-will is, moreover, put in writing for greater security; but this intended advantage raises up 'a whole army of expounders,' who, 'in the pride and heat and bitterness of argument, fall out among themselves,' to the utter destruction of the mild and merciful embassy of peace by which the contentions are stirred, and who pervert it, each to a message of vengeance on all who do not interpret it precisely as he does. 'It is thus,' he continues, 'that, by the angry and lowering passions of these middlemen, an obscuration might be shed on all the goodness and the grace which sit on the brow of their superior; and when stunned, in the uproar of their sore controversy, with the challenge and the recrimination and the boisterous assertion of victory, and all the other clamors of heated partizanship, that these may altogether drown the soft utterance of that clemency whereof they are the interpreters, and cause the gentler sounds that issue from some high seat of munificence and mercy, to be altogether unheard.'

After showing the undoubted character of benevolence, of mercy, and love to man, with no limitation of men, with which the Christian message is fraught, all which is '*asserted*' in its very terms, the preacher continues, after his manner of rich amplification, to contrast this serene and kindly and inviting aspect with the cloudy turbulence and forbidding frown of sectarianism.

Digitized by Google

'It is thus that the native character of Heaven's message may be shrouded, at length, in subtle but most effectual disguise, from the souls of men; and the whole spirit and design of its munificent Sovereign be wholly misconceived by his sinful, yet much loved children. We interpret the Deity, by the hard and imperious scowl which sits on the countenance of angry theologians; and in the strife and the clamor of their fierce animosities, we forget the aspect of Him who is on the throne, the bland and benignant aspect of that God who waiteth to be gracious.' Dr. Chalmers expresses his regret, 'that men of highest respect in the Christian world have done grievous injury to the cause;' that Calvin himself incalculably weakened his own power by declaring the message of mercy 'not in the spirit of gentleness,' but in 'the spirit of an incensed polemic, and with that aspect which sits on his pages of severe and relentless dogmatism.' That violence and vituperation by which his Institutes are so frequently deformed, never occur, we venture to affirm, but with an adverse influence on the minds of his readers, in reference to the truth which he espouses. In other words, that truth which, when couched in the language and accompanied with the calls of affection, finds such welcome in the hearts of men, hath brought upon its expounders the reaction of a stout indignant hostility, just because of the intolerance wherewith it has been proposed by them.

'Let us lift ourselves,' he proceeds, 'above these turbid elements of earth, and be firmly and erectly confident of benevolence in heaven. Yonder is the region of light, and of undoubted love; and whatever the mists and the darkness may be of this lower world, there is free, generous, unbounded welcome to one and all in the courts of the Eternal. The sun of our firmament is still gorgeously seated in fields of ethereal beauty and radiance, when veiled from the sight of mortals by the lowering sky that is underneath. And so of the shrouded character of the Godhead, who, all placid and serene in themidst of elevation, is often mantled from human eye by the turbulence and the terror of those clouds which gather on the face of our spiritual hemisphere.' 'There may be nought to gladden in the wrathful and warring controversies of the men who stand betwixt us and heaven, but in heaven itself are notes of sweeter and kindlier melody; and well may we assure ourselves of the gratulation that is awakened there over every sinner who turns to God.' 'In a word, it is when the bearer of this message from God to man urges it upon his fellow-sinners in the very spirit which first prompted that message from the upper sanctuary,—it is when he truly represents, not alone the contents of Heaven's overtures, but also that heavenly kindness, by which they were suggested—it is when he entreats rather than when he denounces, and when the compassion, which is in the heart of the Godhead, actuates his own,—it is when standing in the character of an ambassador from Him who so loved the world, he accompanies the delivery of his message with the

Digitized by Google

looks and the language of his own manifest tenderness,—it is then that the preacher of salvation is upon his best vantage-ground of command over the hearts of a willing people; and when he finds that charity and moral earnestness have done what neither lordly intolerance nor even lordly argument could have done, it is then that he rejoices in the beautiful experience, that it is something else than the wrath of man which is the instrument of working the righteousness of God.' 'It was in love to man that this wondrous dispensation was framed. It was kindness, honest, heartfelt, compassionate kindness, that formed the moving principle of the embassy from Heaven to our world. We protest, by the meekness and the gentleness of Christ, by the tears of Him who wept at Lazarus' tomb, and over the approaching ruin of Jerusalem; by every word of blessing that he uttered, and by every footstep of his wondrous visitor, over the surface of a land, on which he went about doing good continually,—we protest in the name of all these unequivocal demonstrations, that they do Him injustice who propound his message in any other way than as a message of friendship to our species. He came not to condemn, but to save; not to destroy, but to keep alive. And he is the fittest bearer, he the best interpreter, of these overtures from above, who urges them upon men, not with wrath and clamor, and controversial bitterness, but in the spirit of that wisdom which is gentle and easy to be entreated, and full of MERCY.'

It were to weaken the effect of such glorious manifestations of the higher sentiments of humanity, such truly Christian exclusion of the *propensities* from the holy ground of religion, to make a single comment upon them. Set them but in contrast to the harangues of the Tonga islanders, — nay, of the Greeks and Romans, and the theory of eloquence attempted in this paper is complete.

It was soon discovered, that the views now submitted were far indeed beyond the limits of an essay. Selection and exclusion in the mass of matter that offered, were the chief difficulties. The compass of the subject is immense, and involves, I would say, a revolution in the whole kingdom of literature; for it presents an instrument of criticism which will work with the precision of the mathematics, and bid away from its presence all the vague and inconsistent verbiage which has hitherto passed by that name. Nay, more; it may and will indirectly produce the most important moral effects on society, by adding to the practical efficacy of that chief glory of Phrenology, the doctrine of the Supremacy of e Moral Sentiments.

Digitized by Google

Art. XXIX. — *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; Marsh, Capen & Lyon, Boston. 1834. 12mo. pp. 402.]

Education has for many years been a favorite study with Mr. Simpson; it is a subject on which he has read and thought, and written much; while at the same time, as an active 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 recognized 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 labors. 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

Digitized by Google

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 laboring population. Of this class he describes successively the physical, intellectual, moral, and religious condition. 'The *physical* condition of the whole class of manual laborers,' 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 laborer 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 labor and capital, and between laborer 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

Digitized by Google

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 anything, 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" *induced* 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

Digitized by Google

the laboring 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 labors 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 laboring 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 not one 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 excavating 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 shown 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 way-side, 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

Digitized by Google

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-excited 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-labor class,' Mr. Simpson proceeds, in chapter second, to show 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

Digitized by Google

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 unsparing 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 chace," 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

* '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.'

Digitized by Google

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 positively 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 anything like adequate moral training as one of the most prominent. He shows 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

Digitized by Google

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 expected 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

Digitized by Google

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

Digitized by Google

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 recognize 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 whieh infant training ought to be conducted. There are also some very just observations on the religious in-

Digitized by Google

struction 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

Digitized by Google

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 labor, the division of labor, the effect of competition, of overtrading, of machinery, of poor-laws, and pauperism, with all its degradation when not induced by unavoidable misfortune, &c.'

Digitized by Google

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 he 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 favoring 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 splendor of the Greeks and Romans, — a worship too unequivocally indicative of a sympathy in ourselves with the lower feelings, out of which that false splendor 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

Digitized by Google

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 strewed 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 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 obvi-

* '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,

Digitized by Google

ous 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 favor.* 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 recognized 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

that the opinion in favor 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.

Digitized by Google

State for the Home Department,* to constitute a Board 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 labor 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

* '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, 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." '

Digitized by Google

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 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 re-appointment 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,

Digitized by Google

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 pro-

Digitized by Google

ceeds 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 churchmen, 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 appear-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.

Digitized by Google

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 endeavoring 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

Digitized by Google

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.

Art. XXX. — *Cases of Deficient Perception of Colors.*

It is generally known that there exists individuals, who, though they possess acute vision, and are able to distinguish with perfect accuracy the form, magnitude, weight and numbers of bodies, are yet in a greater or less degree incapable of discriminating between certain colors. Such instances are by no means rare in society; and as the subject is curious, and has for the last half century in no small degree puzzled the wits of philosophers, we shall devote a few pages to bringing together, with as much brevity as possible, the details of all cases of this nature of which we have been able to collect an account. They possess little novelty to the phrenologist; but are of some value as illustrations of the principles of our science, and as additions to the evidence on which those principles are founded.

The earliest case which we have been able to discover is published in the Philosophical Transactions for 1777.* It is entitled 'An account of persons who could not distinguish colors,' and is contained in a letter by Mr. Joseph Huddart to the Rev. Dr. Priestley. The letter is as follows: —

'Sir,

'When I had the pleasure of waiting on you last winter, I had hopes before now of giving you a more perfect account of the peculiarity of vision which I then mentioned to you, in a person of my acquaintance in the north; however, if I give you

* Vol. lxvii. p. 260.

Digitized by Google

the best I am able, I persuade myself you will pardon the delay.

'You will recollect I told you that this person lived at Maryport in Cumberland, near which place, viz. at Allonby, I myself live, and having known him about ten years, have had frequent opportunities of conversing with him. His name was Harris, by trade a shoemaker. I had often heard from others, that he could discern the *form* and *magnitude* of all objects very distinctly, but could not distinguish *colors*. This report having excited my curiosity, I conversed with him frequently on the subject. The account he gave was this: That he had reason to believe other persons saw something in objects which *he* could not see; that their language seemed to mark qualities with confidence and precision which he could only guess at with hesitation, and frequently with error. His first suspicion of this arose when he was about four years old. Having by accident found in the street a child's stocking, he carried it to a neighboring house to inquire for the owner: he observed the people called it a *red* stocking, though he did not understand why they gave it that denomination, as he himself thought it completely described, by being called *a stocking*. The circumstance, however, remained in his memory, and, together with subsequent observations, led him to the knowledge of his defect. As the idea of colors is among the first that enters the mind, it may perhaps seem extraordinary that he did not observe his want of it still earlier. This, however, may in some measure be accounted for by the circumstance of his family being Quakers, among whom a general uniformity of colors is known to prevail.

'He observed also, that, when young, other children could discern cherries on a tree by some pretended difference of color, though he could distinguish them from the leaves only by their difference of size and shape. He observed also, that by means of this difference of color, they could see the cherries at a greater distance than he could, though he could see objects at as great a distance as they; that is, when the sight was not assisted by the color. Large objects he could see as well as other persons; and even the smaller ones, if they were not en-

Digitized by Google

veloped in other things, as in the case of cherries among the leaves.

'I believe he could never do more than guess the name of any color; yet he could distinguish white from black, or black from any light or bright color. Dove or straw color he called white, and different colors he frequently called by the same name: yet he could observe a difference between them when placed together. In general, colors of an equal degree of brightness, however they might otherwise differ, he frequently confounded together. Yet a striped ribbon he could distinguish from a plain one; but he could not tell what the colors were with any tolerable exactness. Dark colors in general he often mistook for black, but never imagined white to be a dark color, nor a dark color to be a white color.

'He was an intelligent man, and very desirous of understanding the nature of light and colors, for which end he had attended a course of lectures on natural philosophy.

'He had two brothers in the same circumstances as to sight, and two other brothers and sisters, who, as well as their parents, had nothing of this defect.

'I asked one of the first mentioned brothers, whether he had ever seen a rainbow? He replied he had often, and could distinguish the different colors; meaning only, that it was composed of different colors, for he could not tell what they were.

'I then procured and showed him a piece of ribbon: he immediately, without any difficulty, pronounced it a striped and not a plain ribbon. He then attempted to name the different stripes; the several stripes of white he uniformly and without hesitation called white; the four black stripes he was deceived in, for three of them he thought brown, though they were exactly of the same shade with the other, which he properly called black. He spoke, however, with diffidence as to all those stripes; and it must be owned, the black was not very distinct. The light green he called yellow, but he was not very positive: he said, "I think this is what you call yellow." The middle stripe, which had a slight tinge of red, he called a sort of blue. But he was most deceived by the orange color; of this he

Digitized by Google

spoke very confidently, saying, "This is the color of grass; this is green." I also showed him a great variety of ribbons, the color of which he sometimes named rightly, and sometimes as differently as possible from the true colors.

'I asked him whether he imagined it possible for all the various colors he saw to be mere difference of light and shade; whether he thought they could be various degrees between white and black, and that all colors could be composed of these two mixtures only? With some hesitation he replied, "No, he did imagine there was some other difference."

'I could not conveniently procure from this person an account in writing; but I have given his own words, having set them down in writing immediately. Besides, as this conversation happened only on the 10th of last month, it is still fresh in my memory. I have endeavored to give a faithful account of this matter, and not to render it more wonderful than it really is.

'It is proper to add, that the experiment of the striped ribbon was made in the day-time, and in a good light. I am, Sir, &c."

The publication of this case called forth another, which will be found in the Philosophical Transactions for 1778.* As we formerly published it at length in the third volume of our Journal (page 44,) it is unnecessary here to give more than an outline of it. The individual narrates his own case: — 'I do not know,' says he, 'any green in the world: a pink and pale blue are alike; I do not know one from the other. A full red and a full green the same. I have often thought them a good match; but yellows (light, dark, and middle,) and all degrees of blue, except those very pale, commonly called sky, I know perfectly well, and can discern a deficiency in any of these colors to a particular nicety; a full purple and deep blue sometimes baffle me.' He then mentions an occasion on which a 'rich claret-colored dress' appeared 'as much a black to his eyes as any black that ever was dyed;' and adds '*I can see objects at a distance* when I am on travel with an acquaintance, *and can distinguish the size, figure, or space* equal to

* Vol. lxviii. Part ii. p. 112.

Digitized by Google

most, and I believe as quick, color excepted.' 'My eyes, thank God, are very good at discerning men and things.' The defect was hereditary in his family, — his father, sister, two nephews, and a maternal uncle, having a similar imperfection of vision.

This case seems to have created some interest at the time, and to have gone the round of the periodicals; at least it is to be found in the Edinburgh Weekly Magazine for 17th November, 1779, vol. xlvi., and in the Westminster Magazine for the same year, page 515.

There is a remarkable uniformity in the published cases of this description; and we shall therefore give a brief summary of all those of which, so far as we have been able to discover, any account has been published.

In the fourth article of the Transactions of the Phrenological Society, Dr. Butter relates a very interesting case of Mr. Robert Tucker, then nineteen years of age, who had, only two years before that time, accidentally discovered that he was unable to distinguish several of the primitive colors from each other. Being employed in making an artificial fly for fishing, he intended to have constructed the body of the fly with silk of an *orange* color, whereas he used that of a *green*. When the error was pointed out to him by his younger brother, he could not believe it till it was confirmed by other persons. Threads of orange and green silk were then twisted round his finger, and he could not perceive any difference in them, but thought them to be the same colored thread twisted several times. Many of the primitive colors he neither knows when they are shown, nor remembers after they have been pointed out to him, and he confounds certain colors with each other, as green with orange, red with brown, pink with blue, black with bottle-green, and indigo and violet with purple. He knows only the yellow color to a certainty. A bay, a chesnut, and a brown horse, he described to be of the same color, and he knew the colors of only black or white horses. He knew not the blood on a spaniel's neck from dirt, until he was told, and had seen the wound

Digitized by Google

in the dog's ear. Mr. Tucker's vision is 'exceedingly acute. He sees the form of surrounding objects, like other people, at noon-day, in the twilight, and at night.'*

The case of Mr. John Dalton, which is reported by himself in the Memoirs of the Literary and Philosophical Society of Manchester,† bears considerable resemblance to those narrated. Its principal features are the following: —

'*Blue*, *purple*, *pink*, and *crimson*,' says Mr. Dalton, 'are, according to my idea, all referrable to blue. I have often seriously asked a person whether a flower was blue or pink, but was generally considered to be in jest. Notwithstanding this, I was never convinced of a peculiarity in my vision, till I accidentally observed the color of the *Geranium zonale* by candle-light, in the autumn of 1792. The flower was pink, but it appeared to me almost an exact sky-blue by day: in candle-light, however, it was astonishingly changed, not having then any blue in it, but being what I called red, a color which forms a striking contrast to blue. Not then doubting but that the change of color would be equal to all, I requested some of my friends to observe the phenomenon; when I was surprised to find they all agreed that the color was not materially different from what it was by day-light, except my brother, who saw it in the same light as myself.' He then, with the assistance of an intelligent friend, entered upon a philosophical investigation of the peculiarities of his vision, and the result is fully detailed in the Memoirs.

'My observations,' says he, 'began with the solar *spectrum*, or colored image of the sun, exhibited in a dark room, by means of a glass prism. I found, that persons in general distinguish six kinds of color in the solar image; namely, *red*, *orange*, *yellow*, *green*, *blue*, and *purple*. Newton, indeed, divides the purple into *indigo* and *violet*; but the difference between him and others is merely nominal. To me it is quite otherwise. I see only *two*, or at most *three* distinctions. These I should call *yellow* and *blue*,

* See Phrenological Transactions, page 209.

† Vol. v. 1798, part i. page 28.

Digitized by Google

or *yellow, blue,* and *purple.* My yellow comprehends the *red, orange, yellow,* and *green* of others; and my blue and purple coincide with theirs. That part of the image which others call red, appears to me little more than a shade or defect of light. After that, the orange, yellow, and green seem *one* color, which descends pretty uniformly from an intense to a rare yellow, making what I should call different shades of yellow. The difference between the green part and the blue part is very striking to my eye: they seem to be strongly contrasted. That between the blue and purple is much less so. The purple appears to be blue, much darkened and condensed.'

Mr. Dalton then proceeds to state the results of his observations on the colors of natural and artificial bodies in general, both by day-light and candle-light. He mostly used ribbands for the artificial colors. The following are extracts: —

'All crimsons appear to me to consist chiefly of dark blue, but many of them seem to have a tinge of strong dark brown. I have seen some specimens of *crimson, claret,* and *mud,* which were very nearly alike. Woollen yarn, dyed crimson, or dark blue, is the same to me. *Pink* seems to be composed of nine parts of light blue, and one of red, or some color which has no other effect than to make the light blue appear dull and faded a little. Pink and light blue, therefore, compared together, are to be distinguished no otherwise than as a splendid color from one that has lost a little of its splendor. Besides the pinks, roses, &c., of the gardens, the following British Flora appear to me blue, namely, *Statice Armeria, Trifolium pratense, Lychnis Flos-cuculi, Lychnis dioica,* and many of the *Gerania.*' 'By candle-light, red and scarlet appear much more vivid than by day; crimson loses its blue and becomes yellowish-red. Pink is by far the most changed; indeed it forms an excellent contrast to what it is by day. No blue now appears; yellow has taken its place. Pink, by candle-light, seems to be three parts of yellow and one red, or a reddish-yellow. The blue, however, is less mixed by day than the yellow by night. Red, and particularly scarlet, is a

Digitized by Google

superb color by candle-light; but, by day, some reds are the least showy imaginable. I should call them dark drabs.'

'I do not find that I differ materially from other persons in regard to *orange* and *yellow*, either by day or candle light.'

'Of *green*, by day-light, I take my standard idea from grass. This appears to me very little different from red. The face of a laurel-leaf (*Prunus lauro-cerasus*,) is a good match to a stick of red sealing-wax; and the back of the leaf answers to the lighter red of the wafers.'—'Orange and green have much affinity also. I can distinguish the vegetable greens one from another, as well as most people, and those which are nearly alike, or very unlike to others, are so to me. A decoction of Bohea tea, a solution of liver of sulphur, ale, &c. &c., which others call brown, appear to me green. Green woollen cloth, such as is used to cover tables, appears to me a dull, dark, brownish-red color. A mixture of two parts of mud and one of red would come near it. It resembles a red soil just turned up by the plough. When this kind of cloth loses its color, as other people say, and turns yellow, then it appears to me a pleasant green. Very light green paper, silk, &c. is white to me.'

'I apprehend that *blue* appears very nearly the same to me as to other people, both by day-light and candle-light.'—'Purple seems to me a slight modification of blue, and I seldom fail to distinguish them.'

'My idea of *brown* I obtain from a piece of white paper heated almost to ignition. This color, by day-light, seems to have a great affinity to green, as may be imagined from what I have said of greens. Browns seem to me very diversified; some I should call red: dark-brown woollen cloth I should call black.'

Mr. Dalton's brother saw colors very nearly in the same light as himself. He mentions also, that having made known the circumstances to his acquaintances, he found several in the same predicament; and that out of twenty-five of his pupils, to whom he explained the subject, two were found to agree with him, and, on a similar occasion, one. 'Like myself,' says he, 'they could see no material difference betwixt pink and light blue by day, but a

Digitized by Google

striking contrast by candle-light; and, on a fuller investigation, I could not perceive they differed from me materially in other colors.' — 'I think I have been informed of nearly twenty persons whose vision is like mine.' — 'Our vision, except as to colors, is as clear and distinct as that of other persons.' Only two or three are, (like Mr. Dalton himself) short-sighted. It is remarkable that I have not heard of one female subject to this peculiarity.

'From a great variety of observations made with the above-mentioned persons, it does not appear to me that we differ more from one another than persons in general do. We certainly agree in the principal facts which characterize our vision.' He then gives a detail of those characteristic facts, which, however, want of room compels us to omit.

Mr. Dalton concludes his paper by attempting to account for his anomalous vision. He conjectures, that one of the humors of his eyes must have been 'a transparent, but *colored* medium, so constituted as to absorb *red* and *green* rays principally, and to transmit blue and other colors more perfectly.' 'I suppose,' says he, 'it must be the vitreous humor; otherwise, I apprehend, it might be discovered by inspection, which has not been done.' We must refer to the essay itself for a farther exposition of his views.

The case of Mr. James Milne, of Edinburgh, is generally known to phrenologists. Like the other individuals, he is able to perceive *forms* and *distances* with perfect facility, and some of his relations also have a difficulty in distinguishing colors. Mr. Milne, when bound apprentice in a draper's shop, gave a purchaser a bright scarlet ribbon to match with a piece of green corduroy. He also mistook a gown of a mixed brown color for green. He knows blues and yellows, but browns, greens, and reds, he cannot distinguish. Blue and pink, when about the same shade, and seen in day-light, appear to him the color of the sky, which he calls blue; but, seen in candle-light, the pink appears as a dirty buff, and the blue retains the appearance which it had in day-light. The grass appears to him more like an orange than any

Digitized by Google

other colored object with which he is acquainted. Indigo, violet, and purple, appear only different shades of one color, darker or lighter, but not differing in their bases. He never mistakes black and white objects: he distinguishes easily between a black and blue, and is able even to tell whether a black be a good or a bad one. In the rainbow he perceives only the yellow and the blue distinctly. He sees that there are other shades or tints, but what they are he cannot distinguish, and is quite unable to name them. In day-light, crimson appears like blue or purple, but in candle-light it seems a bright red.*

The case of Mr. Sloane is also well known.† He is at a loss to distinguish betwixt green and brown, and likewise between some shades of red and blue. His sight is otherwise perfect.

In the Medico-Chirurgical Transactions, (vol. vii. part 2, p. 477,) an account is given by Dr. W. Nicholl, of a boy, eleven years of age, who was subject to a similar imperfection. 'He does not call any color green. Dark bottle-green he calls brown, confounding it with certain browns. Light yellow he calls yellow; but darker yellows and light browns he confounds with red. Dark brown he confounds with black. Pale green he calls light red; common green he terms red. Light red and pink he calls light blue; red he calls by its proper name. On looking through a prism, he said he could discover 'no colors but red, yellow, and purple.'

The mother of this boy is stated to be free from this imperfection of vision, but her father has it. This gentleman had two brothers and three sisters. One of the brothers had this peculiarity, but the other brother and all the sisters were without it. The father was in the navy, and several years ago he purchased a blue uniform coat and waistcoat, with *red* breeches to match the blue. The brother of the boy's grandfather, it is mentioned, has mistaken a cucumber for a lobster, and a green leek for a stick of red sealing-wax.

* See Phrenological Transactions, page 224, and Combe's System, 3d edit. page 402.

† Phrenological Transactions, p. 226.

Digitized by Google

In the ninth volume of the Medico-Chirurgical Transactions, (part 2, p. 359,) another case is published, of a gentleman residing near Mauchline, in Ayrshire, who had great difficulty in discriminating between certain colors. 'The color I am most at a loss with,' says he, 'is green; and in attempting to distinguish it from red, it is nearly guess-work. Scarlet, in most cases, I can distinguish; but a dark bottle-green I could not, with any certainty, from brown. Light yellow I know; dark yellow I might confound with light brown, though in most cases I think I should know them from red.' This gentleman had a brother with a similar defect, and mentions that his sight was otherwise perfect.

Mr. Dugald Stewart is said to have experienced a like inability. He first perceived his defect when one of his family was calling his attention to the beauty of the fruit of the Siberian crab, which he could not distinguish from the leaves but by its size and form. Mr. William Scott, a member of the Phrenological Society, has a similar imperfection. Pink and pale blue appear to him the same, and he cannot distinguish red from green, or dark blue from purple. Blue and yellow appear to him entire opposites, as much so as black and white.

Mr. Harvey has described, in the Edinburgh, Transactions the case of a tailor now alive and upwards of sixty years of age, who could distinguish with certainty only white, yellow, and grey. On one occasion he repaired an article of dress with *crimson* in place of black silk; and on another occasion he patched the elbow of a blue coat with a piece of crimson cloth. He regarded indigo and Prussian blue as black; he considered purple as a modification of blue; and green puzzled him extremely. The darker kinds he considered to be brown, and the lighter kinds as pale orange. He experienced no difficulties with good yellows. His notions of orange were imperfect. The reddish oranges he termed brown, and the lighter kinds yellow. He considered carmine, lake, and crimson to be blue. The solar spectrum he regarded as consisting only of yellow and light blue. None of the family of this person had the same defect.

We have read also of a gentleman, in the prime of life, who

Digitized by Google

perceived only blue and yellow in the spectrum of four colors in which there were red, green, blue, and violet. Whenever the colors of the spectrum were absorbed by a reddish glass, except red and dark green, he saw only one color, viz. yellow or orange, but could not distinguish which of these two colors it was.

Dr. Spurzheim has observed similar instances. 'I know,' says he, 'a family, all the individuals of which distinguish only black and white; Dr. Unzer, of Altona, could not perceive green and blue; and at Vienna I saw a boy who was obliged to give up his trade as a tailor, because he could not distinguish different colors. I have observed similar instances at Paris, at Dublin, and at Edinburgh.*

Finally, At a meeting of the London Phrenological Society, in the beginning of 1826, a gentleman was presented, unable to distinguish between several different colors. A variety of differently colored pieces of silk were shown him, but his mistakes were ludicrous and incorrigible.†

The cause of these phenomena has considerably perplexed the philosophers of the old school. The Royal Society did not even attempt to give a theory of the two cases which were read before it in 1777 and 1778. Dalton, as already mentioned, accounted for his peculiarities by supposing the vitreous humor of his eyes to be of a blue tint, and thus fitted 'to absorb red and green rays principally, and to transmit blue and other colors more perfectly.' This theory, however, is unsupported by the Baconian requisite of *facts*. It is not proved that the vitreous humor had really such a tint; and even if it had, the phenomena would by no means be accounted for. If we look through a green or blue glass, we are still able to see every primitive color on bodies with a shade of green or blue over them. A pair of blue spectacles, certainly, will not cause us to see red, orange, yellow, and green, as the same color, or the face of a laurel leaf to appear of the hue of red sealing-wax.

* Phrenology, p. 276.

† Ed. Phrenological Journal, iii. 265.

Digitized by Google

Dr. Thomas Young rejects Dalton's theory, and thinks it 'much more simple to suppose the absence of paralysis of those fibres of the retina, which are calculated to perceive red.' There is no evidence of the existence of such fibres in the retina, and therefore Dr. Young's explanation must fall to the ground. Others think it probable that the loss of red light in certain eyes may be ascribed to the *retina* having a blue tint. This also is a gratuitous hypothesis, and has not been proved by dissection. The only other account of the matter that we are aware of is, that, as the ears of certain persons have been shown by Dr. Wollaston to be insensible to sounds at one extremity of the scale of musical notes, *so* is the retina 'insensible to the colors at one end of the spectrum.' This theory, however, is, like the others, repugnant to sound logic, and affords no satisfactory explanation of the varied phenomena detailed in the foregoing cases.

In accounting for this curious peculiarity, phrenologists have taken facts for their basis. Their observations tend to prove that individuals whose power of distinguishing colors is imperfect, have a deficiency of that part of the brain immediately over the middle of the orbits, the function of which has been ascertained to be the perception of the existence and relations of colors. Dr. Butter states, that 'in comparing Mr. Robert Tucker's cranium with casts, and with plates in Dr. Spurzheim's book, he was forcibly struck with the flatness of his os frontis, at the place in the orbitary ridge where the organ of Coloring is said to be situated; and this flatness, it is known, indicates a small development of the organ.'* The Phrenological Society possesses casts of the heads of Mr. Milne and Mr. Scott, which have a decided depression in the same situation. In Mr. Sloane's forehead, of which also the Society has a cast, the deficiency is not so great as in those of the other two gentlemen; but the organ is greatly less developed than in the masks of individuals distinguished for knowledge of the harmonies of colors. With regard to the gentleman at the London Phrenological Society, it is mentioned that 'his eyes ap-

* Phrenological Transactions, p. 216.

Digitized by Google

peared perfect, — nay his sight was singularly acute; and he was neither long nor short-sighted; but over the orbit, in the spot marked by Gall as the seat of the organ of Color, a depression was evident to the whole assembly.' *

ART. XXXI. — *Cuvier.* — [Extract from a paper read before the Phrenological Society of Paris, by Dr. FOISSAC.]

Translated for the Annals.

GENTLEMEN:

There are epochs in the history of the world, when nature seems to collect all the vigorous germs of its creative power to produce great men. Then she rests, as if fatigued by age and exhausted by the effort. The same age witnessed the birth of Alexander and Aristotle, and the same year (1769) saw the advent of Napoleon and Cuvier, both distinguished for energy and genius, and both worthy to give their name to the generation which was rising around them: one destined to rule in the camp, to found dynasties, to crush thrones, and to march at the head of European civilization; the other to rule in the pacific empire of letters, in the midst of the most scientific body in Europe; an encyclopedia of human knowledge, always living and progressive; the unveiler of life's mysteries, and the legislator of natural history. Let us examine, gentlemen, by what powerful organization, the intellect of Cuvier wrought these prodigious labors.

The post-mortem examination of this great naturalist was made May 15, 1832, by Messieurs Orfila, Dumeril, Dupuytren, Allard, Biett, Valenciennes, Laurillard, Rousseau, Andral (neveu) and Berard. The brain of Cuvier weighed three pounds, ten ounces, four drams and a half,† exceeding the ordinary weight of the human brain by nearly one third, which enormous difference lay almost entirely in the cerebrum; the cerebellum, pons varolii and medulla oblongata not exceeding the ordinary size of these organs in other persons. No one present, said M. Bérard, to whom we are indebted for these phrenological details, recollected to have seen a brain so crimped, *convolutions so numerous* and crowded, anfractuosities (furrows) so deep, especially in the anterior and superior portion of the cerebral lobes.

It would be an error prejudicial to Phrenology to suppose that the extent of the intellectual faculties can be ascertained by the weight or absolute size of

* Phrenological Journal, iii. 265.

† Dr. Spurzheim's brain weighed three pounds seven ounces and an eighth. The French pound is, we believe, about 1-25 heavier than the English. It should be remarked however, that Spurzheim's brain was weighed without the membranes, but we know not how it was with Cuvier's.—*Trans.*

Digitized by Google

the brain. Experience and reason prove the contrary. The Phrenologist must found his judgment upon a comparison of the different regions with each other, and heads, large in the propensities and animal instincts, are remarkable for the smallness of the anterior lobes of the brain, where the intellect resides.

Nor can we admit that the brain of Cuvier contained *a greater number of convolutions* than ordinary brains. Nature has determined the organs appropriated to the animal economy, and every individual, monsters excepted, has the same number. Hercules had no more bones and muscles than a diminutive Laplander, but his organs were larger, stronger, and endowed with greater activity. Such was the case with Cuvier's brain. Unfortunately no plaster cast of it was taken, as the papers had announced. In order to find the unsearchable clue to his disease, the brain was sliced up, as has been the custom since the days of Vicq-d'Azir, and it was soon reduced to a shapeless mass, in which the eye could no longer recognize any thing like human organization.* This serious omission, made without the consent of the professor who conducted the examination, would be in some degree atoned for, if we possessed a model of the cranium. We had hoped until the last moment that we should have been able to exhibit this, but all communication with the only copy that exists has been absolutely denied to the phrenological society *by an inflexible will.* But all those who have seen it, all those who were acquainted with Cuvier when alive, know the enormous development of the frontal region compared with the three others. We rarely meet, even among men of genius, with such large organs of Language, Eventuality, Locality, Order, Color, Form, and Constructiveness; and we accordingly find Cuvier reading at an age when other children hardly know how to speak. Drawing was one of his favorite occupations. His memory in every department was prodigious, and his knowledge and acquaintance with foreign languages profound.

These faculties, common, though in an inferior degree, to all who are skilled in natural history would have given to the forehead of Cuvier an inclination backward, but the prodigious development of the organs of Comparison, Causality and Ideality raised and enlarged the anterior and superior region of the forehead, the seat of intelligence. Hence those profound investigations, those precise and vigorous descriptions, those learned classifications, those philosophical, lucid and prolific principles, that inimitable spirit of generalization, which distinguishes his works, especially his Lessons of Comparative Anatomy, and his Researches on Fossil Bones. * * * * *

However incomplete may be the notions we have thus given of the cerebral organization of Cuvier, it is none the less evident to us, that this fine organization was one of the most striking proofs of a doctrine against which he had the weakness to pronounce an opinion twenty-five years ago, in his famous Report to the Institute, and, (must we say it?) that he might not displease Napoleon, who thought he saw in the discoveries of Gall an 'arsenal of gross ma-

* Dr. Spurzheim used to remark that this mode of dissecting the brain was like attempting to demonstrate the structure of the arm by beginning at the wrist and slicing it up to the shoulder, like a cucumber.—*Translator.*

Digitized by Google

terialism!' Nevertheless, these two celebrated men were made to understand and esteem each other, and, towards the end of their career, they did each other justice. Gall had already one foot in the grave when Cuvier sent him a cranium 'which,' he said, 'appeared to him to confirm his doctrine of the physiology of the brain.' But the dying Gall replied to him who brought it, 'Carry it back, and tell Cuvier, that my collection only wants one head more, my own, which will soon be placed there as a complete proof of my doctrine.'

(It must be interesting to phrenologists to know that a notice of the phrenological development of Cuvier in the hand writing of Dr Spurzheim, was found amongst his papers. How the notice was obtained by Dr. S. is not known, but the memorandum follows entire.—*Translator.*)

"PHRENOLOGICAL NOTE ON THE HEAD OF BARON CUVIER.

The frontal and lateral regions were predominant over the occipital and sincipital.

Three degrees among the intellectual faculties.
1 — 22, 23, 24, 27, 30, 35.
2 — 34, 29, 31, 20, 25.
3 — 19, 32, 26, 28.
Lateral Region, two degrees.
1 — 8, 7, 6.
2 — *, 9, 12.
Occipital region, three degrees.
1 — 11.
2 — 10, 5.
3 — 4, 2, 3, 1.
Sincipital region.
1 — 13, 21.
2 — 19, 18, 14.
3 — 15, 16, 17.

His head very large, his brain weighed 3 pounds 10 ounces."

NOTICES.

Society's Cabinet.—We take pleasure in stating that the Collection of Casts, Skulls and Drawings of the Boston Phrenological Society is gradually increasing. Donations of specimens of human skulls, casts of heads, crania of the lower animals, are respectfully solicited for the Society.

Bust of Spurzheim. An admirable bust of this distinguished philanthropist and philosopher, combining correctness and good taste, has lately been published under the direction of the Boston Phrenological Society. Any number can be procured by applying to Marsh, Capen and Lyon, the publishers.

This bust is true to nature, having been moulded from the living head in Paris, and although devoid of the *beau ideal,* is still elegant, and is therefore an useful and becoming ornament for the study or parlor.

THE ANNALS. 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.

Digitized by Google

MARSH, CAPEN & LYON,

NO. 133 WASHINGTON STREET, BOSTON, AND CONCORD, N. H.

PUBLISH THE FOLLOWING

VALUABLE BOOKS.

PRHENOLOGY, OR THE DOCTRINE OF THE MENTAL PHENOMENA, in two volumes, 8vo. Vol. I. Physiological Part. Vol. II. Philosophical Part, with Plates. 3d American Ed. By J. G. Spurzheim, M. D.

This work gives a full view of the Science of Phrenology, and furnishes numerous facts illustrative of the principles of human nature.

PHRENOLOGY in connexion with Physiognomy. Illustration of Characters, with thirty-five plates. One vol. royal 8vo. By J. G. Spurzheim, M. D. To which is prefixed a Biography of the Author. By Nahum Capen.

OBSERVATIONS ON THE DERANGED MANIFESTATIONS OF THE MIND, OR INSANITY. One vol. 8vo. By J. G. Spurzheim, M. D. With an Appendix. By A. Brigham, M. D.

'An invaluable treatise, from the pen of one who, probably, was more intimately acquainted with the nature and disease of the brain than any man living. It is full of interest.' *N. Y. Mirror.*

A VIEW OF THE ELEMENTARY PRINCIPLES OF EDUCATION FOUNDED ON THE STUDY OF THE NATURE OF MAN. One vol. 12mo. By J. G. Spurzheim, M. D. 3d Am Edition.

PHILOSOPHICAL CATECHISM ON THE NATURAL LAWS OF MAN. One vol 18mo. 3d Am. Ed. By J. G. Spurzheim, M. D.

'Men have long been treated as children; they have been taught that ignorance and incredulity are virtues, and that fear is wisdom; and that they may glorify God by flattery, rather than by moral excellency.' *Extract from Preface.*

OUTLINES OF PHRENOLOGY. Being also a manual of Reference for the Marked Bust. One vol. 18mo, 3d Am. Ed. By J. G. Spurzheim, M. D.

Digitized by Google

EXAMINATION OF THE OBJECTIONS made in Britain against the doctrines of Gall and Spurzheim. By J. G. Spurzheim, M. D. And, ARTICLE OF THE FOREIGN QUARTERLY REVIEW. By Rich. Chenevix, Esq. F. R. S. &c. With Notes by Dr. Spurzheim. One vol. 12mo.

PROF. FOLLEN'S ORATION, delivered at the Funeral of Spurzheim, Nov. 17, 1832.

SPURZHEIM'S ANATOMY OF THE BRAIN, with a general view of the Nervous System. With an Appendix—with 18 plates, improved.

REMARKS ON THE INFLUENCE OF MENTAL CULTIVATION AND MENTAL EXCITEMENT UPON HEALTH. One vol. 12mo. By Amariah Brigham, M. D. 2d Ed.

OBSERVATIONS ON MENTAL DERANGEMENT Being an application of the Principles of Phrenology to the elucidation of the causes, symptoms, nature, and treatment of Insanity. By Andrew Combe, M. D.

COMBE'S PHRENOLOGY. A System of Phrenology by Geo. Combe, late President of the Phrenological Society, Edinburgh—4th edition.

COMBE'S ELEMENTS OF PHRENOLOGY. Elements of Phrenology, by George Combe, late President of the Phrenological Society, Edinburgh. 4th edit. improved and enlarged, with plates.

LECTURES ON POPULAR EDUCATION, by George Combe

DR. CALDWELL, ON PHYSICAL EDUCATION.

MEMOIRS OF SPURZHEIM, by Andrew Carmichael, M. D.

A few sets of the EDINBURGH PHRENOLOGICAL JOURNAL, for sale.

NECESSITY OF POPULAR EDUCATION AS A NATIONAL OBJECT. By James Simpson, Esq.

MACNISH ON THE PHILOSOPHY OF SLEEP.

CASTS.

MARSH, CAPEN & LYON keep constantly for sale a variety of CASTS, illustrating PHRENOLOGY—approved by DR. SPURZHEIM.

William A. Hall & Co. Printers.

Digitized by Google