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THE

PHRENOLOGICAL JOURNAL.

No. LXVI.

NEW SERIES.—No. XIII.

I. MISCELLANEOUS PAPERS.

I. *Report of the Proceedings of the Phrenological Association, at its Third Annual Session at Glasgow, in September* 1840.

In accordance with an announcement extensively circulated, and a copy of which was inserted in the thirteenth volume of this Journal, p. 242, the Phrenological Association held its third session during the week commencing Thursday 17th September 1840, in the Hall of the Glasgow Phrenological Society, 104 Brunswick Street, at one o'clock. At a preliminary meeting of the General and Local Councils, it was determined that ten shillings should be the sum payable by members attending the meetings, and that each should have the privilege of introducing a lady. At the meeting on Thursday, Mr George Combe, the President of the Association, delivered the following

Opening Address.

Gentlemen,—In acknowledging with grateful feelings the honour which you have done me in electing me President of the Phrenological Association, and in sincerely expressing my conviction of my own inability to do that justice to the situation which its importance demands, I beg to add, that no effort, within the scope of my abilities, shall be wanting to render the meetings instructive and agreeable to all its members; in which object I know that I shall be warmly seconded by every gentleman whom I now address.

I am bound, however, to mention, that no portion of the merit of forming the Association belongs to me.

In March 1835, that early, stedfast, and indefatigable friend to the science, Sir George Mackenzie, published in the

Phrenological Journal a prospectus of a " British Association for the advancement of Mental Science." This was the first public suggestion offered on the subject.

At a meeting of phrenologists held in Dublin on the 17th August of the same year, Professor Evanson moved, and Sir Henry Marsh, M. D., seconded the motion, " That it appears desirable that there should be formed a General Association of the Phrenologists of Great Britain and Ireland, to meet annually, for the purpose of advancing the science of Phrenology, giving publicity to its doctrines, and effecting a mutual co-operation among phrenologists."

On the 25th of August 1838, a meeting of phrenologists was held in the lecture-room of the Literary and Philosophical Society of Newcastle, Professor Gregory in the chair; at which a Phrenological Association was instituted, and " declared to consist of those gentlemen (either members of established phrenological societies, or members of the British Association for the Advancement of Science) who enrol their names as members, and engage to obey the regulations from time to time adopted by the governing body." A provisional committee was appointed for the general management of the Association for the time being, who were instructed to frame laws, " and arrange the proceedings of the Association, on a scale as liberal in spirit, and as economical in outlay, as is compatible with the well-being of the Association." It was resolved to meet annually, at the same times and places as should be appointed for the meetings of the British Association, and to request the attendance of phrenologists at the meeting of the Association to be held at Birmingham in 1839.

During the meetings of the British Association at Birmingham in August 1839, the provisional committee proceeded to frame a code of laws, and to arrange the other business of the Phrenological Association. The Association adopted these laws (which were subsequently published in the Phrenological Journal), and then proceeded to hold regular meetings, at which topics of interest were brought forward by the members and discussed. The meeting elected office-bearers for the present year, and named this day, the 17th of September 1840, as the time, and this city, Glasgow, as the place, for the next assembling of the Association.

I have said that, individually, I took no part in the proceedings which have now been briefly detailed. The honour of them belongs to the gentlemen whose names I have already mentioned, and to the others who formed the provisional committee. Allow me to add, that engagements in promoting the advancement of phrenology on the American Continent

rendered my attendance at Newcastle and Birmingham nearly impossible. I sailed from Edinburgh, on my way to the United States, on the 1st, and from Bristol on the 8th, of September 1838, and did not return to England till the 17th of June 1840. The meeting at Newcastle was held only five days before my departure, and this is the first that has taken place since my return.

Allow me to congratulate you who are here assembled, and phrenologists generally, on the great object which has been accomplished by the institution of this Association. The first difficulties have been surmounted, the machinery has been devised and set in motion, and we have before us a splendid field of exertion. Phrenology, as a branch of physical science, gives scope to the talents of those who are fond of observation, and love to approach Nature in her most palpable forms. The structure and connections of the brain; the indications of the development of this organ presented by the skull; its modifications in the different classes of animals; the effects of age, temperament, and disease, on its functions—are subjects of high importance, and well calculated to exercise a mind capable of scientific research. By the accurate observation of nature, the real foundation of phrenology as a science may be discovered by every intelligent inquirer who will bestow on it adequate attention. Far from shunning the scrutiny of a minute investigation of the facts on which we rest our inductions, phrenologists are constantly inviting, nay ardently soliciting, such a trial. In proportion to the extent and accuracy of any individual's observations, is the strength of his conviction of the truth of the doctrines which we are now met to advance.

It will be a leading object with the members of this Association to bring forward facts and illustrations as numerously as possible. I respectfully recommend to every gentleman to become a close observer and rigid investigator, and, while he listens with becoming attention to the facts adduced by his fellow-labourers in the science, to omit no opportunity of verifying them himself by a direct appeal to nature.

One difficulty in the department of observation has been experienced by every practical phrenologist. While ours is really a science of observation, we possess no instrument or other means for giving precise indications of the size of the different parts of the brain. This deficiency is a constant theme of objection in the mouths of our opponents, and is a subject of regret with those of our own members who, trained in the rigid school of experiment and observation applicable to inorganic, and even to organic but nonsentient matter, de-

sire to see the same certainty of admeasurement introduced into phrenology. Many endeavours have been made by ingenious individuals to invent instruments for measuring accurately the size of the different parts of the brain in the living head, but none of them, within my knowledge, has been entirely successful.

When I was in Philadelphia, in the beginning of 1839, this subject engaged much of the attention of Dr Morton, author of the splendid work on the "Crania Americana;" of Mr John Phillips, a gentleman possessed of high mechanical talents, who devoted himself to the subject in conjunction with Dr Morton; and of myself: and a mode of measurement was devised by Mr Phillips, which is described in Dr Morton's work, and which was practised by them with a view to determine scientifically the size, not of each minute portion, but of the great divisions of the brain, the anterior, the coronal, and basilar regions; but even these endeavours led only to approximations to precise results. We remain, therefore, still in the condition of judging of the size of the different parts of the brain only by observation and estimation. We possess rules, however, to direct us in our estimates, and these I regard as sufficient to enable us to distinguish, with little danger of mistake, the relative proportions of the anterior, the coronal, and the basilar regions of the brain.

In regard to the individual organs, I solicit your attention to two points that should always be distinguished, although they are often confounded, especially by our opponents; namely, the possibility of discovering the functions of particular parts of the brain, and the possibility of applying our discoveries in all instances. In a strictly scientific inquiry, it is only the first that we are bound to establish. If we can shew that it is possible, in a sufficiently large number of instances, to distinguish the size of particular organs without risk of mistake, and to observe accurately the manifestations that accompany different degrees of size, phrenology may justly claim that degree of certainty which constitutes knowledge a science, although some difficulties should lie in the way of its practical application to individual cases.

It will be admitted by every practical phrenologist, that it *is* possible to discriminate the size of each organ if we resort to extreme cases. I cannot conceive the condition of a mind unable to distinguish between the size of the organ of Ideality in the head of Dr Chalmers and its size in that of David Haggart; I mean so to distinguish the difference as to arrive at as positive a conviction of the organ being large in the former and small in the latter, as he could reach in con-

templating two figures, that the one is a square and the other is a circle. And if he have adequate opportunities of observing the mental manifestations, he will receive an equally satisfactory conviction of the difference in them also. The like may be predicated respecting the other organs. A sufficient number of these extreme cases exist, and are accessible to all serious inquirers, to prove the real connection of particular mental powers with particular portions of the brain.

It has been said that the proposition that the brain consists of a congeries of organs is only hypothetical, because no one has been able to demonstrate in the brain the separate existence of the so-called organs. Certainly we have not been able to demonstrate it to the eye and to the touch; but we are able to do so to the understanding. I mean to say, that, when the eye perceives the difference in the part named the organ of Ideality between Dr Chalmers and David Haggart, and the understanding, by means of an extensive induction of facts, arrives at the conviction that the want of the peculiar feeling named Ideality is connected with deficiency of size in this particular part of the brain and no other, and that the possession of it in a high degree is connected with the large development of this part and no other, the inference that by this part exclusively the power is manifested is perfectly legitimate. We may dispute whether the part should be called an organ or not, but the merits of this dispute will be found to involve only the definition of the word organ. If we limit the meaning of the word to parts the boundaries of which we can see or feel, such as the eye and the auditory nerve, assuredly the cerebral portion is not an organ in this sense of the word; but then it follows that the posterior column of the spinal marrow is not an organ of sensation, nor the anterior column an organ of motion, because the line of demarcation between them is not ascertained. If, however, we define an organ to mean a particular part whose locality is ascertainable, and which can be demonstrated to be connected with a particular function, then the portions of the brain marked out by phrenology *are* organs, and the posterior and anterior columns of the spinal marrow also *are* organs of sensation and motion respectively. The *understanding* is satisfied that they are organs, although the *senses* are not. But the same deficiency of visible and tangible evidence pervades other sciences. No philosopher ever saw or handled the cause of attraction or gravitation; the whole science of astronomy rests on inductions from the phenomena of its manifestations merely. A large portion of the science of geology also is composed of inductions from phenomena, and we believe in the deposition of certain rocks by water, and in the ejection of others by fire,

with the most assured conviction, although we have not seen either the actual deposition or the actual ejection of any of them. Medicine also, as a practical art, is able to exhibit few of the causes of the diseases of which it treats to the eye or the sense of touch, yet we do not hesitate to believe in these causes, and to act on our belief.

I have entered into these details perhaps unnecessarily, respecting the evidence on which phrenology rests; but I proceed to add, that cases certainly do occur in which it is impossible to determine, with precision, the relative size of some of the organs. In these cases phrenologists differ in opinion; their differences are seized hold of by opponents as evidence that the whole doctrines are a mere tissue of conjectures, and that there is no conclusion within its whole circuit which rests on a really satisfactory foundation. Every phrenologist feels the injustice of this mode of treating the subject, but every one does not see the answer to the charge. Besides, in this meeting—a meeting composed of phrenologists—it is to be expected that the most striking cases of development and deficiency on which the science rests, will not be those which will be brought most extensively forward, but that we may be called on to consider and discuss difficult instances regarding which many of us may differ in opinion; and I should regret if any of our own less-experienced members, or of the visiters who may occasionally listen to our proceedings, should imbibe the impression from them that our whole science is still matter of dispute among ourselves.

I consider the foundations of phrenology to be as palpable as the sun at noon-day, and as impregnable as the solid rock, if we seek for its evidence in cases of extreme size and extreme deficiency in different parts of the brain; but I admit that cases of special combination, and others of nearly equal development of many organs, occur, in which its application is difficult, and I believe that the like may be predicated of most other sciences founded on observations of nature.

Geology is, like phrenology, a science of observation, and we have a recent instance shewing that while, as a whole, it is surely and rapidly progressive, its details are, in many points, subjects of uncertainty and dispute. "In all the geological maps of England which I have seen," says an enlightened geological friend, "from Conybeare and Phillips' in 1822 to Walker's in 1837, the stratified rocks of Devonshire are marked as clay-slate and greywacké. Professor Phillips, so late as 1837, held the lower part to consist of these rocks, and the upper of millstone grit. Mr Delabeche in 1839 was nearly of the same opinion, substituting the term "Carbonaceous series of Devon and Cornwall" for millstone grit. Yet

the opinion thrown out by Messrs Murchison and Sedgwick a few years ago has recently been confirmed by an examination of the fossils, and the inferior portion of these rocks is found to belong to the old red sandstone formation, the superior to the coal-formation. Let it be observed, that the dispute in this case did not relate to the tertiary beds, which have only begun to be studied within these few years, but to the older rocks whose characters were supposed to be sufficiently known even in the days of Werner." How often, also, does the geologist experience difficulty in distinguishing between rocks of igneous and those of aqueous origin, in particular instances in which they appear almost to run into each other; although, in the general case, the differences between them are striking. He would be an unjust adversary who, from these difficulties and differences in opinion among eminent geologists, should argue that the whole science is involved in uncertainty, and has no solid foundation in ascertained facts.

I have hitherto spoken of phrenology chiefly as a branch of physical science; but it presents another and an almost boundless field of interest, as the philosophy of the human mind. In this respect it is unlike, and, in my opinion, it excels, most of the other sciences. In establishing the functions of a particular part of the brain, we ascertain a primitive faculty of the mind. When we have fixed, on a sure basis, our knowledge of each primitive mental power, its sphere of action, its uses and abuses, and the morbid aberrations to which it is liable, we have laid the foundation of the philosophy and practice of education, because education consists in training, instructing, and directing the primitive faculties of the mind; we have presented materials for the construction of a sound and practical system of ethics, because ethics or moral philosophy is simply an exposition of human duty, founded on the nature and objects of the bodily functions and mental powers; we have lighted the path of the physician in the treatment of insanity, because this disease has its origin in the departure of the cerebral functions from the state of health, and a correct knowledge of their normal condition is the very foundation of sound views of their phenomena when diseased; we present principles of the greatest value to the criminal legislator to guide him in his enactments, because his object is to restrain the mental powers of individuals from abuses, and phrenology points out to him the causes within the mind itself, and also those external to it, which most vigorously excite each particular faculty to action, and crime is the result of excessive, or ill-directed, action of one or more of our primitive desires.

With such a field of interesting investigation before him, the mind of the phrenologist is prone to catch fire and launch forth on the vast ocean of speculative discussion, instead of confining itself to the sober limits of correct observation and cautious induction. It is to many minds a captivating employment to assume data, instead of observing facts, and to weave a gossamer web of the imagination, instead of practising the rules of a rigid logic. In our discussions on the present occasion, it will be desirable that our members should restrain that ardour of speculation which is so captivating to vivacious and ingenious minds when presented with a theme worthy of their powers, and should rely on facts, and direct and logical inferences from them, rather than on bold theories, for attaining the objects of our meeting.

In the observations which I have hitherto made, I have had in view chiefly the proceedings of the Association as an assembly of confirmed phrenologists. Let me now address a few remarks to those who may honour us with their attendance in the character of mere inquirers into the evidence and objects of phrenology.

Many individuals are to be met with who approach phrenology in a spirit not only of doubt but of disdain; who come to listen to a phrenological discussion not with a candid mind open to conviction, but with a captious, hostile disposition, and whose observations are, "Shew *me* this," "Convince *me* of that," and "*May not* the case be so and so?"—constantly labouring to turn aside evidence and truth, and indicating by their whole manner that these are unwelcome guests to their understandings. We have but one answer to make to such contentious inquirers: In all other sciences, conviction can be obtained only by a serious and candid application of the mind to the study of the subject itself, and phrenology forms no exception to the rule. In studying this science, the inquirer must begin at the rudiments; and he must lay aside the notion that it is of so trivial a nature, and so simple, that he may master it in half an hour, or that, by attending a few lectures, he may become wiser than its professors who have studied it for years. Phrenology, when viewed in all its bearings, is perhaps one of the most difficult of the sciences. To master it, the student must be a patient and accurate observer of size, form, and temperament; he must possess a mind capable of analysis and combination; and he needs an extensive practical acquaintance with the phenomena of daily life. We have among our own members individuals, skilled, perhaps, in other sciences, who have applied no small portion of their attention to phrenology, and who have become

convinced of its essential truth, but who still meet with many perplexities and occasions for doubt. I have generally found these to be non-practical phrenologists—that is to say, men who did not minutely examine living heads, and observe mental manifestations in the theatre of life. From the very nature of the science, (it being one founded on the *estimation* of form and size, and of the manifestations of mental power, which do not admit of specific measurements,) it is not susceptible of demonstration by *reported evidence.* The student must go to nature and learn to *observe* and *estimate* for his own satisfaction. From the first day when I entered on this study, I never derived conviction from reports of other men's observations; and if I had not gone to nature, I should probably have been still involved in perplexity and doubt. I beg, therefore, respectfully to state to intending inquirers, that I know of no royal road to this science, and that, much as we desire to extend a knowledge of it, the very principles which it teaches serve to shew, that we shall in vain endeavour to instruct those who approach us with the demand, "Shew *me*," "Convince *me*." We assure such persons, that we shall be most willing to afford them every assistance in their studies; but that they must *convince themselves* by observation and reflection. This Association meets not to teach the elements of phrenology, but to advance and diffuse it. Our friends, therefore, who favour us with their attendance as visiters, are entreated to make the necessary allowances for the difference between the state of mind of those who have long studied this subject and of themselves, if they are now approaching it for the first time.

To encourage inquiry, however, in a right spirit, I may advert shortly to some of the uses of phrenology. It is the philosophy of mind, and it enables us to know ourselves. It shews us that we possess animal propensities, moral sentiments, and intellectual faculties, and it makes us acquainted with the uses, objects, and abuses of these powers. They are all endowed with inherent activity, and, when excited, the feelings give forth their suggestions and impulses, often uncalled for by the will, and without guidance from the understanding. They often conflict in their desires: who has not experienced emotions of anger contending against the dictates of conscience and the understanding; emotions of self-love warring with those of benevolence and justice; emotions of fear and shame paralyzing not only the aspirations of ambition, but the clear dictates of duty? In short, which of us in youth, and on his first entrance into society, has not been perplexed, nay, perhaps tormented, by the conflicting emotions which poured

like a torrent into his mind, and which he could neither analyze, control, nor comprehend. An early, a full, and a practical instruction in phrenology would remove, or greatly lessen, these embarrassments, by rendering us familiar with the nature and objects, and proper spheres of activity, of each of our faculties. It would render us familiar with every aspect which the propensities could assume, and teach us to subject them to the direction of the moral and intellectual powers.

I do not mean to say that a *mere* knowledge of the names and uses of the organs would be attended with these advantages. Phrenology teaches us that the intellect is far inferior to the propensities and sentiments in impulsive energy, and that these must *be trained* to obedience by long practice and discipline before virtuous conduct can be insured; and it is such a course of training to which I allude. That any science which should communicate, both to the teacher and to the scholar, precise and sound information concerning the nature, objects, and spheres of action, of each of the faculties to be trained, and of the subordination of the propensities to the moral sentiments, would greatly facilitate the process of training, and also that of instructing, cannot admit of a doubt; and such a science in my apprehension is phrenology.

I am far from wishing to insinuate that phrenology will enable each of us individually, or every teacher, to change human nature, and to render every mental manifestation virtuous or proper in the children under his control; but, as I have elsewhere observed, there are degrees of comparison—good, better, best, and bad, worse, worst,—and all we pretend to accomplish is, to make the good better, and the worst less bad.

Another use to which phrenology may be applied, is the selection of domestic servants and of persons to fill confidential situations. The idea of applying it in this manner excites a smile, perhaps of derision, in those to whom it is new; but to me, who have acted on it for fifteen years, it is not only a serious, but a very advantageous, reality. Let me remark, however, that wherever skilled-labour is wanted, phrenology is not an index to its possession. It reveals only what capacities Nature has bestowed, but does not tell to what extent they have been cultivated. If we wish to employ a book-keeper, we must ascertain by inquiries, whether he has been taught to keep books. If we wish to hire a cook, we must learn, by the same means, whether the individual has been instructed in cookery. But phrenology will enable us to discover, whether the candidate for employment has received from Nature strong or weak animal propensities, strong or weak moral sentiments, strong or weak intellectual faculties; whether an in-

dolent or active disposition; and these items of information are very difficult to be accurately obtained by any other means. I repeat, that, for fifteen years I have practised the examination of the heads of servants applying for admission into my own family, and with the happiest results. By selecting those in whom the moral and intellectual organs predominated, not only have I derived the benefit of being surrounded by persons whose morality and capacity have seldom failed me, but also, they have lived in harmony with each other, and a moral sunshine has pervaded the whole domestic circle.

One vice, however, common in this country has baffled our skill; I allude to the tendency to intoxication. We have no external indication of the existence of this habit, for it depends not on any primitive faculty or organ, but on evil training and constitutional peculiarities. Where it exists, it oversets the whole order of nature in the subordination of the propensities to the moral sentiments. I have been under the painful necessity of dismissing, in fifteen years, on account of habits of intoxication, two male and one female servants, whose moral organs were fully developed. The men had no vice except that of inebriety; but the female servant (in whom Alimentiveness, Destructiveness, and Secretiveness were large, surmounted, however, by a good intellect, large Benevolence, Veneration, and Love of Approbation, with pretty fair, although not large, Conscientiousness), when intoxicated, stole and lied almost involuntarily. I say almost involuntarily; for her thefts were often of things of which she had little need, such as quartern loaves, a few pounds of ground rice, and articles of a similar nature, all allied to the gratification of Alimentiveness, although she was amply supplied with nutritive and agreeable food. In the same condition, she denied self-evident facts, and perverted truth even when it was favourable to herself. My supposition was, that the intoxicating liquor paralyzed the action of the moral and intellectual faculties, which have organs of smaller dimensions than those of the propensities, and that the latter, when left without guidance and illumination, acted as it were mechanically.

Moreover, this case shews that, in my estimation, the propensities are not naturally and essentially evil. In this woman the organs of several of them were large; but as she had also large organs of the intellectual faculties, and of most of the moral sentiments, I did not hesitate to engage her. If she had been sober in her habits, and properly trained, I have no doubt that she would have been capable of directing the large organs of the propensities to good.

Another illustration may be added. In 1836, Sir G. S. Mackenzie addressed a letter to Lord Glenelg, Secretary for the Colonies (who transmitted it to Lord John Russell, as Secretary of State for the Home Department), recommending the application of phrenology in selecting the convicts to be sent to New South Wales, in order to avoid placing individuals extremely deficient in the moral organs, and endowed with very strong animal propensities, in the houses of the settlers in that colony, and to prevent the murders and conflagrations which criminals of this class are prone to commit, especially when exposed to the influence of intoxication. This application was accompanied by numerous testimonials from persons of talent and respectability, certifying that they were convinced from observation that phrenology is applicable to this purpose.

Lord John Russell acknowledged receipt of the letter and documents, but treated them with entire neglect. In the progress of time his uncle Lord William Russell, an aged nobleman, hired Courvoisier as a servant; and Courvoisier robbed his house and cut his throat. I shew you a cast of the head of this criminal, and contrast it with the heads of virtuous men; and I have no hesitation in saying that such a head would not have found admittance into my family as a confidential servant. Perhaps if Lord John Russell had instituted the inquiries suggested by Sir G. S. Mackenzie, such a gleam of light might have penetrated his understanding as might have served in its results to save his aged relative from this catastrophe; for it was necessary only to see this head to be on one's guard against the qualities which it indicates.

We sometimes hear the remark made in society, that phrenology is given up by many of its votaries, and makes no progress; in short, that it has already sunk, or is fast sinking, into oblivion. The expression of this notion springs from the secret desire that it should be true; but I cannot offer the opponents any such consolation. The circulation of the Phrenological Journal is at this moment larger that it ever has been before, since the date of the first and second numbers, which were largely bought from sheer curiosity. There are gentlemen present who, having extensive means of information, will be able to speak, from their own knowledge and experience, on the active movement of phrenology in their social circles. The time was when I knew by name every acknowledged phrenologist in the British Empire; I do not now know probably one in fifty. I may, however, enumerate a few facts that shew how the current flows. In the United States,

an able and efficient monthly Phrenological Journal has nearly completed its second year, and lately boasted of a circulation of 1200 copies. The American press has recently produced the most valuable contribution to the natural history of man that the present century can boast of, namely, Dr Morton's work on the skulls of the native American Indians, compared with their mental qualities, which has already attracted attention in Europe. Dr Morton is now a phrenologist; he gives tables of phrenological measurements, and acknowledges, as the result of all his investigations, "that there is a singular harmony between the mental character of the Indian, and his cranial developments, as explained by phrenology." Even Italy sends forth her testimony that phrenology has reached her shores. On my return from America in June last, I found awaiting me a little work entitled "Memoirs regarding the doctrine of phrenology and other sciences connected with it,"* by Dr Luigi Ferrarese, Professor of Medicine in Naples, read before the Royal Academy of Sciences in that city. It was published with full permission from the royal censor of the press. The censor in his report on the work certifies that it "is very instructive and useful, and contains nothing offensive to religion or to the rights of the king."

If we look to the press in our own country for proofs of the progress of phrenology, we discover satisfactory evidence of its diffusion. Novelists resort to it as a mine of materials for the elucidation of character. Mrs Steward's recent tale named "The Interdict" is really an exposition of phrenological principles; while the author of "Timon, but not of Athens," a work of great boldness, eloquence, and vigour, introduces his leading and most respectable character as a phrenologist, and obviously makes him utter the sentiments entertained by himself. Bulwer and Lady Blessington endeavour to extract interest from phrenology in their writings. It is the foundation of many highly instructive articles in Chambers's Edinburgh Journal, and it obviously forms the basis of the philosophical remarks contained in Captain Maconochie's "Australiana." Again, the two leading medical journals of England, viz. the "Medico-Chirurgical Review" and the "Lancet," have long been favourable to our science; and we are now able to add the "British and Foreign Medical Review," conducted by Dr Forbes, to the list of our friends. The two leading medical journals of the United States, viz. the "Select Medical Library," edited by Dr Bell in Philadelphia, and

* Memorie risguardanti la dottrina Frenologica ed altre scienze che con essa hanno Stretto Rapporto; Napoli 1836.

the "Boston Medical and Surgical Journal," edited by Dr J. T. V. Smith, are ranged on our side. The former has supported phrenology from its commencement, and the latter declared its adhesion to the cause during my stay in Boston, and continues to defend it. Professor Silliman's Journal also, the best periodical devoted to physical science in the United States, has lately enrolled itself in our favour. In short, your time will not permit me to enumerate one-half of the evidence of its triumphant progress that might be adduced; but if I were allowed, in conclusion, to advert to my own works, I should say that the public continue to purchase them to an extent which leaves me no grounds for even suspecting them of indifference to the science, but the reverse; and I presume that, buying, they read them. The translation of my "System" into German, and lately in Brussels into French, and its extensive circulation in the United States of America, indicate an increasing diffusion of the doctrines in these countries.

As to the increasing application of phrenology, do we not know that the Lunatic Asylum at Montrose, the Crichton Asylum at Dumfries, and the great Asylum at Hanwell, near London, are placed under the management of Dr Poole, Dr Browne, and Dr Conolly respectively, all phrenologists? I found also the great Lunatic Asylum of the State of Massachusetts at Worcester, forty miles from Boston, in charge of Dr Woodward, a professed phrenologist, and there is only one opinion in that country of its excellence, and of the success of his treatment. The State of New York is now erecting a magnificent asylum for the insane, and I found phrenologists preparing to offer themselves as candidates for its direction, and founding on their phrenological skill as one and an important element in their qualifications.

In the department of criminal jurisprudence, I may mention that the Honourable Joel Parker, Chief-Justice of the Court of Common Pleas in the State of New Hampshire, in the United States, in his charge delivered to the grand jury in September 1838, on insanity, applied phrenology to the subject. He recognised not only intellectual insanity, but added that "the propensities and sentiments also may become deranged;" and among the diseases to which they are liable he included "an irresistible propensity to steal," "an inordinate propensity to lying," a "morbid propensity to incendiarism," and "a morbid propensity to destroy." Need I state to phrenologists that this is a recognition of the diseased action of Acquisitiveness, Secretiveness, and Destructiveness. The Chief-Justice quotes, as his authorities for the views which he presents, among other works, the Reports of Dr Wood-

ward, and Dr Ray's Medical Jurisprudence, both productions of phrenologists.

Dr Ray's work, allow me to add, is a valuable treatise on medical jurisprudence, in which he not only presents the lights of phrenology to illuminate the subject, but condemns the lawyers of other countries for their blindness to its importance, and, among others, he censures the High Court of Justiciary of Scotland for their condemnation in 1832 of Howison, obviously a homicidal monomaniac. The editor of the "Law Journal" of Boston is an able and zealous phrenologist, and in his work advocates its application to criminal jurisprudence. I cannot boast of equal enlightenment among the lawyers of Britain; but if the world in general advance, it will be difficult for them to continue for ever in the rear of human knowledge.

If we wish to discover evidence of the application of phrenology in education, we shall find that Mr D'Orsey of Glasgow has shewn its valuable results in his school, and has not feared to avow his obligations to the science and to defend it. I could mention many other teachers who walk by its lights, but I limit myself to a few. The Institution for the Blind in Boston is ably conducted by Dr Howe, a phrenologist, who has actually printed in raised letters an "Outline" of the science, which he teaches to his pupils. The Asylum for the Blind in New York is managed by a phrenological author and lecturer, Mr Jones; and the prize-essay of the Central Society of Education in London was presented to Mr Lalor, who acknowledges, in explicit terms, the obligations of education to phrenology. The secretary to the Board of Education in one of the American States uses phrenology as a lamp to his path, in his admirable efforts to advance the education of the people.

One other remark will shew the increasing interest of society in one form of application of phrenological science. In the United States there are great numbers of itinerant manipulators, who in many of the towns and villages give one, two, or three lectures free, to excite attention, and who, in American phraseology, "drive a large business" in examining heads and predicating characters for fees. It is said that they injure phrenology by their ignorance and quackery, and I can well believe it; one of them travelled with a giant and a dwarf to add to the attraction of the science, and another illustrated it by means of a magic lantern (not a bad idea, however; for it is as easy to delineate human heads, as witches, monsters, and devils, on the slides of this optical instrument). But it is undeniable that these practitioners excite an extensive and, in some

instances, an abiding interest in the science. Egotism is unquestionably one, and perhaps the leading motive which induces individuals to apply to them; but in a country where money is prized, even vanity will not impel men, year after year, to sacrifice their gold and silver to mere impostors: In short, amidst all the blundering and ignorance of the American manipulators, there must be so great a measure of success in their operations as leads to, and supports, an impression in the people that there is some truth in the principles on which they practise. You are as well able to judge as I am, whether the same observations may not be made regarding many manipulators in this country. I regard a skilful, correct, and conscientious manipulator as a most useful auxiliary to phrenology, and, while I deplore the abuse of the practice, I cannot help regarding the continued existence even of its abuse as virtually an evidence that the principles themselves are in the main sound. I have met with numbers of well-instructed friends of the science on both sides of the Atlantic, who acknowledged to me that their attention was first forcibly roused to the study by the performances of these despised practitioners. It is the nature of truth to rise pure and triumphant out of the wildest mazes of error; and so will phrenology, in due season, shake off the imperfections of its votaries, and present itself to the world as the sound physiology of the brain and the true philosophy of mind.

As there may be now present some who are only about to commence their studies in phrenology, I would respectfully but earnestly recommend to them to begin if possible by acquiring a knowledge of the anatomy of the brain and of its connections with the nervous system in general, especially through the medium of the spinal marrow. This knowledge lays a sure foundation for the subsequent superstructure of phrenology. It renders many phenomena clear and intelligible, which otherwise will be involved in obscurity in the student's mind. It enables him also to meet with success innumerable objections, which medical men who are hostile to the science never fail to propound to those disciples who are ignorant of cerebral and cranial anatomy.

In the next place, I recommend to the student to learn the local situations of the organs, and to practise manipulation until he become capable of estimating their relative development. To do this with success, let him first ascertain the general size of the skull by callipers, next the proportions of the different regions by the means directed in the books on the science. Let him next write down, as heads of columns, the *relative proportions* of these regions, and then, under the head

of the "propensities," set down the size of each organ of propensity, estimating its proportion to the other organs of the propensities. Let him do the same with the organs of the moral sentiments, and with those of the intellectual faculties. Let him thus estimate the size of every organ from No 1 to No. 35 in regular succession. In doing so, he should take the aid of the marked skull. Let him lay aside for a week the skull on which he has made this experiment, and, without looking at his notes, repeat the estimate of the size of each organ, and then compare the two estimates, and use his best powers of discrimination to determine which is the more correct. If he will proceed repeating these experiments on numerous skulls, then on busts, and lastly on living heads, he will become a well-grounded phrenologist, and in time arrive at the most forcible conviction of the truth of the science.

I have often mentioned that it was only after committing innumerable blunders, and practising extensive observations for three years, that I arrived at a full perception of the truth and importance of Dr Gall's discovery. Those who proceed by what is called "testing" phrenology, and by observing one or two organs only at a time, such as the organs of Tune and Language, appear to me to be merely throwing stumbling-blocks in their own way.

The study of the metaphysics of the science should come last in order, as being the most difficult portion of it; and no opinion should be admitted from metaphysical considerations alone. Facts in nature are the only certain foundations on which science can rest.

Finally, I respectfully recommend to the student to make himself familiar with the collections of skulls and casts that are now to be found in every phrenological museum, and also to bestow due attention on the works which have been published in elucidation of the subject.

When he has followed these rules, he may claim a place as a scientific phrenologist along with other scientific men; but if he take up phrenology merely as a pastime, as a system of divination, or as a topic for wrangling and disputation, he must not be surprised if the votaries of other sciences look on him with contempt, and true phrenologists regard him with sorrow.

I beg to express my sincere regret that Mr Hewett C. Watson is prevented, by necessary business, from assisting us with his experience and talents at this meeting. We owe a debt of gratitude to him for his exertions as general secretary to this Association, and in favour of the cause of Phrenology. It will also be a subject of regret to you to learn that Sir G. S. Mackenzie is

prevented by indisposition from being present with us. Dr A. Combe also desires me to express his disappointment at being prevented by his professional duties from attending. These gentlemen, and many other friends of the cause, who have been prevented from attending our meetings by various unavoidable obstacles, all express their ardent wishes for our success, and for the permanence of the Association.

I conclude by adverting to the admirable conduct of Mr Cunliff, Mr M'Clelland, and the other gentlemen composing the local committee of the Association in this city. I have had occasion to know that their exertions have been very great in arranging the present meeting, in corresponding with phrenologists in all parts of the kingdom, and urging them to attend and favour us with communications. They have provided for our reception in the best manner, and altogether merit our warmest acknowledgments.

Friday, 18*th Sept.*—A communication from Dr James Kennedy of Ashby de la Zouch, *On the functions of that part of the brain which lies between the organs of Philoprogenitiveness and Self-Esteem*, was read. His idea is, that it consists of two organs, the lower of which is the Inhabitiveness of Dr Spurzheim, while the upper, occupying chiefly the lower part of the space usually allocated to Self-Esteem, but including also a small portion of the space which Inhabitiveness has hitherto been made to occupy, is connected with the power of restraining, governing, or controlling the emotions—the power, in fact, of self-control, either in acting or enduring.

Mr Combe remarked, that it seems to be now a prevalent opinion, that the part of the brain alluded to by Dr Kennedy includes two organs, the function of one of which is Inhabitiveness, or attachment to place, and that of the other the faculty termed by himself Concentrativeness, or some analogous function; but that opinions differ as to which of these two powers is connected with the upper organ, and which with the lower. On this point, Dr Vimont's observations favour the conclusion that Concentrativeness is connected with the lower, and Inhabitiveness with the upper organ; while Dr Kennedy's incline him to refer Inhabitiveness to the lower—an idea which is embraced also by Mr O. S. Fowler of Philadelphia. Experience must decide how the facts really stand.

Mr James Simpson referred to the strong power of mental concentration manifested by birds which hover in the air watching for their prey, and by the American Indian riflemen, who will lie in ambush for hours, with their eye fixed on a single spot where they expect an enemy to appear.

Mr JAMES DEVILLE mentioned that he had found the organ of Concentrativeness large in the head of the master of a whale-ship at Hull, who would sit for three or four hours looking out with unwavering attention for the appearance of fish.

The next paper was *an Account by* Mr DEVILLE *of his Phrenological Collection* in London, and the objects for which it has been formed. The collection, he stated, includes upwards of 2400 casts, of which nearly 1500 were taken from persons while living, and about 150 from criminals, English and foreign: 120 are pathological cases illustrative of insanity, &c.; about the same number are masks of distinguished persons; and there are nearly 500 moulds, casts, and crania, of different nations. If it be asked, said Mr Deville, What is the use of so large a collection? my answer is, To prove the truth of the science: moreover, when my attention was first drawn to Phrenology, many of the organs were marked as conjectural, and it therefore was desirable to collect facts to prove or disprove their existence, and elucidate their functions. Following the example of Drs Gall and Spurzheim, who, particularly the former, were not satisfied with a few specimens, I collected largely. Out of the 1500 casts of living persons, upwards of 500 of which were collected for the purpose just mentioned. I was desirous, also, to obtain casts to illustrate every organ very large and very small, from persons living and well known; this required 70 casts, which I have taken for this purpose. My third object was to obtain casts of youths where difficulties occurred in educating them for particular occupations notwithstanding the wish of the parent or preceptor; also to collect casts where particular kinds of knowledge were easily acquired with little or no instruction, and often contrary to the wishes of parents or preceptors: the casts taken for this purpose are at least 70, many of them singular cases. I have also taken about 50 casts of persons devoted to religion, the majority of them having abandoned their occupations or professions for theological pursuits: amongst them are several very remarkable cases. I have likewise about 40 casts of distinguished artists, painters, sculptors, and architects, many of them of celebrity. Of navigators and travellers I have about 30 casts; of poets, authors, and other literary characters, upwards of 80 casts—amongst them many distinguished individuals, peasants, and others. Of musicians, composers, and amateurs of music and singing, there are upwards of 70 casts; of pugilists, about 25 casts, amongst them several who were called the champions of their time. A few years after beginning to form the collection, I discovered a change of form of the head to have

taken place in a young man who had for several years neglected his studies: upon his coming into society in the 24th year of his age, and finding he had not fitted himself to move among educated persons, he again attended college, and studied medicine successfully; and upon taking a second cast of his head two years afterwards, I found that a change of form had taken place, corresponding with his successful studies, and giving him increased power to pursue them, which he now does as a physician. Music, I understood, was originally selected for him as his profession. A new and important field being thus opened, I continued my inquiries, and traced out persons of whom I had taken casts several years before, and some of whom were known to have succeeded in their respective occupations, while others had not succeeded, and a third class had gone on without adopting any new occupation. The result is, that I now possess about 140 casts, illustrating more than 60 cases, and the greater number shewing changes of form of the head to have taken place, corresponding with the altered actions and successful studies of those individuals at various ages; many of the changes occurring after 30, 40, and even 60 years of age. In the remainder of this part of the collection (containing about 600), are upwards of 350 casts which I have taken of distinguished persons—noblemen, legislators, judges, barristers, lawyers, astronomers, engineers, actors, &c.

The collection is divided into two sections; each cast included in the preceding being marked with letter A and a number, the remainder with a number only.

The second part of the collection consists of casts of animals, pathological cases, masks of deceased persons, and national crania. I commenced with taking casts of the heads of criminals, it being considered they were almost a type of character in themselves; this was thought to be the case by many persons, even by some of the eminent phrenologists; and when about thirty casts had been got, I was advised not to go on collecting further, it being supposed an almost useless expenditure of time and labour. My answer at the time was, "If we do not continue collecting, shall we not be charged with selection to suit our purpose?" I therefore embraced every opportunity of getting them, both at home and abroad. About one-third are from foreign countries. Some are casts of state criminals, others of criminals of extraordinary character.

In accordance with a suggestion made to me by Drs Gall and Spurzheim, I have made a collection of pathological cases, such as idiots, imbeciles, cases of insanity, and of malforma-

tions; it now consists of about 120 casts. Drs Gall and Spurzheim having kindly undertaken, if any thing should occur within their connection, to inform me of it, I employed an agent in Paris, who took the casts whenever an opportunity occurred, and I now possess some extraordinary cases of monomania, mania, imbecility, idiotcy, hydrocephalus, &c. So valuable do I deem these casts, that I still consider the expense of procuring them to have been wisely incurred.

Another section of the collection consists of upwards of 120 masks, nearly all of distinguished persons, and many of them rare. These were collected from artists, and purchased at sales, and are useful principally with reference to the intellectual faculties; but as my object has been to make the collection, as far as could be done by casts, a sort of passable sketch of the natural history of man,—whenever an opportunity occurred I collected authenticated masks.

Another interesting section of the collection embraces about 500 skulls of different nations, of which about 150 are real skulls, the rest being moulds and casts of well authenticated specimens. To the late Baron Cuvier I am indebted for permission to take casts from all the authenticated skulls in the Museum of Comparative Anatomy of Paris.

In the further pursuit of my endeavour to illustrate the natural history of man by casts, I have made a large collection of busts of ancient philosophers and great men, taken from the marbles originally in the Louvre, Florentine, and Prussian Galleries, and private collections, and it is surprising to observe how phrenologically they bear out the biographical accounts of them. I have also a large collection of busts of eminent men and distinguished characters of our own country, with a few celebrated foreigners. These two collections of casts amount to about 300, most of them shewing that great attention has been paid by artists to the form of the head.

Upon reading the works of Drs Gall, Spurzheim, and Vimont, and perceiving their observations on comparative anatomy to be worthy the attention of the phrenologist, I have made a large collection of the skulls of animals and birds, with a view, if time permits, to make them a special study. Thinking that a single specimen of any species or variety was not sufficient, I have collected as many of each as I could procure, my intention being, if I can get time and room, to classify them. I have procured specimens of horse, mare, and gelding, of most of the varieties of this and foreign countries; also of horned cattle and sheep, particularly of this country. I possess specimens of nearly all the singing and other birds; also of our domestic birds and fowls; and a great number of

animals, birds, and fowls from Asia, Africa, and America, and some from the Arctic regions. Every opportunity of collecting has been embraced, in the confident expectation that, should I not get time to arrange the collection, it may fall into the hands of some person both able and willing to do so. This part of the collection amounts to near 3000 specimens.

Having read an address of Mr Carmichael, surgeon, of Dublin, to his pupils, on opening his course of lectures for the season 1830, wherein he states that it was his duty to teach them the old or present, but probably soon to become obsolete, mode of dissecting the brain; but that he should also endeavour to explain to them what he considered the more correct mode, adopted by Drs Gall and Spurzheim; also hearing that Dr Caldwell of America used nearly the same language to his pupils, and that many of our able anatomists spoke of their dissections of the brain in the same terms, I purchased at Joshua Brook's sale a set of ten coloured models and casts in sections, shewing elaborately the present mode of dissecting the brain. These I wished to go with my collection, so that they might not be lost to this country. I have likewise two models of dissections, shewing the fibrous structure of the brain, and kindly made by Dr Gall purposely for me; also a complete set of Reil's wax models of Gall's, Spurzheim's, and his own mode of dissecting the brain; making altogether, I hope, an interesting collection for phrenological purposes, as well as a highly useful one for elucidating the natural history of man.

Mr Deville concluded by saying, that whatever the collection might have cost him, he had the satisfaction of knowing that many distinguished individuals, both native and foreign, considered it, though the collection of an uneducated person, an extraordinary mass of evidence in support of the truth of Phrenology, and fully compensating for any deficiency of scholarship he might have displayed in attempting to disseminate a knowledge of a science which has already effected, and promises still to effect, so much for mankind.

Professor Gregory, of Aberdeen, made some observations on the importance of a published "Catalogue Raisonné" of Mr Deville's collection, and suggested that the Association should adopt measures to facilitate the publication of such a catalogue.

Mr Deville stated that, with the assistance of Dr Brown, a zealous London phrenologist, he was actually preparing a catalogue, which he trusted would be ready for publication next spring. In reference to a hope expressed by Mr Combe and other members present, that in no future circumstances

should so valuable a collection run the risk of being dispersed, Mr Deville mentioned that in his will he had strictly provided for its preservation in an entire state after his death. This announcement was received with general approbation.

Mr COMBE spoke with applause of the conduct of Cuvier, who had so liberally permitted Mr Deville to take casts from the skulls in the Museum of Comparative Anatomy at Paris. Such conduct, he remarked, was too rare in this country, and the example of Cuvier deserved to be held up to general imitation.

Saturday, 19th September.—The Association met at 11 o'clock, in the Portland Street Medical School.

Dr WILLIAM WEIR read a communication from Dr JOHN EPPS of London, being a *Case of insanity, with disease of several parts of the brain.* The patient was a married lady of middle age, without children, and of a mild and placid aspect. Her father having fallen sick, she expressed a strong desire to visit him, and was permitted to attend him for a month or more, at the end of which she was brought home by her husband contrary to her own inclination. She wished to continue her attendance on her father, who, however, had a most affectionate wife and daughter to attend upon him. She continually expressed a desire to return to his bedside; but her husband opposed it, on the ground that the attendance was already sufficient. The father at length died. She was much shocked by the news, and from that time, or soon afterwards, became silent, uttering nothing except, "Oh! that I had the wings of a dove! Oh! that I had the wings of a dove! I could have saved life! I could have saved life!" Every week fresh signs of cerebral disease appeared; she began to try to destroy herself; she would try to hide herself—would rush up the chimney. She was removed to a private asylum, and, about twelve or eighteen months after falling into this state, was brought by her husband to Dr Epps for advice. To all his questions she answered not a word. On examining her head, he found different parts of it affected with heat, and suggested a course of proceeding. After this he heard nothing of her for about a year, when he learned that she was on the point of death. A post-mortem examination of the brain was made by the family surgeon, to whom Dr Epps expressed his expectation that the organs of Firmness, Cautiousness, Secretiveness, Destructiveness, and Philoprogenitiveness, would be found diseased. On removing the skull, the *dura mater* was found on one side adhering very powerfully to the skull over the situation of the first four of these organs. On removing

the membranes, the organs of Cautiousness, Secretiveness, and Destructiveness, on one side—that where the adhesion existed—were found in a state of *ramollisement;* so was the organ of Philoprogenitiveness; all the other parts of the brain examined were of a firm and healthy texture. Morbidly active Philoprogenitiveness, says Dr Epps, seems to have been the first step in the progress of the insanity in this case, manifesting itself in the intense anxiety to go to her parent, and then by the conviction that, had she been permitted to go, she would have been able to save his life.

Dr Weir remarked, that Dr Epps had here ascribed to Philoprogenitiveness not only love for the young, which the generality of phrenologists consider to be its entire function, but also filial affection, or love from the young to their parents.

Mr Simpson said, that Dr Epps's idea received some countenance from the tone in which old people are sometimes spoken to by their families—the tone used towards children. The word "protectiveness" seemed to embody Dr Epps's view of the function of this organ.*

Mr Deville mentioned a case which had fallen under his observation, of derangement of the organ of Philoprogenitiveness in a woman who was separated from her children, and whose thoughts and words were entirely engrossed by her calamity. The temperature of the occiput was higher than that of the rest of the head—a fact to which his attention was attracted by the melting of the pomatum employed in taking a cast. It was only over the organ of Philoprogenitiveness that it lost its consistency.

In the absence of Dr Hunter, Mr Combe dissected two brains, which had been prepared for that purpose by Dr Weir. They were in admirable condition; and in exhibiting the cerebral structure, efficient aid was derived from a collection of wax models of the brain, kindly lent for the occasion by Dr Buchanan.

Monday, 21st September.—Mr Henry G. Atkinson read a communication from Mr Richard Cull of London, detailing a *Case of precocious musical talent in the history of "the Infant Sappho," Louisa Vinning.* She was born at Kingsbridge in Devonshire, on 10th November 1836; consequently she is now (September) three years and ten months old. Her father, John Vinning, is a good musician; he sings, and plays on the violin

* "Sympathy for helpless objects" is the definition given by Dr Epps himself in a passage quoted in our 8th vol. p. 394, from his Life of Dr Walker. The discussion of this subject, it will be observed, was resumed on Wednesday the 23d of September.—Editor.

and pianoforte. His musical talent was precociously manifested, in consequence of which he was educated for a musician. He has two brothers of considerable musical talent; in fact, they have left their business to make music their study and profession; one is a violinist, the other an organist. His father possesses natural musical talent, which he manifested by playing the flute in the band of a volunteer regiment during several years. He knows nothing of the technical language of music—he played *entirely by ear*, and he blew very accurately both in tune and time.

Louisa Vinning enjoyed music at a very early age. "She was only nine months old," writes her father, "when I first observed the intense delight she derived from music: when crying, the sounds of a musical instrument immediately soothed her; her whole frame moving in unison with the measure, and her face beaming with enjoyment. I was delighted with this very early and extraordinary development of talent, and played to her occasionally upon the violin; the great pleasure she apparently derived from it being a sufficient inducement to repeat it. I took the opinion of several medical men upon the propriety of indulging her in this kind of amusement, lest my ambition of seeing her one day a good adult musician should be frustrated by too early excitement; their advice was, to give her gentle exercise in singing, and to guard against late hours." A philosophical medical friend, who is an excellent phrenologist, and in whose judgment Mr Cull has great confidence, informed him that, considering her large well-formed chest and general proportions, he sees no reason to believe that her present exertions will injure her health.

She sang before she could speak. Her passion for music increased, until she seemed to require an atmosphere of music to exist in. In the early part of last year (1839), she was discovered to have walked in her sleep, and on one occasion Mrs Vinning found her sitting fast asleep on the top stair of the staircase. To prevent an accident from her sleep-walking, she was now put to sleep on a sofa in the sitting room, until the family retired to rest. And while asleep on the sofa in the evenings she often alarmed her mother by singing. "In the early part of an evening in June 1839," writes Mr Vinning to a friend, (the child being then two years and eight months old,) "I was called by my wife, who was in tears, listening to the child singing in her sleep. This she had frequently done before, but never so sweetly and distinctly; I was surprised at the beauty of the melody, *which was perfectly new to me;* and her repeating it several times, gave me an opportunity of writing it." The melody was placed in the hands of

Mr Blockley the composer, who arranged and wrote for it the poetry, symphonies, and accompaniments, and appropriately named it the Infant's Dream. On the morning after the child sang this melody in her sleep, she said to her mother, " Oh, mother! I have seen such beautiful angels in my sleep, all gold —beautiful gold."

Mr Thalberg, in a letter dated 11th December 1839, speaks of her astonishingly correct singing, and her pleasing voice. Sir George Smart, in a letter dated 3d April 1840, says, " I beg leave to state that I consider her a most wonderful child, possessing strong feeling for music, with an extraordinary correct ear both for time and tune; her singing is perfectly natural, without effort, and her infantine manners and childish appearance distinctly prove her extreme youth." Mr Moscheles took the opportunity of testing her musical powers when she spent a day with his children. He says, in a letter dated 29th March 1840, " She appears to me not only to be most liberally gifted with a voice of unusual compass, but also with a sensitiveness of organization, whether as concerns the power of correctly retaining melodies, or of reproducing intervals, remarkable; and being only three years and a half old." She was introduced at several parties in London during the season as a musical prodigy. She sang before the Queen and Court at Buckingham Palace on the 3d August 1840, and received substantial proofs of the Queen's delight at her talent. She is now singing three nights a-week in the Lecture Theatre of the Polytechnic Institution. Mr Cull has heard her in public and private many times, and has carefully observed her musical manifestations, in conjunction with his friend Mr Atkinson.

She sings the musical sounds of the melodies, but without the words; the syllabic sounds she adopts are as soft and ductile as Italian, which they much resemble. She sings any Italian air after hearing it only three or four times. She well remembers any music which she has heard; and if it be good, she wishes it to be played to her a few times, so that she may be able to sing it. Her style of singing Italian music is very remarkable for similarity to our first-rate opera singers; in short, she struck Mr Cull as a model of an opera prima-donna. The style of her singing is appropriately supported by the adoption of the natural language of gesture, to express the sentiment of the air which she sings. In her graceful, though infantine, action, she is often very expressive; but like most public singers, there is commonly a redundancy of action, and that, too, of an exaggerated nature. Piano passages of music she holds playfully in readiness for a strong contrast of forte ones, to which she beats time with great energy. Her

management of loudness is less skilful than that of pitch, which is commonly the case with vocalists, until they have had great experience. She seems to delight in strong contrasts both in pitch and loudness, which she produces without effort; and although there is much taste displayed, yet an infantine artless manner is one of the charms of her singing. She can pass instantly from one key to another without the usual preparation (which, although unmusical, was adopted as a test of her capability); thus she will pass from C (which is the natural key) to A (which requires three sharps to restore the semitones to their true localities in the gamut) with such precision as to astonish musical men. She will in like manner modulate from a major to a minor key, in which, as is well known, the localities of the semitones differ. Her power of singing passages which you may strike at will on the piano, must be witnessed to be fully appreciated. Some of her turns are very elegantly sung, as are also some of her cadenzas and roulades. She feels the necessity of completing an air by reposing on the key-note, which she accomplishes like an educated musician. She sings while accompaniments are played on the pianoforte and violin; and is not thrown out when she takes part in a harmony by the different melodies of the under parts.—Thus in music,

1*st*, She has an ear to perceive both melody and harmony.

2*d*, She has power of execution to sing a melody as a solo; and also to sing a part in a harmony. Her public singing at the Polytechnic Institution commonly comprises the following:—1. An Italian air. 2. The Infant's Dream. 3. The proof of her power to sing passages struck on the piano on the instant, which frequently terminates in some Italian air. 4. Her power of changing the style and key of music without the usual preparation, in which she passes at once from some Italian air to an English, thence to a Scotch, and thence to end in an Irish air. 5. An Italian air. 6. Finale; part of a harmony in the national anthem God save the Queen. This programme amply indicates her extraordinary capacity to perceive, remember, and execute music.

3*d*, She has a good memory for music, which is *ready at will* to furnish its stores.

4*th*, She has great taste in her singing.

All her talent is natural, for hitherto she has received no technical instruction in music.

Her inventive power, or composition, upon which much stress has been laid by those who are unacquainted with music, has not yet been manifested in a manner to satisfy Mr Cull's mind as *invention* of music. She sang an air in her sleep,

which was *new to her father*, and which may possibly be a new air. But it was sung in the unconsciousness of sleep, and she has as yet *originated* no new music while awake, although she has made some pretty combinations, and has also thrown in some beautiful cadences and turns. Her great merit is for what she does *at will*, *when conscious*, and *when asked;* and not for what she does when in the unconsciousness of sleep. The public itself goes to witness her *voluntary* performance of music, and not her *involuntary* invention of musical ideas.

Her voice is two octaves in compass, the lower of which is of very sweet quality. She sang at the Hanover-Square Rooms, where she was perfectly audible, so that she has great power of voice, which is very flexible throughout its compass. She can introduce occasional sharps and flats with great precision and elegance. She can hold a long drawn note with great equality of tone, and touch each of a series of short notes with great distinctness and purity. A few days since, Mr Cull had a capital proof of the accuracy of her ear. In playing the accompaniment to her singing an Italian air, a false chord was accidentally struck; on which she immediately ceased. On his asking why she suddenly stopped, she replied in a whisper, while pointing to the pianoforte player, "He is wrong." Afterwards false notes were purposely played; when she invariably ceased, and evinced some anger.

She is an engaging child, and from her elegant movements is much admired. She has also a great talent for dancing. She is very energetic; her general activity is great; her feelings are powerful and very excitable; her questions are pertinent; she is self-willed, destructive, very ready to talk, and very arch in her fun. When a death one day was talked of, she quietly said,

> "If I should die,
> Father would cry."

Then archly looking up in his face said, "aha! that's rhyme."

Her head is large, as the following measurements will evidence.

Tape Measurements.

	Inches.
Greatest circumference horizontally from Individuality to Inhabitiveness, ...	19¼
Individuality over top of head to the occipital process,	11⅝
Meatus externus over top of head to the opposite meatus,	11¾

Calliper Measurements.

Individuality to Philoprogenitiveness, . . .	6½
..... Inhabitiveness, ...	6⅝
Comparison to Inhabitiveness, ...	6¼

	Inches.
Meatus externus to Philoprogenitiveness,	4⅜
..... Individuality,	3⅝
..... Benevolence,	4¼
..... Veneration,	4¼
..... Firmness,	4⅛
Destructiveness to Destructiveness,	5¼
Secretiveness to Secretiveness,	5¼
Cautiousness to Cautiousness,	5⅛
Ideality to Ideality,	4
Constructiveness to Constructiveness,	3¾
Melody to Melody,	3¾
Mastoid process to mastoid process,	4⅜

The temperament-signs are dark complexion, dark brown eyes, brown hair, slender form, restless movement of body and eyes, and rapidity of action, which together denote great cerebral activity. Thus her temperament may be considered to be bilio-nervous.

The basilar region is large, but the coronal predominates. The lateral is large; as Destructiveness and Secretiveness. The anterior is also large. The profile of the head much resembles the profile portrait of Clara Fisher, at p. 281 of the Phrenological Transactions. In so large a head, with an even development, there are no small organs. The following table will exhibit their relative size.

	Predominating large.	Large.
PROPENSITIES. Amativeness is undeveloped, and its smallness presents quite a contrast.	Destructiveness. Secretiveness.	Philoprogenitiveness. Adhesiveness. Inhabitiveness. Constructiveness. Combativeness. Acquisitiveness.
SENTIMENTS.	Benevolence. Firmness. Love of Approbation. Imitation.	Self-Esteem. Caution. Ideality. Wit. Conscientiousness. Hope. Veneration. Marvellousness.
PERCEPTIVE FACULTIES.	Melody. Individuality. Time. Eventuality. Language. Form.	Size. Weight. Colour. Locality. Order. Number.
REFLECTIVE FACULTIES.	Comparison.	Causality.

The organ of Melody is very large, and it is of the form described by Gall as the swelled or rounded temple form of organ. It will be found, however, that what Gall has described as the form of the *organ* should be described as the form of the *forehead*, as Mr Cull has shewn in his papers on the organ of music in the Phrenological Journal, New Series.

1. QUANTITY of Brain. The large size of the head indicates a brain capable of powerful mental manifestation. 2. QUALITY of Brain. The temperament indicates susceptibility and intensity of cerebral activity. Thus the large size and high activity of the Infant Sappho's brain will account for her energetic and restless mind.

The head is interesting in a general way, as illustrating the connection between the brain and mental manifestation, as laid down by phrenological writers. But as yet, no one would be able, from examining the head, to pronounce that she has the power to manifest musical talent precociously and spontaneously. We know of no signs which positively indicate such a power; mere largeness of organ will not indicate it, nor will largeness, combined with great general activity, indicate it with certainty. There is much yet to be learned concerning the precocious spontaneous manifestation of individual talents. We are ignorant, 1. of their external signs; 2. of the causes which produce these precocious talents; and, 3. of those causes which maintain them.

Louisa Vinning's head is interesting musically as an example of the energetic manifestation of musical talent; also as supporting Mr Cull's views of the special function of the organ named Melody; and likewise as it so nearly corresponds in its present powers with the infantine powers of Mozart, Crotch, and Kellner, as quoted in the Phrenological Journal, New Series.

The case is interesting, as pointing towards a circumstance in the production of musical talent. Mozart, Crotch, Kellner, and Louisa Vinning, are each the offspring of musical fathers, and the two latter of musical paternal grandfathers. Other circumstances also operate as causes; for the children of all musicians are not musical, and of those that are, but few are spontaneously precocious musicians.

In conclusion, Mr Cull expressed the hope that, by the patient collection of facts, we shall be able to indicate the special laws under which such talents are produced, and thus obtain a glimpse of those obscure but most important laws, the laws of propagation.

After the reading of Mr Cull's communication, some remarks were made by Mr ATKINSON, Dr GREGORY, Mr DE-

VILLE, Mr SIMPSON, and Mr COMBE; and several other cases of precocious musical talent were alluded to by the different speakers. Dr GREGORY feared that this child was subjected to over-activity of brain, which, it was well known, was apt to produce disease, and lead to premature death; and Mr DEVILLE stated that he had intimated to the parents of "the Infant Lyra," another musical child, that the exertion of brain to which she was subjected in consequence of her public exhibitions, would infallibly bring on premature decay; and that, as her parents did not see the force of his advice, which was agreeable to the phrenological doctrines, the child, from the continued and severe exercise of her brain, fell into disease, and died at an early age.

Mr SIMPSON read a *Phrenological explanation of the result of a change of treatment of youth from animal and violent, to moral and benevolent*, with illustrative cases. In this paper he shewed how much Phrenology had aided in introducing and systematizing a sound and comprehensive moral and intellectual education. The faculties active in one individual, he observed, rouse the same faculties, by sympathy, in another; and hence the vital importance that the trainer of youth should manifest only those faculties which it is desirable to strengthen in his pupil, and repress those which are never called forth in abuse but to injure or annoy. The pupil, therefore, should never see the teacher, nor the child the parent, angry, loud, or violent; never insolent and tyrannical; in phrenological language, manifesting Self-Esteem, Combativeness, and Destructiveness; but, on the contrary, should witness only justice, kindness, and temperate firmness. Benevolence, which is moral power, ought to be the great engine of education. It is power with man and beast. The Arab never strikes his horse—yet the beautiful Arabian, which lives, eats, and sleeps with his master, is the best educated horse in the world. The treatment of children has hitherto been too much the reverse of all this. He drew a picture of the flogging and fagging system, and the cowardly frauds which it engendered in school, and the coarse and brutal, and especially puerile, character it produced in society; witness the police reports of the feats of our *adult* school-boys. Some boys either passively or actively resist the violent system, and are pronounced unmanageable. The boy, we may suppose, has been sent from a strict school, as the severe were called, to one still more strict; and he is duly returned from each, with an apology that he defied all authority, and, having arrived at the point of beating and kicking his master, was beyond his management. This un-

manageable boy, we shall suppose, is seen by a phrenologist, who discovers an excellent moral and intellectual, in connection with a large animal organization; and, knowing that, while the animal alone has been exercised, the others, especially the moral, have been left in abeyance, he at once declares that the unfortunate boy is a *mismanaged*, not an unmanageable, subject. He proposes a complete change of treatment. He addresses himself to the higher sentiments and intellect, no longer excites the low and violent feelings, and soon produces a complete change of conduct. This is not a mere theory, for many examples might be produced of its practical value. Mr S. mentioned a gentleman of the most active generosity and beneficence, who at school was mistaken, by those who could not read the better faculties he possessed, for an incarnation of the evil one. He was beaten at school, but always beat again, and was repeatedly sent home as a hopelessly unmanageable boy. Subjected to the old system of "*taming*," he was found as untameable as the hyæna. Left to himself, his higher feelings began to work spontaneously from their own internal energy; and now they take the lead so perfectly, that the animal faculties, which formerly baffled his teachers, merely supply energy in the prosecution of his philanthropic views. He is himself a well-informed phrenologist, and knows the process of his own transformation. Mr Simpson concluded by detailing some additional cases illustrative of these views.

Mr Deville read an *Account of a number of cases in which a change had been produced on the form of the head by education and moral training;* in illustration of which he exhibited the principal casts referred to in his paper. He set out by explaining that, although his facts were of a very striking kind, he did not wish to be understood as affirming that dispositions could in all cases be remodelled, or new talents conferred. The brain and its parts have their limits of power; and endeavours to make them work beyond their strength must weaken the functions, and may even, if pushed too far, lead to imbecility and structural derangement. By judicious management, however, beneficial changes can seldom fail to be produced. In educating children, parents and teachers often err in assuming their own minds as a type of that of the species; so that, in the end, much toil is often found to have been thrown away. Phrenology is useful here, and also in enabling parents to see the propriety of not overworking the cerebral organs of their children. In the head of a young gentleman eight years old, brought to Mr Deville 15 years ago for examination, he found a fine coronal region, with large Ideality, Constructiveness,

Comparison, Causality, and Eventuality, fine perceptive organs, and an extraordinarily large organ of Language; and the inference was, that with a little study he would be a fine linguist, and that he might cultivate with success the highest branches of literature. Mr D. recommended repose from study for two, three, or four years, as otherwise mental weakness might be the result. The advice was neglected, and the youth is now little better than an idiot. Another case is that of G—— N——, a mentally calculating boy, who, at the age of six years, was engaged, through the introduction of a friend of Mr Deville's, by the late Mr P—— of Liverpool, to perform a series of calculations. Mr D. suggested the propriety of not overworking the boy's organ of Number, but the hint was not taken. The consequence was, that although the boy, when he went to Liverpool, could give the square or cube of two, three, or more numbers, in a few minutes, and perform other kinds of complicated calculation,—at present, as Mr D. was informed by himself a few weeks ago, he cannot give the square or cube of numbers, and has not sufficient arithmetical ability even to fit him for the place of a first-rate counting-house clerk. In his head the organ of Number is now evidently smaller than in casts taken at four and six years of age. Innumerable instances of a like nature have fallen under Mr Deville's observation. After detailing that of an idiot endowed with a talent for drawing, he proceeded to illustrate, by the following cases, the position that change of cerebral development frequently follows change of training and pursuits.

1. Casts of the head of Mary Street were taken at twelve and fifteen years of age. From eight to twelve she displayed alternately two phases of character. Her memory was very extraordinary with regard to the Scriptures and history. When only six years old, she followed popular preachers about the eastern parts of London, whose sermons she would afterwards repeat to the neighbours, and criticize; quoting Scripture, and illustrating her views in a most singular way. Thus she would go on, conducting herself morally, for six or eight months at a time; but then she would turn round, and for two or three weeks would pilfer, destroy, lie, and perpetrate all kinds of mischief; after which the activity of the propensities ceased. She was brought to Mr Deville, who predicated from her head the opposite qualities in her disposition, which would render her, though generally under the influence of the moral sentiments, liable to display extraordinary freaks of the propensities, some of which he described. He counselled her parents to divert her attention in a kind manner from subjects

calculated to over-excite the sentiments; and to keep out of view whatever tended to gratify the propensities. This course was followed: after the first cast was taken, she exhibited but one slight freak of the propensities; and at the time of taking the second, her whole conduct was highly moral. A comparison of the casts shews a great increase of the organs of the moral sentiments in the second. This improvement of the brain rendered abstinence from vice more easy than before; and the case teaches us, that the moral and intellectual organs are, like the limbs, fatigued and weakened by too much exertion.

2. Casts of the head of a young man were taken at 17¼ and 19 years of age. From the commencement of his education, about the age of 7, till 11½ years old, he went on tolerably well; he then became sullen, indolent, discontented, selfish, and unsocial. He would take no trouble to relieve distress or avoid giving pain; but was not inclined to go out of his way to inflict it. Having left home in order to get his own living, he met with no success; upon which, following Mr Deville's advice, he began to study intensely, and a great amelioration of his conduct ensued. To acquire knowledge, it appeared necessary for him only to read; and so completely altered was his behaviour, that he became highly loved and respected. He wrote some poetry in a correspondence with a young friend —much of it relating to his former behaviour. A comparison of the casts shews that, in the animal region of the brain, little or no alteration had taken place; whereas in the coronal and intellectual regions the increase, measured from the ear, is from ⅛ to ⅜ of an inch.

3. The next case is that of Mr George Bidder, who, in early life, was the celebrated Devonshire calculating boy, and is now the engineer to the Blackwall railway and other great public works. Casts of his head were taken at the ages of 8, 13, 16, 19, 22½, and 28. In the first, the forehead is nearly upright, but in the second, and still more in the third, its upper part has receded; the knowing organs, however, have expanded in width. Now, during the interval from 8 to 16 years of age, no education was given him;—his father taking him about, exhibiting his wonderful calculating power, and in general putting up at public-houses, where little culture of the reflecting faculties was to be obtained. At length he arrived in Edinburgh, was patronized and placed at school, and from that time mixed in good society for about 3½ years, when he removed to London, and the fourth cast, shewing a growth of the upper part of the forehead, was taken by Mr Deville. After this he was frequently thrown into high moral and intellectual society, with and by whom he was employed; and

at the end of 2½ years so spent, the fifth cast was taken, from which we find that a general expansion had been going on. For about 8½ years more he continued in and near London, employed in similar society; and now there is manifest in the coronal region an increase of nearly half an inch, as measured from the ear; while the region of the knowing and reflecting faculties also has increased nearly half an inch.

4. Mr Dennison brought his son to Mr Deville to get a phrenological opinion of him, and begged that it might be expressed freely, without fear of giving offence. The youth was nineteen years old, and a student of Trinity College, Cambridge. The inference from his head (a cast of which Mr D. took at the time) was—that he possessed the basis of a useful mind, but was too positive and self-willed to go by the rules laid down for the acquirement of knowledge, would not methodize details, and consequently would have less knowledge at nineteen than he ought to have possessed at twelve or fourteen. This accorded minutely with the account which had previously been given to his father by his Cambridge tutor; and the youth was led to apply so energetically to his studies, that within the next twelve months he gained a wranglership. A second cast, taken 2½ years after the first, shews a diminution of fully half an inch at Self-Esteem and Firmness, and a large increase of all the intellectual and moral organs. Mr Dennison was so struck with Mr Deville's observations at the time of the consultation, that he gave him liberty to make whatever use he pleased of his name and of the circumstances of the case; as he considered that phrenology must be of great use in the training of the young. He sent to London casts of several of his family, and also of a relation, for the purpose of obtaining advice as to their education and moral direction. The young gentleman, when transmitting the second cast to Mr Deville, wrote him a kind letter, stating that he had profited much by his advice, and requesting more. He is now studying for the bar. On the first occasion, his temperament appeared to be lymphatic principally, with a little of the sanguine and nervous; now, Mr Deville considers it to be bilious 55, nervous 30, sanguine 15.

4. A gentleman had his cast taken, purposely during Mr Deville's absence from London, and left it for examination, with the announcement that he moved in the higher circles, and was well educated. Combativeness, Destructiveness, and the basilar region generally, were large; Self-Esteem, Love of Approbation, and Firmness, very large. The whole of the posterior region was full; and the coronal region, though in some parts full and in others large, was, in Mr Deville's opinion, not

sufficiently balanced to regulate duly the lower feelings. Alternation of good with inferior conduct was hence deduced, and the inference proved to be correct. It was inferred that he would be too positive and self-willed to move smoothly in the walk of life which his circumstances and education entitled him to frequent, as nobody in good society would submit to his dogmatism and unqualified expression of opinion; that, owing to the activity of the posterior region of the brain, he would like society where he could command personal attention, and be the leader of the company, and would be addicted to female society of a similar character; that he would find it difficult to deliver an oration to persons of his own class, for although he would not be at a loss for words or ideas, he could not readily connect and arrange them; and that his brain must undergo a considerable alteration before he could do this, or be able to move in good society with comfort to himself. The gentleman acknowledged that the whole of these inferences were but too true; adding, that his health had suffered in consequence, and he was going abroad for a few years to break off his low connexions, and improve his mind and manners. After spending four years in Germany, during which he entered into highly moral society, and successfully studied works on moral philosophy, he no longer felt a difficulty in addressing his own class, and repudiated that with which he had formerly associated. He is no longer the positive, self-willed being, but anxious to hear, and to give reasons for his opinions; feeling no wish to be considered—nay, loathing the idea of being considered—the leader of such society, male or female, as he formerly delighted in. A second cast, taken after his return to London, shews an alteration corresponding with the change of his character. At Self-Esteem, Firmness, and the basilar region, there is a diminution, in some parts of fully half an inch; while the intellectual region is found to have increased.

5. Casts of the head of a medical gentleman were taken at the ages of 29 and 35. Shortly before the former period, he had attempted to settle in a large provincial town, where he soon became a political partisan, and, being a fluent writer, wrote so strongly against his opponents, that an action was brought against him for libel, and abandoned only on condition of his leaving the neighbourhood. He then came to London, stated to Mr Deville the difficulties he was in, and solicited some advice. On his head being examined, Self-Esteem, Firmness, Love of Approbation, and Combativeness, were found all large or very large; Cautiousness moderate, and the reflecting faculties and Ideality only full; with indications of a command of words and the power of arranging them. That the inordi-

nate strength of the four faculties first enumerated might be lessened and counteracted, he was advised to remove from the metropolis and reside for a year or two with some respectable family, studying philosophy and ethics, cultivating his reflecting faculties, and getting his Self-Esteem and Firmness diminished before he again attempted practice. He did so; and has now a very fine practice in one of our largest county towns, where he is highly respected by his neighbours. In the second cast, Self-Esteem and Firmness have subsided nearly half an inch, while, at the reflective organs, the head is nearly half an inch larger; the intellectual region generally has increased; and there is an enlargement also of Ideality and the whole coronal region.

6. In 1815, Dr Spurzheim took a cast of the head of the late Mr Oldham, formerly mechanist to the Bank of Ireland, and latterly, until his death, to the Bank of England. Mr Oldham was in 1815 about 45 years of age. On comparing the cast with another taken after death in 1840, an increase is seen in the whole of the intellectual region, agreeing with the increase of talent manifested by him in many ways during the interval, as is well known to engineers and scientific men.

Finally, in five cases where two casts of each have been taken at different ages (viz. 26 and 32, 26 and 30, 36 and 40, 36 and 45, and 45 and 50), and where the individuals have engaged in no new studies, nor been subjected to the influence of altered circumstances, no change of form or size is observable. In one instance, where casts of the head of a young gentleman were taken at 12 and 14 years of age, it was found to have increased a little in size, but to be unaltered in shape. His mother reported, that during the two intervening years he had gone on as before, making progress in no one attainment more than another, and preserving his dispositions and morals as they had been for several years before.

Professor Gregory observed, that the existence of cases of change in the form of the head is *a priori* probable, on the physiological principle that exercise has a tendency to enlarge an organ; and that now we begin to possess actual evidence that changes *do* take place. At the same time, he thought that certain difficulties, or sources of error, should not be overlooked in our investigations of this point. The thickness of the integuments, for example, may change, while the form of the brain continues unaltered; though certainly there seems to have been an actual cerebral alteration in the cases adduced by Mr Deville. There is both action and reaction where a faculty is greatly exercised. The exercise strengthens the organ, which in its turn enables the faculty to act with still greater vigour and activity than at first.

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Mr Deville said, that in some of his cases where the head had grown, the integuments had diminished instead of increasing in thickness.

Sir Francis A. Mackenzie mentioned the case of one of his own children, whose head and character had undergone a great improvement; and added a warm acknowledgment of his obligations to Phrenology and Mr Deville.

Mr Richard Beamish, after making a similar acknowledgment, stated, that in his own head a change of form had been effected by a change from frivolous and irrational to intellectual and moral pursuits. A cast was taken by Mr Deville in 1823, the time when the change of pursuits occurred; and a second was taken several years ago. On comparing them, an obvious change for the better was found to have taken place, both in the moral and intellectual organs, in correspondence with mental improvement. The head presented the appearance of having been forced forward and upward,—increasing the measurement from the ear in those directions from $\frac{1}{8}$th to $\frac{1}{8}$th and $\frac{1}{16}$th of an inch, while that to the back was diminished in an equal proportion; and giving an increase of about $\frac{1}{4}$th of an inch in breadth and height.

In answer to a question from a member present, whether change of form of the head does not take place independently of moral treatment, Mr Combe said, that in early life the brain grows and spontaneously changes its shape, in which case alteration of dispositions or talents will be a result and not a cause. He thought it important to add, that there does not seem to be in every case a possibility of effecting enlargement of an organ by exercise of its function. A certain degree of size must be possessed to render it capable of increase. A lady whom he knew practised music for years, in the hope of improving her musical talent, but at last gave up the attempt in despair. He himself had, during his whole life, exercised as well as he could a deficient organ of Number; but even now he was unable to master the multiplication table. Perhaps some brains have a natural capability of being enlarged by exercise; and it may be, that, where this capability is absent, no training will increase the size of a small organ, or materially strengthen its functions.

Professor Gregory remarked on the practical importance of the subject under discussion. Changes of character do occur, and no man's mind is stationary. Whether exercise enlarges or only invigorates the organs, it is the duty of all to exercise those faculties which ought to be strengthened, and to avoid occasions for the activity of those which are already too strong.

Tuesday, 22d September.—This morning between forty and fifty members of the Association breakfasted together in the low room of the Trades' Hall; when Mr T. H. BASTARD of London suggested the formation of a central Society in that city, for the more effectual diffusion of Phrenology, and which should nowise interfere with or supersede any existing societies. Its proposed objects seemed to be, to collect the Phrenologists of the United Kingdom into one general body—to establish in London a central point of communication by means of an office and a secretary—to form a collection of skulls, casts of heads, Phrenological plates and books, &c., to which the members of the Society, and friends introduced by them, might have access—to supply at low prices, casts, plates, and books—and generally to promote the advancement and diffusion of Phrenology and its useful applications. It is proposed that, among the duties of the secretary shall be that of explaining the Society's collection to visiters, and giving them information concerning Phrenological publications, societies, and collections.

Various members of the Association delivered their opinions on this proposal; some thinking the Society not likely to succeed, while others favoured the opposite view. Looking forward to a large number of members in different parts of the kingdom, Mr Bastard proposed that the annual subscription should be only five shillings; and a paper having been circulated among those present, to the effect that "We, the undersigned, being of opinion that the formation of a Central Society in London, for the purpose of promoting the science of Phrenology, is desirable, are willing to support such a society by annual subscriptions of five shillings," about fifty signatures were obtained. The Society, it is proposed, shall consist of ladies as well as gentlemen.

At the afternoon meeting, a cast was exhibited from the *Head of Philip Davis, a blind man*, shewing a large development of the organ of Locality. A short account of him, by Dr JOSEPH MOORE of London, who had forwarded the cast, was read. His blindness resulted from purulent ophthalmia when he was about four years old. At a proper time, he was sent to the asylum at Bristol, where he learned basket-making, and he returned to his native town (Plymouth) to work at his trade. One of his fellow-labourers in the dock-yard was accustomed in rotation to read to the others; and the books employed appear to have been well selected,—history, travels, &c. being the subjects. Travels and geographical descriptions always delighted him. He also used to make excursions alone in and about the town and neighbourhood, and, in Dr

Moore's opinion, knows the various streets, courts, and alleys of Plymouth better than any inhabitant, and can not only direct, but shew their locality. He proceeded on one occasion to Exeter, a distance of forty-two miles, by the public road, and returned through the forest of Dartmoor, in order, as he expressed it, that "he might see both ways." His custom in London is, to inquire how many turnings to the right and left there are to such a place, and his tact and accuracy are most surprising.

Mr Combe, after pointing out the great size of the organ of Locality in this case, remarked farther, that the organ of Colouring was small, as it is usually found to be in blind persons.

Mr Deville, who knew Davis well, related some striking illustrations of the strength of his faculty of Locality, similar to those mentioned in Dr Moore's communication.

A cast of the *Head of Edward Oxford*, lately tried for firing at the Queen, taken on the morning before his trial, had also been sent to the Association by Dr Moore, and was exhibited to the meeting. Oxford, says Dr M., is eighteen years of age, of low stature and modest address. His countenance would be pleasing, but for the silliness which a continual grin imparts to it. He exhibits little cunning, and no degree of ferociousness. He is feelingly alive to the statements regarding himself in the newspapers, and to the portrait prints of himself. He was delighted at the proposition to take his cast, and assented to it most readily. Inordinate vanity is betrayed in every action, and the love of notoriety seems to have been a powerful motive in impelling him to the commission of his execrable act. His mortification was most marked on an observation being made, that to commit murder, even on the person of a sovereign, no longer constituted a hero. His education has been very limited; he is fond of reading works which contain the marvellous; and he alleges he has read with care and much pleasure Thiers's History of the French Revolution.

Mr Combe remarked that the head was rather below the average size, that the intellectual organs were pretty fully developed, and that the organs of Self-Esteem and Love of Approbation were very large. The natural language of these faculties was evident in the expression of the countenance. The case, however, was one of diseased excitement of the feelings. The jury returned a verdict of insanity, and a very just and proper verdict it was. The act itself, taken in all its circumstances, was a proof of diseased brain. Twenty years

ago, however, this poor youth would have been found guilty of murder, and executed, as many individuals labouring under *moral* insanity have been. A better day had dawned, and insanity was now beginning to be better understood, not only by the medical profession, but by lawyers and legislators. Phrenologists are undoubtedly entitled to the merit of contributing to bring about this most desirable result.

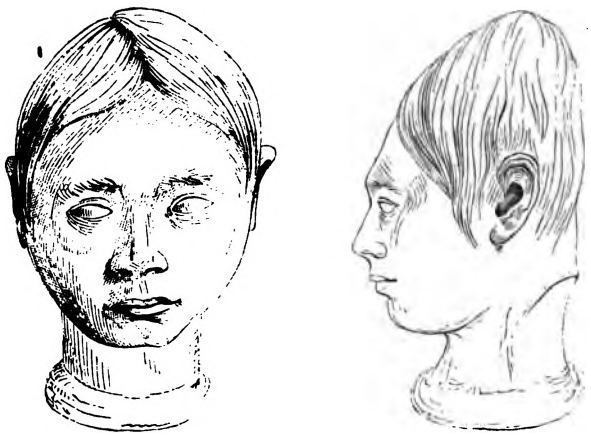
Mr Deville mentioned a case in which Phrenology had been of service to an English jury in a trial of lunacy.

Mr Combe related a case which had excited great interest in Philadelphia last winter. Eighteen years previously, a confectioner, named Wood, had come from England, had carried on his trade first in New York and then in Philadelphia, had realized money, and acquired a respectable character. He had an only daughter, whom he was desirous of advancing into a higher station by marriage. But he himself was not in genteel society, yet he restrained her from mingling with persons of her own condition, and she, therefore, had no freedom in any circle. She assisted in keeping his shop, one of the first in his line, in Philadelphia; and there a young man, named Peck, of inferior habits and station, made love to her, and induced her to leave her father's house and marry him. She was absent only one night, when she returned home, and confessed that she was married. Her father became violently excited with rage; he drank a large quantity of rum; and, under the joint influence of disappointed ambition, rage, and intoxication, he blew out his daughter's brains with a pistol in his own house. He did not attempt to escape. When he became sober and tranquil, he had no knowledge of what he had done. The case went to trial for murder. His counsel pleaded insanity, and proved previous aberrations from the normal state in some of his mental manifestations; but chiefly relied on the shock given to his feelings by his daughter's conduct having produced a real insanity preceding the homicide. The jury gave effect to the plea, and returned a verdict of Insanity. Mr Combe heard the verdict discussed, and observed that those who understood Phrenology generally approved of it; he considered it probable that a knowledge of the liability of the brain to take on diseased action in such circumstances, might have influenced the jury in their deliberations. The case occurred after his lectures, in which the subject had been discussed before large numbers of the inhabitants of Philadelphia.

Mr Simpson referred to the case of John Howison, a lunatic who was executed at Edinburgh in January 1832 for the murder of an old woman at Cramond, and who, before his execu-

tion, groundlessly accused himself of eight other murders. The discussion which arose upon this case at the time, had led to beneficial results; for in every similar case since tried in Edinburgh, the plea of insanity had been successfully urged.

Mr Combe exhibited a cast of the *Head of Thomas Adams, a flat-headed Indian*, of about twenty years of age, of the Cloughewallah tribe, located at the falls of the Wahlamette River (the Multuomah of the maps), about twenty-five miles from its junction with the Columbia River. He mentioned that, in May 1839, he had been introduced in New York to the Rev. Jason Lee, who had been a missionary among these Indians 2000 miles beyond the Rocky Mountains, and who had with him the young man in question. It is the custom of the Cloughewallahs to compress the heads of their children by means of boards and hair-cushions, applied on the forehead and occiput; and so effectual had the pressure been in the case of Thomas Adams, that the lateral diameter of his head was actually greater than the longitudinal. On examining the head, Mr Combe found the occipital spine to be as high as the top of the ear. The head appeared as if it had been



tilted up behind in such a manner that the forehead, although deficient in the reflecting organs, was made to stand much nearer the perpendicular than otherwise it would have done. So far as could be judged in a case of such distortion, the organs of Destructiveness, Acquisitiveness, Secretiveness, Self-Esteem, Love of Approbation, and Firmness, were very large; those of Combativeness, Philoprogenitiveness, and Adhesiveness, deficient. It was difficult to estimate the size of the mo-

ral organs, they were so displaced. The perceptive organs were fully developed. In the upper part of the forehead the brain was shallow, but on the left side the organ of Causality was pretty distinctly marked. Form and Language were large. The young man spoke English well, and had practised speaking it for two years. He was intelligent in his conversation, and said that he liked the Indian and American modes of life equally well. His face was exceedingly broad, full, and lymphatic; the predominant expression was that of Love of Approbation. There were no traces of thought in his smooth fat cheeks, but his eye was dark and mild, and when he smiled the effect was pleasing. Mr Combe endeavoured to direct the conversation so as to ascertain, if possible, the extent of his intellectual powers. On all subjects that fell within the scope of the observing faculties (the organs of which were fairly developed), he was intelligent, ready, and fluent; but on others which required the aid of Comparison and Causality, he was dull, unintelligent, and destitute equally of ideas and of language. Thinking that probably he did not understand the words used on these topics, Mr Combe tried to explain them, but found an obtuseness of comprehension which rendered the attempt unsuccessful. He found those intellectual powers to be of tolerable strength whose organs were fully developed, and those to be deficient whose organs were small. Mr Lee said that the youth was warm-tempered and touchy.

It being possible that the cerebral convolutions had been displaced, but not destroyed or entirely impeded in their growth, (as the spinal marrow performs its functions in hunchbacks,) Mr Combe requested the missionary to carry a cast of a normal European brain with him when he returned to his station, and to beg the medical officer of the Fur Company, who lives in his neighbourhood, to examine carefully after death the heads of these flat-headed Indians, and report minutely the differences in the size and distribution of the convolutions. Of the condition of this young man's feelings Mr Combe had no means of becoming acquainted by personal observation; but having requested his friend Mr Samuel W. Dewey of New York, who had procured the interview, to use every means of observation in his power, and to report on the subject, he was, on 21st May 1839, favoured by that gentleman with the following highly interesting particulars:—"Having passed the greater part of this day in company with the flat-headed Indian Thomas, whose head you examined this morning, I feel extremely desirous to lay before you the result of my observations as to his character, so far as it has manifested itself in my presence. In the course of my walk with Thomas, I re-

peatedly asked him if his tribe had any idea of the Deity previous to their being visited by the missionaries. As often as I made this inquiry I was told they had not the least idea of the Deity. I asked him if he never thought it strange that the grass grew up, withered, and died;—that the trees blossomed, bore fruit, and then parted with their leaves;—if he had never viewed with surprise the rising and setting of the sun, moon, and stars. The only reply he made was, 'No, nothing.' I then inquired if he was sure this feeling, or rather want of feeling, pervaded the whole tribe. He responded, 'Yes, all like me.' For the purpose of comparing his views with those of the Indians who have never had their heads flattened, I asked him if his tribe did not have some idea of a good and an evil spirit, or of one or the other. He seemed quite offended at my pertinacity, and replied with much vehemence, 'No, nothing at all.' Thus much for his Veneration, and his reflective faculties. I went to many places with him—to several jewellers' stores, where he saw large quantities of jewellery; and, when asked what particular article he would like to have, he replied, 'Would like to have all.' He went with me to the library room of the American Institute, and when asked what he saw there that he would like to possess, he said at once, 'I want all.' In short, he wanted every thing he saw. Many persons upon whom we called made him presents. These he at once thrust into his pockets, as if fearful they would be taken from him; and, whenever any one touched him, he clapped his hands over his pockets, as if to prevent their being rifled. He told me, with a gracious smile upon his countenance, that he liked my friends much; that he thought them to be very good people, because they made him such fine presents; and, said he, 'I like to go every day with you to see your friends.' He urged me very hard to get him a trunk to put his presents in, and also not to say a word to Mr Lee, or any one of the 'concern,' about the presents he had received. He said he wished I would ask permission of Mr Lee (the missionary) for him to go around among my friends: and, in reply to my inquiry, if he thought Mr Lee would consent to his going with me, he said, 'Yes, only don't say any thing about presents.' Mr Mullen presented him with a fine silver watch, worth at least 25 dollars. Thomas said he would put it away in his trunk to keep it safe. I had much difficulty in persuading him that it was better the watch should be carried in his pocket, and the machinery kept in operation. He questioned me closely on this point, and finally I succeeded in convincing him, that, if the watch was allowed to remain inactive, the works would become stiff with rust, &c. When he had heard

all I had to say about the watch, he promised to wear it, and to wind it up every morning, on condition that I would give him a watch ribbon. I took him to a confectionery, and there had a fair chance to test his Acquisitiveness and Benevolence. I had previously been informed that his companion, who came from the same place as himself, and is called William, was quite ill. When we were fairly in the store, I asked him if he was fond of sweets. He replied in the affirmative. I asked him what, in particular, suited his taste: he replied, 'I like all;' in fact, he wanted to take the whole stock of confectionery with him. The proprietor of the establishment made him a present, consisting of a large quantity of candies, sugar-plums, &c. &c., none of which would he eat, 'but,' said he, 'I put 'em in my trunk.' I asked him if he would not give some of the 'peppermint drops' to his sick companion when he should get home: he replied, with a surly emphasis, 'No, he don't give me any thing he gets.' This reply was drawn from him by my endeavouring to excite his benevolent feelings. We now proceeded towards his residence, stopping on the way for a moment at the grocery store of an acquaintance. Being here again asked what he would have, he cast his searching eyes around and said, 'I will have all.' Some cakes and figs were given him, and he was requested to eat some of them: he said, 'No, I put 'em in my trunk.' From this last place till we arrived at his boarding-house he kept continually stating to me his wants, and requesting me to observe the strictest secrecy about his presents, especially towards Mr Lee. He said he wanted shirts, vests, stockings, &c., and asked if I could not take him to some of my friends who would furnish him with these articles. I told him it would be the best way for him to lay by his money, and that he would soon have sufficient to purchase the things he wanted, and probably at a very low price. 'I no want to pay for 'em,' was his prompt reply. I was particularly struck with the ready manner in which he would find his way back to some starting point, and say, 'My house is there,' at the same time pointing to the very part of the city where it was. I did all in my power to lead him out of his reckoning. I went first to the right, then to the left, through all the byways, lanes, &c.; but his strong Locality kept the run of all my windings and turnings. At this time (May 1839) he had not been around town sufficiently to have gained even a moderate knowledge of the streets and byways of this irregularly built city. He did not express the least desire to return home to see his sick friend, but seemed all eagerness to get more presents, although his pockets were crammed to overflowing, and both hands were full. We arrived at his resi-

dence at about the commencement of twilight. He entered, saying, 'Can you see?' (it was quite dark in the passage or hall). I followed, groping my way after him, to the attic storey. He left me at the top of the stairs, darted into a room, and soon had his presents snugly locked up in his trunk. He then came to me, when I asked if his sick friend was there. He said he was, but did not appear willing that I should see him. I watched his countenance closely, and felt satisfied he was averse to having me see William; and I strongly suspect he was fearful an interview with William would injure his chance for presents in future. I insisted upon seeing the sick Indian, and, with great reluctance, he finally led the way to his bedside, where he still tried hard to prevent me from speaking to him, by saying, 'William is asleep.' I thought he spoke truly till I saw that his friend's eyes were open, and glistening like balls of liquid fire. They sparkled with intense brilliancy, as I thought, at the idea of Thomas having received so many presents while he was confined to his bed, and unable to go about. I had a short interview with him; and, upon inquiring as to his feelings and the treatment he was receiving, I was surprised to find him so much superior to Thomas. He gave me answers, brief and to the purpose, saying, he hoped he should soon be able to get out. Thomas had no kind expression of affectionate feeling for William, or apparent anxiety for his recovery; not a single inquiry about his pains and sufferings; but, on the contrary, shewed the greatest indifference and coldness towards him, and, during my interview with William, kept pulling my elbow, and requesting me to notice the wide difference between the sizes of their respective trunks. Said he, 'William got three trunks; I got no more than one.' I found William had three fine large trunks, while Thomas had but one, and that comparatively a small one. He was particularly anxious that I should be convinced that the three trunks of William were well stocked with presents, and that the trunks themselves were presents also. I may have judged him harshly, but it really appeared to me as if Thomas had a secret desire that William might die, and thus leave him alone to get all the presents. I parted with him, and, as I descended the stairway, the petition about the trunk was again repeated. I questioned both William and Thomas as to their present views respecting the Deity: they said, 'We know there is God, we pray to God,' &c. Thomas repeatedly said, that when he returns to his country he means to convert all of his tribe, and to do all in his power to make them like Christians. He says, that 'before the missionaries came among his tribe they used to murder one another, but that

missionary told them it was wrong, and that if they kill they will be hanged. His tribe don't like to be hanged, so now they don't kill one another.' He seemed to be extremely tenacious of life, and said 'he wanted to live long time.'" In a subsequent letter to Mr Combe, Mr Dewey gives the following additional details: "I first saw Thomas in a Methodist meeting-house; the occasion was one calculated to have roused his finer feelings, if he possessed any. Thomas was seated on a platform by the side of Mr Lee, the missionary, who brought him to this city (New York), and who was, at the time alluded to, giving a detailed account of his labours among the 'Flatheads,' and other Indians on the Columbia River. Mr Lee gave a glowing description of the country of the Flatheads, and spoke of Thomas, his friends, and his conversion to the Christian religion. Thomas sat as quiet and as void of emotion as a statue of marble. After service was completed, I stepped to the side of Thomas and endeavoured to draw him into conversation. He appeared to be tongue-tied, and very sullen, till I placed in his hand a piece of silver; when, as if by magic, the spell was removed, and he instantly became loquacious in the extreme,—running on in the most rapid manner to answer all the questions I had previously put to him. The amount of his conversation was this:—That he belonged to a tribe of Indians on the Columbia River, and had been brought to this city by Mr Lee, in company with another Flathead, who was then lying sick at his boarding-house: that he had received some few presents, but was greatly in want of many articles of clothing, &c. The day following, I made arrangements to have you examine him; of what passed at that time you have the best knowledge. A short time before he left for home, which was during November 1839, I enquired about his cakes and other articles of confectionery. He stated that they were still in his trunk, and that he intended to carry them home. I then inquired what he intended to do with them in case they remained in good order. To this question he replied indirectly, that he should sell some, and *perhaps* give some to his friends. In the course of about four weeks after my first interview with Thomas, his companion died, and as the funeral was to take place in public, I determined upon being present to witness the effect of it upon Thomas. I went to the church where the parties were assembled, and took my seat directly in front of Thomas, who was seated a few yards from the corpse of his companion; in fact, the coffin was placed nearly in a line between us. The discourse was one of thrilling interest, and caused many of the audience to shed tears; to me it was peculiarly interesting, and I sat

through the whole service, which lasted quite two hours, keeping my eyes riveted on Thomas, in the hope that I might discover some gleam of sympathy for his deceased friend. The whole appeared to be mere noise and fury of the ordinary kind, so far as he was concerned. The finely turned periods and heart-stirring appeals of the eloquent speaker had no more effect on his appearance than upon the walls of the church. After sitting, as stated, in front of Thomas through the funeral service, I took him by the hand and followed in the usual measured step next to the hearse, for a distance of at least a mile, to the place of interment. The position of chief-mourner was allotted to Thomas, and as he had become quite attached to me, I was permitted to walk with him. The time required to pass from the church to the grave was not far short of an hour and a half, on account of the many haltings of the procession, which numbered upwards of a thousand, including men, women, and children. This time was employed by me in endeavouring to discover some feeling of grief or regret on the part of Thomas at the death of his companion, and I am constrained to state that my endeavours were unavailing. I touched upon every point that I thought was calculated to remind him of his home, his friends, and those of the deceased, how they must necessarily be distressed at hearing of his death, &c. &c.; all this was to no purpose—my words seemed to fall short of his ear while I was speaking in this strain. I finally concluded to let him have his own way as to conversation, and for a short distance I remained silent. Thomas seemed to be anxious to speak, and, after a moment's hesitation, looked me in the face and said, 'I have got William's coat on, but it don't fit me; I wish you could bring me to some of your friends and get them to give me a better one.' I turned the conversation by alluding to the scene in which we were then taking part, and told him I would talk farther on the subject of a new coat at another time. When the body was being placed in the tomb, Thomas gave me a pull on one side of my coat and said, 'I see some women here who promised to give William some shirts, and as he is dead I wish you would ask them to give the shirts to me.' He got the shirts I believe eventually. After concluding the burial, I went with Thomas to the house of one of the members of the church. This person had quite a collection of pictures; among them was one of 'The hand of Providence;' it was a print representing the hand of Providence in the act of dispensing blessings to all who might solicit aid from that hand. This was the foreground. The background was occupied by the devil, who was making a hasty retreat from the divine influence of the [illegible] figure of

Satan had a long forked tail. The person describing the picture at last pointed out the devil, and no sooner had he pronounced the word devil, than Thomas gave a yell in a strain that made all ring again, and seemed greatly amused. He exclaimed, 'What! devil have tail! why, the missionaries never told me the devil had a tail;' and then laughed heartily at the joke. The person who was the innocent cause of this merriment appeared to feel quite hurt, and soon closed his portfolio of pictures. Up to the last moment Thomas persisted in asking for presents, and assured me that he never had the least idea of the Deity till the missionaries enlightened him on that point. I had this corroborated from several other sources, and feel confident that the Flat-heads are without the least knowledge of a great First Cause."

After leaving New York, Mr Combe saw an announcement of the death of Thomas's companion, and was told that Dr Rees had been his medical attendant. This gentleman had previously published "The Humbugs of New York," among which he included phrenology; but he allowed this young man to be buried without examining his brain, or at least without reporting on it, or calling in the aid of phrenologists to do so. Strange that those who are so confident that phrenology is a "humbug," should be so reluctant to avail themselves of opportunities of observing facts! It is by facts alone that phrenology can be overturned. Besides, the condition of the brain in a Flat-headed Indian is an interesting and unknown subject in physiology; and any medical man who has the means of throwing light on it and neglects to do so, proves himself to be no friend either to his own profession or to science in general.

Professor Gregory, in making some observations on the foregoing case, said that the question, What is the effect of artificial compression upon the brain? is one of great interest and importance. Do the compressed organs cease to grow, or even diminish in size; or are they merely pressed into different positions from those originally occupied? Judging as a medical man, he should expect a mixed effect; it is likely that the organs are in some measure forced from their places, while their growth and size are at the same time affected. In those parts of the head which are left free from external pressure, the organs perhaps increase more than they would otherwise do, but their extreme protuberance may be occasioned partly by the displacement of organs in other regions of the brain. The cerebral development of the Indian in question, he remarked, certainly agreed in many particulars with his mental qualities; but still there were some points, in which it did not

appear, from the information possessed, that there was such a correspondence as might be looked for if the convolutions were not to some extent displaced. The organs of Destructiveness and Firmness, for example, were exceedingly prominent; yet it did not appear that the manifestations were in equal excess.

Mr Combe gave an exposition of the Temperaments, at the conclusion of which various ladies and gentlemen stood up, at his request, on the platform, and their temperaments were discussed by the meeting.

Wednesday, 23d September.—Mr D. G. Goyder read a paper *On Education in connection with Phrenology*. After pointing out the utility of phrenology in reference to mental training in general, and the great assistance which it is calculated to afford to teachers, he proceeded to express his disapproval of the employment of emulation and fear as means of impelling children to study. The master who rules by emulation, he observed, excites to a hurtful degree the organs of Self-Esteem and Love of Approbation, thus encouraging the growth of pride, vanity, and selfishness,—feelings generally too strong even when not directly cultivated. Of Acquisitiveness, also, the undue activity is in this way too frequently promoted. The practice of ruling by fear is likewise highly detrimental. Its adoption, by overstimulating Secretiveness, paves the way to cunning and duplicity, and disposes the pupil to deceive and overreach the teacher in evading his tyrannical sway. The result of his own experience in teaching, Mr Goyder stated to be, that fear and external restraint have no better effect than to make hypocrites. He then adverted to the absurdity of educating the faculty of Language so exclusively as is generally the case, and quoted Locke in support of his views. A reform in education, he added, is evidently required; but with whom is that reform to originate? We cannot expect it to emanate from those teachers or others who are satisfied with existing practices. Let phrenologists then,—who, knowing the importance of a just regulation of all the powers, find in their science so powerful an aid in repressing the energy of those which are exuberantly developed, and in cultivating, by judicious exercise, such as are too weak,—let phrenologists institute as early as possible an experimental seminary, to be conducted on phrenological principles by a properly qualified teacher. But, supposing this to be effected, whence are pupils to be obtained? Phrenologists of course would give the seminary their support; but it is to be apprehended that, among

others, much prejudice and misapprehension would be excited by persons interested in the maintenance of existing practices. Let the operative classes therefore be instructed in the principles of phrenology, and then there will be no lack of pupils. In doing this, let abstract views be less insisted on than plain and palpable facts: these are not only more intelligible, but better fitted to produce conviction in a learner's mind. In confirmation of this opinion, Mr Goyder detailed instances which had occurred in his own experience as a teacher of phrenology. If the attention and co-operation of the working classes can thus be gained, much will be done for the promotion of educational reform. Lastly, said Mr G., they must be convinced that phrenology is not hostile to religion. In a village near Scarborough, about ten operatives had formed themselves into a society; they each purchased a copy of "The Constitution of Man," and studied the work attentively. They then purchased a few casts, and were making a steady progress, when they were stigmatized by the Methodists as infidels; and so powerfully did this operate against them, that they sold their casts, burned their books, and dissolved their society. Having been convinced, however, by Mr G., that phrenology is not hostile to religion, but in truth a powerful auxiliary, they expressed a resolution to reorganize themselves and again to pursue the study.

Mr D'Orsey said that, even at the risk of being classed with those self-esteeming parties whom Mr Goyder had denounced in the paper now read, he could not allow the opinions just expressed to pass altogether without qualification. He trusted the meeting would pardon his speaking on what might be deemed a professional subject; but he took it for granted that Phrenologist and Educationist were pretty nearly synonymous terms, or at least, that the majority present were disposed to bear with one or two observations on Mr Goyder's views. Mr D. then proceeded to state that, about twelve years ago, he had commenced his career as teacher of a private school, on a small scale, the number of pupils during the first year being under thirty,—and that he then, and for several years afterwards, had used corporal punishment with considerable severity. About 1834, his attention had been directed to the more advanced views of education so eloquently developed in the work of Mr Simpson, to whom he felt proud to confess his many obligations, though he differed with him on certain points. These views had strengthened his gradually growing conviction of the utter inefficiency of personal chastisement as an instrument for promoting moral improvement, or stimulating to intellectual advancement. The inflictions had consequently become

less frequent and less severe; and at last, soon after his advancement to the English Mastership in the High School of Glasgow, he had entirely abandoned corporal punishment. The English department did not exist till 1834, when the classes opened with eleven boys. The number enrolled during session 1839-40 was 306, divided into seven classes, each class having a separate hour, and ruled more easily without corporal punishment than the eleven boys had been ruled with it. Still, he could not concur in the pleasing visions of pure benevolence so touchingly portrayed by the essayist. A school must be governed before it could be taught; in other words, the teacher must have his pupils in a state of perfect discipline before his intellectual teaching and training, however advanced, could be of much service. To establish this excellency of conduct, there ought to be religious instruction and moral training carried on from infancy, at home and at school. But was it so? Religious instruction, though improved and daily improving, was still in too many cases a mere form of words. Moral training at home was sadly neglected. He must be pardoned for uttering a plain, perhaps an unpalatable truth, when he stated that, in Glasgow, comparatively few took a lively interest in the education of their children. As an instance, he might mention that accommodation was provided in his school-room for thirty or forty parents, yet rarely above two or three, out of several hundreds, were to be found in attendance. The fathers were immersed in business, and the mothers were occupied with house arrangements, in paying and receiving visits, and in preparations for attending or entertaining large evening parties. The boy then entered school with the impression that he was about to study subjects which his parents regarded with dislike or at least with indifference; the sources of his father's gains, or the results of his mother's expenditure, being far more interesting topics at home than educational improvement. His teacher, moreover, was not the object of his respect; for he heard him talked of familiarly as "Smith" or "Thomson,"—learned that his father *patronized* such a person's school,—and saw himself, though a boy, periodically empowered to pay his instructor a pittance under the name of *wages*.* The co-operation of the parents was thus annihilated, and the teacher was obliged to trust for his influence to the religious instruction and moral training of the school-room and play-ground. Mr D. then entered into a brief account of his attempt to introduce into his department an Initiatory Division, for children between four and seven years of

* This is actually the d ading word extensively used in Scotland.

age, in order that they might be duly trained for the more advanced classes. In this he was very successful for more than a year, till the High School Committee thought fit to interfere with the arrangements, simply because the initiatory pupils had a separate teacher, school-room, and play-ground; and to such an extent was this interference carried, that in the face of a memorial signed by fifty-six parents, and regularly presented at the board of the Town-Council, that body exercised the power with which it is armed by the present state of the law, and virtually suppressed, without examination, this most important feature of the system. The moral training which the school might have afforded had thus been nipped in the bud, and boys, of course, now entered with all such rude and boisterous habits as result from years of ill-regulated feelings. With such boys, benevolence, unqualified by firmness, had been fully tried, and had signally failed. Mildness was construed into weakness; the impunity with which faults were committed, produced many imitations; the discipline of the classes obviously decreased; and the lessons gave little satisfaction to the diligent portion of the pupils, to the parent, or to the teacher. What, then, was to be done? Reform was required, and punishment, though *not* corporal, was necessarily introduced. Fines were tried, but abandoned; and detention, bad marks, writing out pages, and ultimately public expulsion, now constituted the penal inflictions. Firmness of purpose being thus added to gentleness of manner, discipline was fully restored; though the elder pupils, joining without previous training, and coming from schools where fear was the only motive, were invariably found the most difficult to manage.—After relating several anecdotes illustrative of his arguments, Mr D. stated, that from twelve years' experience, he felt convinced that such ideas as Mr Goyder's, however beautiful in theory, were quite incapable of being reduced to practice in schools, until parents, mothers especially, were made more alive to the imperative necessity of home training; until every child, rich or poor, passed through a rational infant school, not an intellectual forcing-house; and until the educator were raised from his present shackled and despised condition, to his proper status in society as the equal of the clergyman, the physician, and other professional men. As matters now were, teachers were not so much to blame as Mr Goyder imagined, the fault resting rather on the unenlightened state of the public mind.

Mr Simpson concurred in the views of Mr D'Orsey. Those benevolent individuals who looked forward to the abolition of

severity in schools, were by no means to be accounted visionaries. The obstacle was the mistreatment which boys received at home from nurserymaids and others. Education should begin from the cradle, and, if systematically and judiciously pursued in infant schools, would fit children to be inmates of a school conducted on this benevolent plan. If punishment was bad, rewards were worse; they excited envy and jealousy among the competitors.

Mr JOHN G. GULLAN differed from Messrs D'Orsey and Simpson. Is not the hope of reward the great stimulus to exertion through life; and why should rewards be proscribed in schools? Punishment also is demanded by human nature: As some horses are intractable without beating, though others may not require it, so there are certain boys whom it is impossible to govern without chastising them. He had been a teacher from an early age, and found this to be the case. He thought that mothers had been undeservedly charged with neglect of the domestic training of boys, and that teachers were more frequently the parties at fault. Infant schools were calculated to be useful to the children of operatives, who were left to roam at large in idleness while their parents were at work; but mothers in the upper ranks ought, in his opinion, to train their children at home, and were quite competent for this duty.

Mr JOHN ISAAC HAWKINS said, that he once had occasion to introduce punishment into an American school which happened to be for three months without a master; and the mode which he adopted was a mild one. He procured white and black books, in which the names of the children were recorded; and marks were made in one or other of them according as conduct was good or bad. Weekly, monthly, and quarterly tickets were given to every child, shewing the number of marks attached to its name in the black and white books; and these tickets were taken home and exhibited to the parents. The plan succeeded to admiration; and the children, from being noisy and unruly, became quiet and orderly.

Mr BASTARD spoke of similar results in a school connected with the Children's Friend Society in London. Mild treatment was resorted to, and though there are vicious children among those who attend, even solitary confinement is found unnecessary as a punishment.

Mr SIMPSON, in reference to Mr Gullan's observations, said that the want of infant schools is felt even by enlightened mothers in the upper ranks: few are able to bestow constant enough attention on their children; and besides, a wider circle

than that of home is required for the due training of the moral and social faculties. Infant schools were truly characterized by Lord Jeffrey as well-regulated nurseries.

Mr Combe mentioned a case illustrative of the benefit of proceeding on sound physiological principles in the education of the young. A boy, who was extremely mischievous, was sent to Dr Howe of the Boston (U. S.) Institution for the Blind, as a pupil. He was so full of destructive energy, that he broke the benches, tore the chairs asunder, swung on the doors till he wrenched them off their hinges, and perpetrated all sorts of mischief on frangible objects; while he was so restless, that he was incapable of bending his attention to books. Dr Howe reasoned with him, appealed to his moral sentiments, and did every thing in his power to improve his habits by means of moral suasion; but with little success. He was satisfied that there must be causes for these dispositions, and endeavoured to discover them. He observed that the boy had large lungs, and a high sanguine temperament, which gave him great strength and restless activity; also, large organs of Destructiveness, that prompted him to exert those qualities habitually in injuring the objects around him. He thought of providing him with a legitimate field for the exercise of his dispositions. This was, to send him into the cellar every morning to saw and split wood for three hours together, for the use of the institution. This exercise had the desired effect. After undergoing it for some time, he became quite willing to sit still in school and receive instruction with the other boys; and the benches and chairs were safe. The boy himself was delighted with the change, and had soon sawn and split up all the wood in the cellar. He was then set to running, leaping, climbing poles, and disporting himself in various ways, in the gymnasium of the institution; and Dr Howe found that, as long as a proper and adequate vent for his excessive muscular activity was provided for him, he conducted himself with propriety, and was capable of mental application. In administering punishment, therefore, let the teacher ask himself, whether the infliction has a tendency to remove the cause of the evil which he desires to remedy. Annihilate the cause, and the effect will of course disappear.

Mr W. C. Trevelyan read the following case of *Derangement of Language and some of the Perceptive Faculties.* A gentleman between fifty and sixty years of age, of temperate habits, nervo-bilious temperament, and with the moral sentiments and intellect predominating over the propensities, has, besides his professional duties as a clergyman, been for

several years engaged in writing a voluminous county history. One day, in the month of September 1839, he had been working without intermission in the compilation of an index for a volume of his history, then about to be published. Feeling drowsy, he laid himself down on a sofa, and slept for some time. On awaking he felt extremely cold, and, seeing a female in the room, he asked her who she was, not knowing his own wife. He afterwards became giddy and sleepy, but was recovered from his drowsiness by severe medical treatment. Since that time he can seldom remember rightly the *name* of any article, place, or person; neither can he recollect numbers. Though he recognises persons he was previously acquainted with, he can seldom mention their names. In talking on any subject he constantly calls one thing by the name of another, so as to render his conversation nearly useless. On attempting to read, a dull pain attacks the region of his perceptive organs, and particularly the organ of Language; he becomes giddy; and, before he can get to the end of a line, the whole appears a blank. His sight he considers as not so good as previously to the attack; complains much of a cold head; remembers better when his eyes are closed, or when stooping. He often shewed absence of mind in conversation and in reading, for many years previous to the attack. His reflective, moral, and animal organs appear unaltered; his appetite is good, his general health improved, and he enjoys bodily exercise. In conversation he reasons on his malady, and gives a clear account of the attack. When he was a boy at school he suffered occasionally from a dull pain in the region of the perceptive organs, and it has frequently recurred during his subsequent life.

Mr Combe hoped that, in the event of this gentleman not recovering, his brain would be examined after death, with the view of ascertaining whether the organs of Language and the other deranged faculties present a morbid appearance.

The next paper was a communication from Mr William Bally of Manchester, *On the head of James Lowe, the Salford idiot*, whose case is recorded in the Phrenological Journal, vol. ix., p. 126. Lowe died on 7th April 1840, and casts of his head and brain were exhibited to the meeting. In sawing the skull horizontally, it was found that the prominent superciliary ridge was of thick bone, with a large frontal sinus, so that

during life the size of the superciliary organs was undiscoverable. Mr Bally states the circumference of the head to be 14½ inches; its size from ear to ear over the vertex, 6¾ inches; and the weight of the encephalon, exclusive only of the dura mater, 13½ ounces avoirdupois. According to information by Mr T. F. Brownbill, surgeon, Lowe was of a quiet disposition if not annoyed; but, when excited into a passion, he would swear, and strike with his fists, or any weapon he could get hold of, and if unable to satisfy his vengeance upon the person who had irritated him, he would bite his own hands till they bled. When in this state, he became exceedingly stupid, and refused to be taken to attend to calls of nature. He had no idea of dressing or undressing himself. He loved to amuse himself with toys, and was very fond of coloured objects, frequently making caps of stained paper, belts, ribbons, &c. He was fond of those who treated him with kindness, but never seemed to forget those who had injured or provoked him. Often he would amuse himself with imitating a drunken man, and when in good humour would take off his shoes and dance, after which he would, with seeming pleasure, fight with his own shadow, and strike his knuckles against it on the wall. Occasionally he seemed much pleased in attempting to sing psalms, and then would kneel down with hands upraised, as if to pray. His appetite was very voracious and undiscriminating, and he would never fling away any part of his food. He was cleanly in his habits, with the exception of not attending to calls of nature. He never seemed to have a desire to associate with any females. Though attempts were often made to teach him to button and unbutton himself, he never learned to do so, but would impatiently tear off the buttons. He seemed to have no manual dexterity. His age at death was 24.

A communication from Mr Cornelius Donovan of London, *On the head and character of François Courvoisier*, the murderer of Lord William Russell, illustrated by a cast of the head, was next read. By means of a series of queries submitted to a very intelligent person, who lived with Courvoisier in the house of Mr Fector, M.P., for more than a year, Mr Donovan learned the following particulars respecting him:—That he seemed to be attached to his employers and fellow-servants, and from his obliging manners was well liked by both;—that he was very amorous, and was thought to have an attachment to one female in particular;—that he was particularly fond of children; by no means quarrelsome; fond of shooting; not in the habit of associating much with men, and not particularly fond of dress; was rather silent; had a very

tender feeling to all he thought to be in distress, and often relieved them at his own expense; was cheerful in general, always ready to join in the jokes of the servants' hall, and so ready to invent any thing in the way of joke or trick, that it was a common saying amongst the servants, if any artful trick was played off amongst them, that it was "one of François' artful manœuvres;" was not thought to entertain a high opinion of himself, or to be particularly religious; was not particularly close-minded; was very fond of money; very ingenious in *planning* any thing, but not in *making* it, and when alone was always doing something; not in the least musical; very temperate in eating and drinking; his actions and manners were counted sensible, and he was well liked by all his fellow-servants. From another person equally well-informed, Mr Donovan received a letter containing this passage:—"Mr——, a hair-dresser of this town (Dover), had frequent interviews with Courvoisier in the course of his business, when the latter was valet to Mr Fector, M.P. He had the highest opinion of him, and strongly asserted the impossibility of his guilt, until the events of his trial brought to light the hidden things of darkness." With respect to the phrenological bearings of Courvoisier's head (on which subject see the last number of this Journal, p. 323), Mr Donovan, after remarking on the strong manifestations of Secretiveness presented in the career of the criminal, suggests for consideration the possible influence of that state of mind named *maladie du pays*, to which the Swiss are liable. His attention was lately drawn to the effect of large Concentrativeness by the case of a pupil of his, aged 23, with a very good head, and a large development of that organ; and who occasionally becomes so *haunted* by a subject, that, for a fortnight or longer, he cannot shake it off. This individual has taken excursions with the view of ridding himself of his troublesome guest, as he is unable during the attack to direct his attention to any other subject of thought. This engagement of the mind does not apply so much to legitimate subjects of study, as to certain fancies or crotchets. He has a small posterior region of the brain, but Destructiveness is large; and he says that, while thus under the influence of Concentrativeness (if such be the fact), he has had frequent thoughts of self-destruction. This case is given by Mr Donovan to illustrate the probable effect of the organ of Concentrativeness or Inhabitiveness (which he thinks large in Courvoisier's head); tending to render a person susceptible of being, as it were, taken possession of by a state of feeling contrary to the ordinary inclinations, and which is so absorbing as to deprive him of the usual degree of self-control.

The cast of Courvoisier's head having been placed on the table beside that of Thurtell, the murderer of Mr Weare, a remarkable similarity was pointed out between them. The organ of Benevolence, however, was larger in Thurtell.

Mr W. B. Hodgson considered Mr Donovan's suggestion as to Concentrativeness important. A strong tendency to brood over any subject must have a considerable influence on the results of the feelings as displayed in conduct. Mr H. mentioned the case of a lady with deficient Concentrativeness, an active temperament, and vivid feelings, in whom he had correctly inferred lively emotions, short-lived, but apt suddenly to return. When her father died, she was prone to forget his recent death, and would talk cheerfully with visiters, till, suddenly recollecting her bereavement, she changed her countenance and conversation. Mr Martin, a missionary, used in like manner, as he states in a published work, to forget the death of his sister; and was betrayed into such inconsistent states of feeling, that he wished he could either properly remember or altogether forget the event.

Mr Combe, after expressing his concurrence with Mr Hodgson, remarked that nevertheless the discussion appeared to have no bearing on the case of Courvoisier, in whose head the part of the brain supposed to be the organ of Concentrativeness seemed to him but little developed. Yet, as the function of the organ is still uncertain, the tendency to brood over certain ideas may have been strong in Courvoisier, and may, in some degree, have influenced his actions.

The next paper was *Observations on the Functions of Philoprogenitiveness*, by Mr H. G. Atkinson; in which he commented on Dr Epps's opinion, stated in a communication read on Saturday, that this faculty is the source of filial as well as parental affection. Phrenologists, he thought, should beware of ascribing to single causes the results of combined influences. The "protective feeling" of offspring towards their parents seemed to him to arise from Veneration and Benevolence acting together. Philoprogenitiveness he considered to be the source of tenderness of sentiment, as exemplified in the songs of Burns. In himself the organ is large, and he is exceedingly fond of children; he delights also to attend a sick friend, or even persons in whom he takes no interest while they are in health. He concluded by observing, that phrenology is still in a very imperfect state, and that we have yet many difficulties to contend with, the science being in the very infancy of its existence. There is not, said he, a single organ, the functions of which have yet been correctly ascertained and described: indeed it is maintained by many

able phrenologists, and was the opinion of Gall, that there was no primitive feeling of either hope, justice, or, he thought, fear, as described by Mr Combe; and in this opinion he himself was inclined to concur. But, however this might be, he delighted in the difficulties before us; for difficulties incite to exertion, and exertion in a good cause is pleasure. But he would have those who are in the habit of manipulating heads to be more cautious in predicating character; many errors are committed, to the injury of the science, and many others are disguised in the ambiguity of language. He did not now allude to any one in particular, but to all who practise manipulation, whether publicly or privately. It is necessary to be well acquainted with the philosophy of poetry, the arts, music, and mathematics, before you can say that such a one may be a poet, an artist, a musician, a mathematician. Let us remember what Gall has said—that before he could manipulate perfectly he must know all things perfectly, or at least the philosophy of them.

Messrs Deville and Beamish expressed their dissent from the opinion of Dr Epps on Philoprogenitiveness.

Mr Robert Cox referred to the dispositions of the Esquimaux, whose love of young is powerful, but among whom the old and helpless are treated with great neglect, unless their own children be alive—in which case the behaviour of the latter is obedient and affectionate.

Mr Combe begged leave to offer a remark on Mr Atkinson's statement, that phrenology is still in the infancy of its existence: this was a statement which ought not to go forth without explanation. Much, no doubt, still remains to be discovered before phrenology shall reach maturity, but it is equally true that much has already been fully ascertained. Surely phrenologists are not in the infancy of their knowledge of the functions of the organs of Cautiousness, Philoprogenitiveness, and many others. Those who themselves have made few observations are apt to suppose that the facts ascertained by the observations of other inquirers are few; and in proportion to the extent of any student's field of observation, is his conviction that, in the main, phrenology rests on a stable foundation of facts. In its metaphysical department it may, with truth, be said to be still in its infancy; that is to say, little progress has been made in analyzing the faculties into their elementary or primitive principles. For example, we may all agree, that, when the organ of Cautiousness is largely developed, certain mental manifestations are found in connection with it; but very different opinions may be entertained as to the metaphysical character of the quality which distinguishes every form of these

manifestations. Uncertainty on the latter point is quite consistent with certainty on the former. With reference to Philoprogenitiveness, Mr Combe observed that, when an organ was powerfully active, it might be gratified by any thing that personated or was invested by the individual with the essential qualities of its natural objects. Thus, the doll gratified Philoprogenitiveness, although it was not a child; it was small and helpless, and in these qualities resembled a child. A young female would take a pillow, or wrap up a pocket handkerchief, and fondle it as a baby; but this was not a departure from the proper functions of Philoprogenitiveness. In like manner, an affectionate daughter might treat her old and feeble father as a baby, speak to him and feel towards him as such. It was his weakness and dependency that called her Philoprogenitiveness into play; but her Benevolence, Veneration, and Adhesiveness probably co-operated with that organ in producing her actions. He did not consider that in such cases Philoprogenitiveness performed any functions different from those usually ascribed to it. He questioned whether a lady with large Philoprogenitiveness, but small Benevolence, would treat an aged parent with tenderness and kindness.

A communication from Mr J. L. Levison *On the Cerebellum of Birds* was next read. Its object was to refute a statement said to have been made by Professor Rymer Jones, that the cerebellum is absent in birds. Mr Levison had made accurate casts of the brains of many birds, and could testify from observation against the averment of Professor Jones. The mistake must have arisen from his assuming the relative situation of the cerebellum in birds to be the same as in the mammals generally, that is, below the cerebrum; whereas the disposition of the cerebral and cranial parts is, in reality, very different. Professor Grant, in a lecture on the Osteology of Birds, published in the *Lancet* for 1833–4, p. 765, says that the hemispheres of the brain are so much developed backwards in birds, that they "not only cover the corpora quadrigemina and optic lobes, but even rest a little on the large-lobed cerebellum." With respect to the size of the cerebellum in relation to the cerebral hemispheres in different birds, Mr Levison mentions that, in the common crow, it is as 1 to 10 or 12; in the black or brown grouse, as 1 to 6 or 7; in the red woodpecker, as 1 to 9; in the robin as 1 to 6; in the canary, as 1 to 5; and in the male domestic pigeon as 1 to 5. These proportions, he thinks, correspond with the strength of the amorous feeling in the different birds.

Another communication, from Mr Nicholas Brewer of Lon-

don, suggested *the establishment of a Guarantee Society* on the principles of an insurance company, with the object of providing security for persons in situations of trust, on payment of a small annual premium. Such a society already exists in London, and is doing well; but the committee of management derive no aid from phrenology, being guided only by previous character, the nature of the trust, and the average breaches of it which are found to occur. A society under the management of experienced phrenologists, who would derive much additional aid from examining the heads of applicants, would be still more profitable to the shareholders. The diffusion and improvement of phrenology would, moreover, be promoted; for the confidence which phrenologists have in their science would thus be made obvious to the public, and as every person guaranteed by the society should give a cast of his or her head, a collection of valuable facts would gradually be accumulated. "The Phrenological Guarantee Society" would have a tendency to advance the well-organized in society, and to keep the badly-organized where they would have little power of doing injury; and hence it would confer great benefits on the community at large.—Owing to the lateness of the hour, no discussion took place on this proposal.

At a meeting of the council, held this day, and at which were present Messrs Trevelyan, Simpson, M'Clelland, Cunliff, Combe, Deville, Bastard, and Dr Maxwell, it was, after considerable discussion, unanimously resolved, that the next general meeting of the Association should be held in London, in the first week of June 1841; and the following gentlemen were appointed a committee in that city (with power to add to their number) to carry into effect all necessary measures, viz. Messrs Hewett C. Watson, Thames Ditton; James Deville, London; Thomas H. Bastard, London; Richard Beamish, F.R.S., Prestbury, Cheltenham; Henry G. Atkinson, London; and John Isaac Hawkins, London. Messrs Watson and Bastard were appointed joint secretaries and conveners of this committee. It was farther resolved, "that as the council and general committee have the power, according to the rules of the Association, of altering the laws, the same are hereby altered, so far as the above resolutions are not in accordance with the original constitution." Lastly, Dr Weir and Mr M'Clelland were appointed a committee to examine and docquet the treasurer's accounts.

In the evening at eight o'clock a meeting was held in the Lecture-Room of the Mechanics' Institution, North Hanover Street, to which the public were admitted. The room was

filled to overflowing, and must have contained 600 persons; besides whom many in vain attempted to gain admittance. A lecture, which lasted an hour and a half, was delivered by Mr Combe, on the characters of nations in connection with the different forms and sizes of national crania. It was illustrated by the plates in Dr Morton's *Crania Americana*, and numerous specimens, and seemed to excite much interest. The meeting, after being addressed by Messrs Simpson, Deville, Hawkins, and Professor Gregory (whose speeches, as well as the lecture, we regret that our limits prevent us from reporting), broke up at half-past ten o'clock.

II. *Dr Baillarger's Researches on the Structure of the Cortical Substance of the Cerebral Convolutions.*

Dr Baillarger has published an interesting paper on this subject in the *Mémoires de l'Académie Royale de Médecine* (Paris, 1840). We avail ourselves of the summary given in the *Medico-Chirurgical Review* for October last, page 426:—

"The object of the author is to shew that the cortical surface of the nervous centres is distinctly stratified, consisting of several alternating layers of grey and white medullary matter, and that these strata may be aptly compared to the alternating plates of different metals or other substances in a voltaic pile.

"After minutely describing numerous anatomical examinations of the cortical substance of the brain in man and in the lower animals, he sums up the results of his inquiries in the following among other conclusions:—

"'1. The cortical substance of the cerebral convolutions consists of six layers, alternately grey and white, proceeding from within outwards. If we examine a thin slice of the grey [the cortical?] substance placed between two pieces of glass, the six layers appear alternately transparent and opaque.

"'3. The white strata, which exist in the thickness of the cortical grey substance, are formed of two rows of vertical fibres.

"'14. The superposition of six strata, alternately of white and grey nervous matter, in the cortical substance of the brain, suggests the idea of a galvanic pile.

"'15. This analogy between the structure of the cerebral surface and the arrangement of a galvanic apparatus, may be adduced as an argument in favour of the following two propositions:—The nervous, like the electrical, action, is in re-

lation to surfaces and not to masses. The nervous influx, like the electrical stream, is transmitted by surfaces.'

"The opinion that there is some analogy between electricity and the mysterious cause of nervous action, is now admitted by many of the leading physiologists of the present day. It is therefore reasonable to expect, that there are some features of resemblance between the anatomical arrangements of the nervous centres and those of a galvanic apparatus. Different opinions have been held by different anatomists as to the part of the nervous system which may be most aptly compared to a pile.

"Rolando fixed upon the cerebellum; he says—'If an apparatus, composed of different non-metallic substances, such as schistus, charcoal, muscular substance, and cerebral substance, and if the electrical organ of the gymnotus and torpedo, composed of albumino-cartilaginous and other similar substances, is known to generate a great quantity of electrical fluid, why may not a similar principle be developed by the numerous layers of the yellow and cineritious matter of the cerebellum?'

"Our author, while he does not impugn the accuracy of Rolando's conclusion with respect to the cerebellum, alleges, with considerable shew of reason, that, if electrical action is developed by the nervous centres, it is much more probable that the seat of this development is not in one part only, but rather that it is diffused over their entire extent. 'Assuredly,' says he, 'if the Italian anatomist has been led from the circumstance of the superposition of two laminæ of nervous matter to affirm that the cerebellum may be compared to a voltaic pile, how much more readily must he have admitted the same thing for the brain, had he been aware of the stratified structure of its surface, in which I have shewn that six alternating laminæ can be proved to exist.' He adds—'In a future memoir I will shew that a similar arrangement can be demonstrated in the surface of the cerebellum itself, and also of the spinal cord; so that this stratified structure is common to the entire extent of the surface of the nervous centres. But it is not on the surface alone of these centres that such an arrangement exists; it is well known to be quite obvious in the substance of the corpora striata, tubercula quadrigemina, and in the tuber annulare also.'

"In confirmation of his views, that the nervous centres may be aptly compared to a galvanic apparatus, Dr Baillarger next alludes to the minute anatomy of the medullary matter; and suggests that the innumerable fibres which it everywhere sends into the cineritio[illegible], may be regarded as so many

conducting points which draw off the nervous or galvanic power.

"The following paragraph is interesting:—

"'If we consider that in those animals which are highest in the scale of intelligence, the brain is the most convoluted, and presents therefore the largest extent of surface; and if to this consideration we add, that not only is delirium much more frequent in diseases of the superficial than of the deep-seated parts of this organ, but also that in dementia it is usually the cortical substance that is found atrophied or otherwise diseased, we cannot hesitate to attribute important functions to the cerebral *surfaces;* indeed, they seem to be the parts that are most essential to the performance of the functions of the nervous system.'

"Appended to the memoir are two lithographed engravings, which beautifully illustrate the stratified structure—consisting of six layers alternately of white and cineritious matter—of the cortical substance of the cerebral convolutions. The memoir is altogether well worthy of the attention of the physiologist, and will doubtless attract the notice of subsequent writers on the anatomy of the nervous system."

III. *An Account of the Progress of Phrenology in Germany.* Communicated by R. R. Noel, Esq.

George Combe, Esq. Schloss Pertntz, Bohemia.

My dear Sir, *October* 16. 1840.

Our mutual friend, Mr Bastard, having informed me of your wish to learn some particulars of the present state of phrenology in Germany, I forward you the following account of the principal incidents with which I am acquainted. I am sorry to say, no very decided change in the opinions of the learned men in general has taken place since the year 1837, when you visited this country yourself; but still, there were many signs favourable for the science at that time which did not meet your attention, and, since then, a considerable progress in public opinion may be observed, as I will presently explain. In what I have to say I cannot avoid speaking of myself to a certain extent, but feel assured this will not be attributed to any petty motive. During the period of my residing in Germany (now upwards of seven years, with the exception of one winter in Italy, and some months in England, Switzerland, &c.), I have remained principally in Saxony and Bohemia, and must, therefore, confine my remarks to these

two countries. As, however, a great part of this time has been spent away from towns, I have not been able to exert myself for phrenology, or gain as much information, as I have wished.

I will speak first of Saxony. As, in every German state, the scientific and learned men look up principally to the Court for patronage and honours, it was fortunate for phrenology that the present king of Saxony and his learned brother Prince John took much interest in it, from the moment of my first arrival in Dresden, in the autumn 1833. I had not been there long, before Prince John called upon me to explain to him the principles of the science, and examine his own head; and soon afterwards, he submitted his children to a like examination, requiring a written opinion of the cerebral organization of each. This opinion was acknowledged to shew the truth of the science, not only by Prince and Princess John themselves, but also by the distinguished individuals charged with the education of the children. Since this time, I have been again called upon, in 1835 and 1838, to visit the young princes and princesses, and point out such measures as a practical acquaintance with phrenology enabled me to recommend for adoption in their education; and I have had several conversations with their governor and governess on this head. The two last winters I have again passed in Dresden, and, having had many opportunities of conversing with the Royal Family, have seen with pleasure that their Majesties, with Prince and Princess John, continue to take a lively interest in the progress of the science. I need not call attention to the high station this royal family occupies for intellectual cultivation as well as moral conduct, as Mrs Jameson, in her last work, "Social Life in Germany," has laid these facts before the English public. But to return to the winter 1833–4; phrenology having been thus favourably received at Court, it followed, of course, that nearly all the learned men were prepared to attend to it favourably too. The first who expressed his conviction of its truth, and who did all in his power to promote my objects, was the late Hofrath Böttiger, the celebrated archæologist. He it was who introduced me to Obermedicinalrath Seiler, in whom, by degrees, I found a friend to the science; at least, he soon acknowledged his conviction of the truth of its leading principles. I gave him your "System" and the works of Spurzheim to read, and pointed out the wretched organization and peculiar features in the skulls of many murderers, suicides, &c. Since that time, as you are aware, Seiler has procured a large collection of casts from Edinburgh and Paris, and all the phrenological works, including

Vimont; which, added to the large collection of national skulls, those of suicides, murderers, and the insane, with numerous interesting cases of disease in the bones of the skull, form admirable means for carrying conviction to the minds of all desirous of studying the science. It was my wish, the first winter I passed in Dresden, to give public lectures on phrenology; but diffidence of my own powers, bad health, and the want of a collection of casts, in the first instance, and, latterly, the promise of Seiler to lecture himself, and the hope thus excited of seeing the science in the ablest hands, induced me to confine my efforts to private circles, and to visiting prisons, seminaries, and institutions for the deaf and dumb, the blind, &c.; on which occasions I succeeded in convincing many of the authorities, and most intelligent classes, of the sound foundation on which phrenology rests, and the truth of its leading principles. In short, phrenology became quite "the rage," and a great many lasting adherents, belonging to the most distinguished families, were gained. In all the circles in which I had an opportunity of judging—and these included nearly the whole of the educated classes—I found phrenology at least spoken of with respect. Many of the first medical men besides Seiler, as Drs Hedenus, Choulaut, Von Ammon, Hille, Weigel, Reichenbach, Günther, Schön, &c., either then or later have expressed to me their conviction of the truth of phrenology, or have confessed that they know not one sound argument to be brought forward against it. I must mention, however, the conduct of one distinguished physician,—Hofrath Carus, the celebrated physiologist, psychologist, comparative anatomist, &c.; as, unfortunately, the weight of his opinion has been instrumental in preventing a knowledge of phrenology from being even more extensively diffused. I lost no time in calling upon him, but, at our first interview, he would not listen at all to the pretensions of phrenology, classing it with chiromancy, astrology, &c. At a later period, however, he became inclined to judge it more favourably, and at length, in 1838, he candidly acknowledged that most of the mental faculties have their seat in the brain; but his opinion was that the occipital region was the part where the intellectual faculties were to be sought. When I last saw him, the beginning of June this year, he had just received a collection of phrenological casts from Paris, and was come so far as to acknowledge three distinct regions in the head, as the seat of three distinct classes of faculties, viz. the frontal region for the intellectual, the central for the moral faculties, and the occipital for all the lower propensities common to man and animals. You will see by this that he is now near the truth; but

still he has not quite reached it, as he takes the development of the three original vertebræ of the skull (der drei Schädel wirheln),* as containing the seats of these different classes of mental faculties, and therefore considers the moral faculties to occupy the entire central region from the base to the sinciput—an arrangement which, if real, would render man a much more moral being than he unfortunately is at present.

With regard to the promised lectures by Seiler, they have not yet been given, and I fear never will, owing to his advancing age, extensive practice, duties as professor of anatomy, &c. There are, nevertheless, many young physicians and others in Dresden, who feel a warm interest in phrenology, if they do not take active steps to promote its progress; and there is no fear that it will ever fall into oblivion. A friend of mine, a medical man, has lately written a short article entirely in favour of the science, and calling attention to the degree of cultivation it experiences in England, Scotland, and America; this I have induced Mr Brockhaus, in Leipzig, the editor of the "Conversations Lexicon der Gegenwart," to admit into that widely-circulated work. Another friend, Dr Cotta, a distinguished geologist, published in 1836 a translation of the article by Chenevix, with Spurzheim's notes, from the Foreign Quarterly Review. Many articles on phrenology have appeared in different periodicals since I have resided in Germany; but most of them have been written in a spirit adverse to the science. In 1834, Heiker's Physiological and Medical Review† contained a long review, in two of its numbers, of Dr Hirschfeld's translation of your "System," from the pen of Dr Ideler. Upon the whole, it was written in an impartial tone; many of the principles of the science were warmly advocated, and it conveyed some admirable and profound reflections on the unfruitfulness of mere metaphysical speculations. Last year a long article on phrenology appeared in Most's "Encyklopädie der gesammten Staatsarzeneikunde," a valuable work, now in the course of publication. This article, by a Dr Tott, contains many errors and false statements as regards phrenology, although the author professes to shew both sides of the question impartially. There are some remarks in it, however, copied from a work by Dr Friedreich (the celebrated writer on medical jurisprudence, mental derangement, &c.), and a note by Dr Most himself: these I translate, as these two authors are looked upon as high autho-

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† Being at present in the country, at a distance from my books, I cannot give you the exact title of this work.

rities by a large class of those readers who take an interest in pyschological research, and it may be interesting to you to know their exact opinions. Dr Tott, after bringing forward several erroneous views of phrenology, and expressing a hope that it will never be allowed to have any influence on criminal jurisprudence, goes on to say,—"To be sure the profound Friedreich judges differently of phrenology,* for he says that if this system be not entirely established in all respects, yet it contains much truth, and ought not to be disregarded in any judicial-psychological system (und auch für die gerichtlich-psychologische Kunde nicht unberücksichtigt bleiben dürfe). He cites a number of examples from a work which proves the existence of a great many of Gall's organs in the heads of persons who really possessed the corresponding mental faculties. Friedreich is of opinion that a great error has been committed in not calling phrenology to our aid in our forensic proceedings, but confesses that the application of the principles requires a profound and extensive study, yet many medical men are entirely ignorant of the works of Gall, Spurzheim, and Combe. Now," adds Tott, "let those who like believe in phrenology; I, for one, shall side with the antiphrenologists at present." On this Dr Most justly remarks: "In regard to all sciences based on experience, there must be no colours to which we swear allegiance. The party-man is always one-sided, and the one-sided head is never fit to search out the truth. We, too, will not expect too much either from phrenology or from physiognomy, a science to which it is nearly related. We, too, are of opinion, that, as the questions now stand, it would be a misfortune for that state in which criminal lawyers should attach any great importance to these two doctrines in judging offenders. Nevertheless, to consider them of no value,—to throw away the wheat with the chaff,—to remain in ignorance of the important connection between external and internal organization in life,—of the relation between form and matter,—such a proceeding can only be condemned. Phrenology and physiognomy afford many most valuable hints to the gifted inquirer; and the great number of facts which have been collected, and which are not to be denied in a mere off-hand manner, are of too much scientific importance to be neglected. As the sciences progress, other generations will certainly raise phrenology to its proper rank,

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together with Lavater's physiognomy, which in our days has wrongly been suffered to fall into utter forgetfulness. For the present we will leave these questions, voting neither for nor against them. *In medio salus!*"

Altogether, the physiologists and psychologists of Germany are at present in an unsettled state as to their views of the brain and the mind of man. The somatic theory, however, is making firm progress, and in the end will certainly triumph over the spiritual and pure metaphysical doctrines of the schools, being advocated by such men as Friedreich, Bloomröder, Jacobi, Nasse, Fleming, Tessen, Zeller, Leuthold, Ruer, &c. In so far the ground is being continually prepared for the reception of phrenology; and it is being still further so, through the microscopic investigations of Ehrenberg, Valentin, Carus, &c. into the structure of the brain; investigations which have already produced many valuable results. I must add, that in the articles in periodicals, written in a decided spirit against phrenology, such entire ignorance of the science, such misstatements and false notions have been prominent, that it would have been impossible to reply to them otherwise than by calling attention to the facts on which the science is based; and this proceeding would be of no avail, as the power of prejudice over minds like those of the authors of the articles alluded to, would cause such works as those of Gall, Broussais, and yourself, to be thrown away with disgust.

But I must now say a few words of Bohemia. In this country, the number of those who take an active part in promoting the diffusion of phrenological knowledge, is far greater than in Saxony. Among the first converts whom I was instrumental in gaining, were the Counts Francis and Leo Thun, members of one of the highest and most distinguished families of the land. Count Francis procured, last year, a large collection of casts from Deville, which, joined to the copies of those which Seiler and myself have taken in Dresden during the last seven years,* and casts of the national skulls brought to Europe by the celebrated traveller Baron Hügel, enable him to produce a sufficient number of facts to carry conviction to every unprejudiced mind His apartments in Prague are liberally thrown open to all who take an interest in the science,

* The number of casts which I have been able to collect amounts to upwards of 50, containing several distinguished characters,—as Böttiger, Dr Kreysig, V. Ammon (the head of the Protestant church in Saxony, author of the enlightened work, "Fortgang des Christenthums zur Weltreligion," &c.) Falkenstein, Retzsch, &c. besides numerous casts and some skulls of murderers, incorrigible criminals, &c.—all proving the truth of phrenology, in the most conclusive manner as regards the separate regions for the intellectual, moral, and animal powers.

and during last winter upwards of thirty converts to phrenology, amongst whom were seven medical men, met in them at stated intervals to discuss and to communicate information on the subject. The science, too, received considerable encouragement in Prague last winter, owing to an acknowledgment which Dr Hirtel, the professor of Anatomy in the University, made to his class at the conclusion of his lectures on the brain. His words, as reported to me by a person present, were as follows:—"You see, gentlemen, that we are now well acquainted with the general appearance of the brain, but that, according to the method of investigation hitherto adopted, we know nothing whatever of the functions of this highly complicated organ. Many, therefore, say the anatomy of the brain is a fruitless study; fruitless, however, is only the way in which it is pursued. The phrenologists have pointed out to us another way, which will doubtless be followed out further. People are satisfied, in general, with laughing at their doctrines; beware of following such an example; for although I do not believe in all the details of the present system, yet I am satisfied it contains much more than is usually supposed, and that it is destined to throw much light on the functions of the different parts of this organ."

Besides this public testimony in favour of the leading principles of phrenology, attention has likewise been aroused by a publication of Dr Staneck, a practising physician in Prague. He has written, in the Bohemian language, a Sketch or Elements of Phrenology, illustrated by a large sheet containing lithographic views of heads and skulls taken from the fourth edition of your "System of Phrenology." Count Thun and others have lost no time in circulating copies of this little work amongst the country schoolmasters, and it is likely to be of much use amongst those classes which are not well acquainted with any but their native language. In fact, the science will now advance rapidly in Prague, and in the course of the ensuing winter I have no doubt a regular society will be formed.

I have now pointed out the leading facts which shew that the science to which you have so nobly devoted yourself is not without a considerable number of adherents in Saxony and Bohemia, and that it is likely soon to be firmly established in the latter country. Of Vienna I could say much too—of the interest which Prince Metternich (one of Gall's earliest pupils) and many members of the first families there take in it. Indeed, it was principally owing to my being a phrenologist that I received great attention from Prince Metternich, and introductions to the heads of the different institutions to facilitate my observations in Vienna. But I fear I have

already made my account too long, and will conclude with an assurance of the great pleasure which I have received through the information conveyed to me by Mr Bastard, that it is your intention to visit Germany next year yourself, a step which will assuredly be attended with most beneficial results for phrenology.—I remain, my dear Sir, yours very sincerely,

R. R. NOEL.

II. CASES AND FACTS.*

I. *Sixteen years' Phrenological Experience.* By the Reverend HENRY CLARKE of Chorley, Lancashire.

SIR,—The heading represents what our Scottish neighbours would significantly call "a real fact." And to induce your phrenological friends to communicate *bona fide* facts in illustration, and for the advancement, of true mental philosophy, is the object of your very excellent article in the Journal of the 1st of April. That article would have abundantly satisfied my mind, had doubt on the subject previously existed there, that very many of the alleged facts of professed phrenologists are mere fancies. I have my fancies too, but I will not present them to you as facts. Sixteen years ago, then, I was sojourning for a few weeks in Cornwall. One wet day made me a prisoner within doors, and at the same time brought me into contact with a large book, on a subject of which, till then, I had never heard. A theme so new and strange soon wholly engrossed my thoughts; and although not ten in the morning when I began its perusal, the gentleman who was to carry me in his boat across an arm of the sea to my lodgings, found me at nine in the evening, so rivetted to my wet-day companion, that he had twice to intimate his intention of going without me ere I laid down the volume. Not long had we arrived at my domicile, when my friend gravely informed the company present, consisting of four ladies and two gentlemen, that I was one of those curious persons who could tell every thing respecting a person's character from an examination of the head.

Not imagining that this statement could pass for any thing but a joke, or lead to any other result than a laugh, I treated it in the character of the former, and met it with a hearty compliment of the latter. Not so the ladies. They received the information as sober verity. In proof of which one of

* Many cases are reported also in the first article of this Number.

the four was singled out by the rest, and presented by her own request for examination. Having allowed judgment to go by default, I found it was now too late to obtain a reversal of the sentence passed upon me by protesting that I knew nothing of the art. The disclaimer was held to be overruled by a positive assurance from my friend, that when he came to fetch me across the water, he found me so intent on a book with a great many cuts of heads in it, that he could hardly get me away, and he was quite certain I must be one of those who studied the new art of telling fortunes by examining the head. Neither my serious asseveration, that I had never till that day heard of this method of judging of the various mental powers by the size and form of the head, nor any declaration that nothing like fortune-telling had I found in the work referred to, would suffice to exonerate me from exercising my supposed skill in what they termed bumpology ;—I must tell the ladies all about their heads.

The lady who stood forth as the voluntary subject of my first essay, I had never before seen. But, on looking at her in a sort of despair of being able to draw a single inference from her head, as I really had read all day without becoming aware that I possessed the means,—the system itself, as a new view of mental philosophy, having engaged all my attention, and its operative application having been quite overlooked,—I was struck by the very great similarity between the form of the posterior part of the head and that in one of the plates in the work which I had been reading. Catching at this straw to save myself, I said, " Ladies, positively I know nothing of the subject ; but now I do remember that there is a head, with a large portion overhanging the neck behind, like this lady's, which, the writer says, indicates an excessive fondness for children, and which, when not duly regulated, leads to the spoiling of them."

With expressions of great astonishment, the other ladies assured me, that the subject under my inspection was the mother of four children, whom she was notorious for fondling, indulging, and spoiling. Evidence that their statement was true subsequently came in abundance under my own eye. Another of these ladies then insisted on my examining her head, and, on looking at the same part, which was the only part that I had carefully noticed in the book, I observed so complete a contrast, a head so straight up from the narrow neck, that I ventured to affirm, that if there was any truth in my author and his plates, this lady must be void of fondness for children. " Oh, she cannot bear them," exclaimed her sister; " but if you can tell all about us in this way, I will not have my head

examined." So here my labours for that time ended. But here, too, they in fact began, for this adventure determined me to study the science of phrenology. I considered that if it was true that there were clear undeceiving external indications of internal mental powers, the former must be deserving of the closest and most persevering attention, and would furnish the knowledge which I had long sought to little purpose in the various systems of metaphysics and mental philosophy. Nor have I been disappointed. Never have I since found a healthy head, with a large mass of brain immediately above the middle of the cerebellum, but the individual was passionately fond of young children. And never have I encountered a person exceedingly attached to young children generally, but in every instance in which I had an opportunity of examining the back part of the head I have found the part in question large. In the same relation of disrelish for children, and a small proportion of brain in this part of the head, have I invariably found both the manifestation and the organ, and, *vice versa*, the organ and the manifestation; and the cases I have observed in England and Scotland amount to some thousands.

There are, indeed, some other parts of the head respecting which my observations have not led me to the same invariable results. Among these are those termed Time, Tune, Colour, Wit, and Hope. But the parts termed Self-Esteem, Firmness, Benevolence, Caution, Individuality, Comparison, Causality, and at least a dozen others, I have always found to correspond in development with the character.

It is most true that I have again and again found the estimates of professed phrenologists very greatly at variance with the manifestations. But even these cases, I have ascertained, in every instance that I have been enabled fully to investigate, to yield this evidence to the truth of phrenology, that there was something in the organs of the examiner which incapacitated him for giving a correct estimate and judgment of the head of another. And, lest I should be misconstrued, and supposed to insinuate that I am an infallible judge, let me state the facts, that my organ of Form is indifferent, and my perception of form is far from good; so I am deficient in the capacity of readily and accurately estimating the form of the head and the individual organs. But, to remedy in part this defect, I take more time and pains, and more severely tax my Individuality, Locality, and reflecting powers. The difference in tact and accuracy between one manipulator and another, would often not only have astounded me, but staggered my faith in phrenology, if I had not had full in my view the fact

that such differences were always conjoined with corresponding differences in the organs of the manipulators' heads. If the lower part of one's forehead greatly preponderated over the upper, he would catch at once at an organ or two, and bound instantly at numerous conclusions respecting the capacity and character of the individual under his inspection. If the upper part of the manipulator's forehead decidedly exceeded the lower, then the result was a defective estimate of the head which he was examining, and much theorizing from the defective data. Some of the most accurate developments and evolutions of character that I have witnessed, have been those which were obtained by two phrenologists, both having large and active heads, but one endowed with more perceiving than reflecting, and the other more reflecting than perceiving; the former being the chief, though joint, conductor of the manipulation, the latter the principal manager of the comparison of the relative powers, and of the judgment to be given.

Whenever the manipulator's Self-Esteem has greatly preponderated over his Benevolence and reflecting organs, and especially if his Cautiousness were poor, and his Combativeness large, I have observed that his decisions on the amount of organs, and their composition of character, were mostly positive but unsatisfactory assertions. Many a time have I had my own head examined by phrenologists whom I observed to differ much in these and other organs, for the purpose of ascertaining how their dissimilarities would affect their estimate of my organs and capacities; and although no one of them ever pronounced an organ small which another had decided to be large, or the reverse, yet the opinion given has, within certain limits, varied in its modifications with the peculiar development of the manipulator. The nearer the head of the phrenological practitioner has approached to a superior development of all the organs that can aid in the manipulation, and in the deduction of talents and tendencies, the nearer have I always remarked his judgment to approach the subsequently ascertained realities of the case. One professed phrenologist whom I know, told a gentleman of my acquaintance that the latter has the organs of *inductive faith!* Was the former not defective in some of the organs which constitute an accurate philosophical phrenologist?

Having stated above that I have obtained from phrenology knowledge which I sought for in vain among preceding systems of mental philosophy, I may be permitted here to state some things the knowledge of which I now possess, but could not before attain.—I know the extent, the capabilities, the deficiencies, and peculiar tendencies, and consequently the

best mode of management, of my own mental powers. This knowledge neither Locke, Stewart, nor Brown could supply. They talk wisely and well of mental powers and mental phenomena, and offer most excellent advice; but they give no data by which an individual may ascertain the extent, capabilities, deficiencies, and peculiar tendencies of his own mind, and, consequently, they do not and cannot furnish to each the best mode of managing his mind. By phrenology I have also been enabled to judge of the talents, temper, and tendencies of those with whom I come in contact, without waiting for a long series of events, and a great length of time, to inform me what those talents and tendencies are. This did not the previous mental philosophers for me. Again, I can now account for the conduct, and even see the motives, of those whose heads I have had an opportunity of examining, in very many cases for which my former tutors gave no rules. Farther, I have trained youth in strict accordance with the best principles of education that former mental philosophy could adduce, and I have treated others according to the light and injunctions of phrenology, and have invariably found the latter method far superior to the former, and much more efficient; better for the instructor, by enabling him to deal with the scholar's real capabilities, instead of wasting time and labour on imaginary powers; and better for the pupil, by exonerating him from close application to that which he has no adequate ability to learn. Formerly I thought, as most teachers now do, that practice and habit would form a child into almost any thing desired; but now I know that habit and practice can only make the most and best of the powers possessed, when those powers have been carefully estimated, and trained and directed according to that estimate. Habit and practice cannot, as my experience assures me, create a quick perception in a boy with a deficient lower part of the forehead, nor much reflection in one with a small upper part.

With confidence, therefore, I can, by the testimony of sixteen years' active experimenting, strongly recommend the study of phrenology, as highly interesting and greatly advantageous; and the practical application of the science, as the best handmaid of education, morals, and religion, that the human mind can employ.

Trusting that other practical phrenologists will add to the stock of simple facts, which, with a design so laudable and benevolent, you propose to be accumulated, and wishing you a full measure of success, I am, &c.

HENRY CLARKE.

HEWETT C. WATSON, Esq., Thames Ditton.

II. *Cases of Disease of the Organs of Perception.* Communicated by W. A. F. Browne, M.D., Superintendent of the Crichton Lunatic Asylum, Dumfries.

Two cases have recently occurred in my practice, which tend to establish these important principles: *First*, the plurality of cerebral organs, and of the powers connected with them; *Secondly*, disease of particular parts of the cerebral mass, and of the powers connected with them, the integrity of the remainder being unaffected; *Thirdly*, that the situation of these diseased parts is ascertainable from the sensations of the patient.

1. E. C. æt. 45. Wife of a merchant; well educated; head large; temperament bilio-lymphatic. This lady has experienced several misfortunes in her family, which gave rise to much ill health of body, and to a restless irritable state of mind. The first indication of actual delusion was the appearance of a transient halo around whatever she was engaged in reading, and ultimately around whatever object she steadfastly regarded. Latterly, her false perceptions have become numerous. She now walks with difficulty, in consequence of the impression under which she labours, that a smooth surface is an irregular one,—that deep chasms constantly occur in the floor, over which it is necessary to stride,—that the height of one step of the stair is greater than that of another, —or that she totters on the brink of a precipice. Noises which are scarcely perceptible by others annoy her much, both from their supposed loudness and harshness, and from their resembling voices addressing her in conversation. Her language is likewise affected. She either has a difficulty in recalling expressions, or misapplies or misplaces such as she can command. Her memory of facts is much impaired. She is not alive to cleanliness, or arrangement of dress, &c. These symptoms are occasionally entirely absent, when she regains her original acuteness and intelligence; but even when they are present, and inspire her with fear and anxiety, she doubts the reality of the sensations she receives, and appeals to those around her for confirmation and assistance. It is worthy of remark that, while in bed, or resting recumbent, she is rarely visited by these delusions, but that upon getting up, or upon any sudden change of position, she is surrounded by luminous spots, vacillates in her gait, and is for an interval incapable of attending to any external object, or of disabusing her mind of those perceptions, or of the fear and agitation which they create. This circumstance led her former medical attendant to sus-

pect organic disease of the brain. Since the appearance of her present condition, she has complained of exquisite pain across the lower part of the forehead and temples; and so intense has been the suffering in these spots upon some occasions, as to render her unable to bear the weight or even the touch of glasses, which she was accustomed to wear.

2. E. F. æt. 42; a lady of good birth, and originally of extremely amiable and refined manners; of considerable acuteness, but of rather an irritable temper. The head is small in all its regions; temperament highly nervous. She was educated at a time, and in a manner, which gave a preference to external grace over the more solid and supporting culture of the mind. She had no self-resource, and lived upon external pleasurable impressions. She married her husband after a short acquaintance, upon the ground of what they conceived was affection, but in great ignorance of their own hearts and expectations. A disagreement took place in the course of a few weeks, and seems to have been the commencement of a long and painful series of quarrels, recriminations, explanations, and estrangements and reunions, which terminated in a final separation. This disappointment, and great excitability of the heart and circulating system, are assigned as the causes of her disease, which was ushered in by excruciating headach, throbbing in the head, and confusion of thought. Before the period when she observed the puzzling appearances about to be detailed, she was tormented by frightful dreams, in all of which she was tormented by an old woman in a red cloak: That is, before the mind or other powers were so far enfeebled as to receive or for a moment give credit to false impressions in a waking condition, deviations from healthy action took place during sleep, when the mind is least able to discriminate as to the nature of the impressions imparted, and altogether incapable voluntarily to introduce or exclude particular trains of thought. The malady is now marked by various delusions, as to the colour, size, and shape of external objects, and as to her personal identity. This lady is perfectly rational upon all other points, and competent to give a clear and accurate account of her own feelings. Her credibility as an evidence of her own infirmities, is augmented by her rejection of these false impressions, and her refusal to act upon them, except when under the immediate influence of excitement and apprehension. Her belief, even then, is an equipoise between the suggestions of her senses, and the convictions of her reason. When driven to decide between such conflicting testimonies, she attributes the appearances to imperfection of vision. She chiefly dwells upon the changes which individuals with whom she is in con-

stant intercourse undergo in their general appearance, but especially in the colour of the hair and eyes, and the contour of the nose and face. For example, while residing in a clergyman's house, her host, or a person invariably addressed as such by the mother and daughters of the family, presented himself to her in at least thirty different forms; and so perplexing and distressing did the metamorphosis become, that she was, in self-defence, obliged to leave the house. These alterations most frequently occur when she becomes accustomed to the society of those in whom they are noticed, when the novelty and vividness of her first impressions have ceased to rivet her attention, and when her interest in ordinary events begins to flag. Twice persons have entered her apartment, who were not, and could not be, in the house; who were, in fact, at a distance, but who were so visibly before her, and submitted to be so thoroughly scanned and recognised, as to overcome all her doubts, and induce her to pursue them when they seemed to retire. Inanimate objects are likewise subject to these mysterious revolutions in their properties. Her caps, stays, &c. sometimes become so large as to caricature her real size; and she has observed differences of colour in curtains. Next in degree of intensity, is the suspicion that there are two E. F.'s exactly alike, wearing clothes of the same hue and material, and so placed and acting as to lead to incessant mistakes as to their individuality and concerns. When beset by this apprehension, she goes over her whole genealogical tree, produces letters from her relations, and so forth, to prove that she is what she represents herself to be,—the genuine E. F. As a psychological phenomenon, it is worthy of remark, that, associated with this morbid affection of the feeling of personal identity, are false impressions referred chiefly to persons which,—although they embrace changes in articles of dress, destroying their identity,—more frequently convey doubts as to the personality of individuals of whose identity she possesses, or can possess, far more ample and irrefragable evidence than of that of a cap or curtain. While subject to these delusions, she complains of headach chiefly confined to the superciliary ridge or lower part of the forehead, and, when traced by her finger, as clearly circumscribing the region of the organs of perception as the lines upon a phrenological bust.

III.—*Phrenological Visit to the Exeter Deaf and Dumb Asylum.* By Messrs W. J. Vernon and Adolphe Kiste.

Exeter, November 15. 1840.

Mr Editor,—Phrenologists profess their science rests on facts; and, as well-authenticated facts are more valuable than the most acute reasonings, they are naturally desirous of publishing their experiments. Will you oblige us by inserting in your Journal the following extract from the Log-Book of the Deaf and Dumb Asylum in this city. You will perceive, by the language, that the book is kept by the pupils. About six months ago Mr Barber delivered a course of lectures here, and was allowed to examine phrenologically the pupils in the Asylum, the result of which was published in No. XI. of the New Series. Being here delivering lectures on the science, we were kindly allowed to examine the boys by Mr Gordon, the head-master, who is not a phrenologist, but rather, if we may so speak, an hereditary opponent, being a near relation of the late celebrated anatomist, Dr Gordon of Edinburgh, one of the earliest and most celebrated opponents of phrenology in this country.

Extract from Log-Book of the Deaf and Dumb Asylum, St Leonard's, Exeter, November 10. 1840.—"A mild fine day. Two gentlemen came here and felt our heads; they were both phrenologists. Mr Gordon spoke to them (he referred to Mr Barber's remarks). He asked them what boy has a large imagination? They felt our heads, and pointed to Coyle. Their judgments are correct; Coyle has a powerful imagination, and delights in similes and deep thoughts. Mr Gordon again asked them to point out a boy of fine and generous dispositions, and who is fond of imitating others. One felt our heads, and pointed to Tom, and said he was fond of imitating others. He also said he possessed many fine qualities of the mind. He said also he is timid, and he is always frightened at pain, and again he is frightened at difficulties in his study. What boy is talented in mechanics? He felt our heads, and pointed to Cooke. We said his judgment, as that of Mr Barber, was correct, because G. Cooke was a great mechanic, and can make any thing he sees, and he invents many curious things. One of the phrenologists felt our heads, and pointed to Aubin, and spoke to Mr Gordon, and Mr Gordon told us the gentleman says Aubin is fond of drawing. We know he is so, because his faculty of drawing is admirable. The phrenologists felt another of our schoolfellows' heads: we must not name him, be-

cause it would pain his heart; and the phrenologist said he is a vain and sly fellow, and is forgetful of kindness. We cannot say 'tis not true, but we pray it is not so. The phrenologists felt another of our schoolfellows' heads, and said he is a subtle and artful fellow; he always sets cunning schemes, and thinks himself successful, but he always fails in his deceitful designs: that is very true; we know it is true. They felt B.'s head, and spoke to Mr Gordon and said he is sluggish; we said, their opinions are right, because we have often observed that boy does not love to write or learn of himself, but we are obliged often to remind him of his duties. The phrenologists felt E.'s head, and spoke to Mr Gordon and said, That boy is passionate, and when his temper is excited his features appear frowning and furrowed with rage; we said, it is true, and it is very true. The phrenologists felt P.'s head, and spoke to Mr Gordon and said, he was a cunning little fellow, but his habits are changing, and he is becoming more open: we said it is true; we know it is true. We do not say these things are true because the phrenologists say they are true; but we say these things are true because we know they are so by experience and observation of our schoolfellows."

The examination of the boys took place in presence of Dr Ottley and a party of ladies.—We remain, Sir, yours obediently, WM. J. VERNON & ADOLPHE KISTE.

III. NOTICES OF BOOKS.

I. *Timon but not of Athens.* 2 vols. post 8vo. London: Saunders & Otley. 1840.

We have frequently adverted to the increasing interest in phrenology manifested by the numerous notices of it in contemporary literature. The author of "Timon but not of Athens" is obviously a phrenologist, and one of no mean talent. He is liberal in politics, in religion, and in philosophy; and he writes like a scholar, a philosopher, and a gentleman. The work is in the form of a novel, but in substance it is a collection of didactic and piquant remarks on education, catholicism, the established church, the law of primogeniture, conjugal affection, lawyers, priests, public schools, politics, and similar topics. Occasion is taken to introduce the original letters (quite authentic) which passed between George IV. when Prince of Wales, and Caroline his wife, afterwards Queen of England; and between George III. and the Princess of Wales, and other distinguished persons. We recognise phre-

nology running through the author's general thoughts; and he makes his leading and favourite character a phrenologist.

"You are, then," said I, "a believer in the system of Gall and Spurzheim?"

"Yes; there was a time when I had no faith in the science of phrenology. It was through a conversation that I one day had with an intelligent German that my attention was first turned to it as a science. I began to study it perseveringly; and the result was, my complete conviction that all the faculties of the mind, and all those manifestations of it which make up the moral nature of man, depend on the organization of the brain."

"Did you ever read Jeffrey's attack upon it, in the Edinburgh Review, when the system was first rising into notice?"

"Yes; the number which contained it was forwarded to me; I read that article attentively, and I rose from the perusal of it with a lowered opinion of the writer. The attempt at ridicule is flippant and puerile. There is no trace in it of enlightened, or even of rational discussion. His mind is manifestly strong, excursive, and sarcastic; but it has all the littleness of intellectual vanity, mingled with a large leaven of national pride. He felt that if Gall and Spurzheim's philosophy of the human mind was true, that of his countrymen Reid and Stewart would fall to the ground. The aim of the article in question was not to *examine* the doctrines of phrenology with reference to their truth or fallacy, but, if possible, to get the laugh against them, lest the fame of the Scotch philosophers should suffer damage. But the reviewer made no way with those who think for themselves. To them he proved nothing but his own self-sufficiency; and, while the disciples of phrenology were daily multiplying in Europe and in America, his attack upon it was thrown aside and forgotten." (vol. i. p. 220.)

The author of "Timon" stands in no need of commendation from us; but we are proud of him as an ally, and hope that he will continue to disseminate wholesome truths in future works.

II. *Fraser's Magazine for November* 1840.—Article on the Philosophy of Phrenology.

This Number of Fraser's Magazine contains a temperate and well-written article entitled "Mr George Combe and the Philosophy of Phrenology," which demands a brief notice in

our pages. The history of the article has been communicated to us by a correspondent, and will form an appropriate introduction to our remarks.

In March 1840, Mr James K. Dow, of the British School, Nottingham, delivered a public course of eight lectures on phrenology in that town, the attendance on which ranged from 70 to 120 persons. After the close of the lectures, it was announced in the Tory newspaper of Nottingham, that the Rev. W. J. Butler, Rector of St Nicholas, would deliver a lecture to shew that "the philosophy of Mr Combe, as advocated in his Constitution of Man, was deistical in its tendencies." The lecture was delivered gratis, and about 70 persons attended, including Mr Dow himself and other phrenologists. This lecture, a little more polished and extended, constitutes the article in Fraser's Magazine. A report of it was published in the Tory newspaper, and highly commended. About ten days afterwards, Mr Dow, in the same room and also gratuitously, delivered "a lecture in vindication of Mr Combe's Constitution of Man from the attack of the Rev. W. J. Butler ;* and which was attended by not less than 300 individuals, consisting chiefly of the most thinking and respectable mechanics. It was so well received that it led to a controversy in the newspapers, in the form of letters, two of which were written by the Rev. Mr Butler in defence of his lectures.

As it is a rule in conducting this Journal to exclude discussions concerning Scripture and Scripture doctrines, and to confine ourselves to natural facts and philosophical inferences from them, we do not mean to follow the Rev. Mr Butler into the details of his objections. Nor is this necessary, Mr Combe's "Constitution of Man" has been twelve years before the public, and has met with the approval of a large section of the Christian world. It is beyond the risk, therefore, of sustaining prejudice from any review. All that we propose to do, is to notice the *manner* in which the Reverend Rector of St Nicholas has conducted his attack.

He cites two cases to shew that phrenology is unfounded in nature. The first was an experiment performed "some few years ago" by a physician, a firm believer in the "theories of Dr Spurzheim," who declared that, in the cast of the skull of a murderer, "Secretiveness was the quality, of all others,

* This lecture, we are assured, was highly creditable to Mr Dow, not only for the able and complete refutation of the arguments of Mr Butler, but for the moral courage displayed in so promptly stepping forward in defence of phrenological truth, at the risk of exciting considerable obloquy against himself from the prejudiced portion of the religious public, and that, too, in opposition to an antagonist, however illiberal, of acknowledged talent and attainments.

most strongly indicated;" from which conclusion the reverend gentleman dissented, "since it was manifest, from the evidence on his trial, that the fellow could never have been convicted, and, in all probability, never would have been even suspected, if he had only kept his own counsel." Whatever effect this experiment may have had on the mind of Mr Butler, his report of it is entitled to no weight whatever with any philosophical inquirer. He does not give the name either of the physician or of the criminal, nor does he inform us where the cast may be inspected, or where the record of the trial may be read. If any phrenologist had offered an equally vague and meagre case as a fact in favour of phrenology, he would justly have been treated with ridicule; and informed that he was ignorant of the first principles of philosophical induction.

The second case, Mr Butler "can vouch for." "It shews a second signal failure," says he, "in this pretended art or science." A phrenologist "confidently announced a taste and organ for music as forming the characteristic" of a certain individual. The subject of the experiment answered, "I would not positively say whether I could distinguish 'God save the King' from the 104th Psalm or not."

In answering this objection, the first point is to ascertain whether the organ was really large, or whether only an error was committed by the phrenologist who called it so, when it was actually small; but on this we can say nothing, as no evidence is presented, and no reference made, by which the fact may be verified. In the former case, the objection would have weight, but in the latter none.

Farther, we could furnish Mr Butler with other instances in which persons, even well skilled in phrenology, have made mistakes in regard to the organ of Tune; but this does not alter its size, or convert a large into a small organ. The answer to such cases will be found in Mr Combe's address to the Phrenological Association, in page 4 of our present number. The real point at issue is this—Is the organ of Tune ascertained? To answer this question, every philosopher will seek for the strongest evidence, and that which is freest from difficulty. If, then, any person capable of discriminating size, will compare casts of the foreheads of Hadyn, Mozart, Paganini, and other men celebrated for their musical genius, with casts of the heads of Anne Ormerod, and other individuals who can hardly distinguish melody from a common noise, and prove that the development is equally large in this organ in them all, phrenologists will give up their belief in it; but, while truly philosophical evidence is shunned, we must be excused for attaching no importance to what may be the error of an

individual whose name and qualifications are unknown, in a case which probably presented difficulties; for cases do occur in which even a good observer may err in estimating the organ of Tune.

We have spoken of these cases as if the whole information furnished by Mr Butler were scrupulously accurate, so far as it goes; but we must be excused for now expressing our doubts of the perfect correctness of the reports, even mutilated as they are. Experience leads us to doubt the truthfulness of the greater part of the reports of adverse cases, and we shall shew presently that Mr Butler is not particularly accurate, where *perfect* accuracy was not only within his power, but incumbent on him as a duty.

In stating his objections against "The Constitution of Man," he refers to "the People's Edition," and, in commenting on them, we shall use the same edition.

First, All his quotations are drawn from, and his commentaries expended upon, the "Introductory Remarks" to the work. Not a word is extracted from it, from chapter first, page 7, to the conclusion on page 98.

Secondly, He does not combat one of the facts stated in "The Constitution of Man," nor controvert one logical deduction from them, unless his two cases can be called facts. The whole article is an argument in which he first assumes that his own theological opinions are infallibly correct, then endeavours to shew that Mr Combe's doctrines are at variance with them, and finally arrives at the conclusion that therefore Mr Combe's work is dangerous and deistical.

We strongly recommend to phrenologists not to allow themselves to be drawn into an argument in answer to such objections as these; because, by such a mode of reasoning, the adherents of every sect, however widely they may differ from, and even contradict each other, may, with the greatest ease, demonstrate not only phrenology, but geology, astronomy, or physiology to be theologically unsound. The philosophical answer to such objectors is given in "The Constitution of Man," page 89. "If," says Mr Combe, "the views of human nature expounded in this work be untrue, the proper answer to them is a demonstration of their falsity. If they be true, they are mere enunciations of the institutions of the Creator, and it argues superstitious and not religious feelings, to fear evil consequences from the knowledge of what Divine Wisdom has appointed. The argument that the *results* of the doctrine are obviously at variance with Scripture, and that *therefore* the doctrines *cannot be true*, is not admissible; for, in the words of Dr Whately, 'if we really are convinced of the truth of Scrip-

ture, and consequently of the falsity of any theory (of the earth, for instance) which is really at variance with it, we must needs believe that that theory is also at variance with observable phenomena; and we ought not therefore to shrink from trying the question by an appeal to these.'" We repeat that Mr Butler has disregarded these most obvious principles, and so conducted his argument as to take it out of the field of philosophy, and place it in that of polemical divinity.

Finally, He lays the foundation of his objections in misquotations of Mr Combe's text. On page 2 of the Constitution of Man, Mr Combe says, "The constitution of this world *does not look like a system of optimism*. It appears to be arranged, *in all its departments*, on the principle of slow and progressive *improvement*." Mr Butler suppresses this statement entirely. In quoting the following passage (which he does by placing it between inverted commas, and saying that Mr Combe asserts it), he *omits* the words here printed in italics, and *inserts* those printed in CAPITALS. "*In our own country*," says Mr Combe on page 4, "*two views of the constitution of the world and of human nature have long been prevalent, differing widely from each other, and which, if legitimately followed out, would lead to distinct practical results. The one is, that* the world, *including both the physical and moral departments*, contains within itself the elements of (ITS OWN) improvement (AND PERFECTIBILITY)."

Again, Mr Combe has said, "There is no countenance given to atheism by this theory. On the contrary, it affords the richest and most comprehensive field imaginable for tracing the evidence of Divine power, wisdom, and goodness in creation." Instead of this, the reverend Rector makes Mr Combe say that it affords, in his opinion, "the richest field imaginable for blessing and praising God"!!

The conclusion which he arrives at is, that "The latter assertion certainly makes this, the material theory, his (Mr Combe's) own."

Let us see, then, by what steps he reaches this inference. First, after "world," in the foregoing passage, he omits the words, "*including both the physical and moral departments;*" secondly, he inserts the words "ITS OWN" before "improvement;" and thirdly, after "improvement," he inserts the words "AND PERFECTIBILITY," in direct contradiction to Mr Combe's text. The conclusion is then plausibly made out, that "the material theory is Mr Combe's own"!!

The reverend gentleman knew that he was misrepresenting these passages; for, after having not only said that Mr Combe "asserts" and ' do ine," but placed the words as

now cited, between inverted commas, to shew that they were quotations, he, in the perfect consciousness that this would be detected and exposed, proceeds, on page 513, to secure for himself a door of escape; for he there says, "We must now grapple with that gentleman's exposition of the case between these two antagonising principles; and, *in order to do it fairly*, we shall give it in his own language." He then quotes the passage *correctly*. But why did he at all do it otherwise than "fairly?" Why did he strike the *key-note* of his argument in misrepresentation? He shews the dexterity of a wrangler, without the spirit of a philosopher. The correct quotation is introduced as a mere variation in the air, which he trusts that his readers will not scrutinize, or will immediately forget; for, in the paragraph immediately following it, he resumes his argument, not on Mr Combe's text, but on his own suppressed and interpolated version of it! His objections are directed against the proposition that the world contains a system of "perfectibility," a word introduced into the text by himself, in direct contradiction to Mr Combe's positive statement, that to him this world "does *not* look like a system of optimism."

The object of the author is avowed to be, to fix "the material hypothesis" on Mr Combe; and, in trying to accomplish it, he proceeds in his misquotations. On page 516, he quotes the following passage from "The Constitution of Man," in which he *interpolates* the word here printed in *capitals*, and *omits* the words printed in *italics*. "In short," says he, "according to it (the second hypothesis), science, philosophy, and all (THE) arrangements *of the physical, moral, and intellectual elements* of nature, are subordinate in their effects on human happiness in earth, to religious faith." If we insert the word "the" before "arrangements," and omit the words "*moral and intellectual elements*" before "nature," in this quotation, we shall certainly make it approach more closely to an assertion of a "material hypothesis."

The reverend Rector has altered the following passage to so great an extent that we cannot point out its errors by any varieties of type. We therefore beg our readers carefully to compare the original with his version, and judge for themselves. "If," says Mr Combe, "the one hypothesis be sound, man must fulfil the *natural conditions* requisite to the existence of religion, morality, and happiness, *before* he can reap full benefit from religious truth." The words here printed in italics are in the same type in Mr Combe's text. Mr Butler's version, given by him between inverted commas, is this: "'The philosophers,' he (Mr Combe) says, 'assert that there are natural conditions which man must fulfil, before religious

III. *The Quarterly Medical Journals for October* 1840.

All the British quarterly medical journals have noticed Dr Morton's *Crania Americana* in those terms of high approbation in which it so well deserves to be spoken of. The longest, and to the phrenologist most interesting, of the notices, is that in the *Medico-Chirurgical Review*, occupying thirty closely-printed pages. The reviewer has selected from Dr Morton's work a number of particulars regarding the heads and mental characteristics of different families of the human race, "with a view to elucidate that natural correspondence which subsists between the shape of the head and the character of mind, in active life, which," says he, "we regard physiologically as constituting the most important fundamental principle in Mental Science—not useless in education, government, and legislation, in moral, religious, and medical philosophy."—(P. 439.) On Dr M.'s anthropological classification and its elements he remarks, that, instead of adopting the forehead as a chief "physical," and "intellectual" capacity as a principal "moral," character in the distinction of races, the Professor "might have drawn three kinds of *organic* characters from the head, by viewing it under a threefold distribution, corresponding with the three recognised lobes of the brain. From the mind, also, in a similar way, he might have obtained three kinds of *mental* characters, by considering its faculties under the threefold distribution into affections, sentiments, and intellectual powers. Such an arrangement would have yielded the principles of a consistent, though limited, scientific system; for, as in individuals, both families and races may be distinguished by the predominancy of one lobe of the brain over the other two, and of one order of the mind's faculties over the other two—for example, the anterior cerebral lobe may exhibit an ascendancy of size and energy over the other two, while the intellectual powers are displaying a high degree of vigour and activity over the two other orders of mental faculties. We find a clear illustration of this example in Dr M.'s system; for, in '*the large oval head*' and its '*full elevated forehead*,' co-existing with the *highest* '*intellectual*' *aptitude*, we distinctly perceive a remarkable confirmation of the psychosophical doctrine, that the anterior cerebral lobe, by its several parts, performs the functions of organic instruments, appropriated to the higher intellectual powers."—(P. 439.) With respect to the effects of artificial change of the form of the skull by compression, the reviewer is of opinion that this "does not change the structure or qualities of the brain, but merely

truth can enter into his heart with good effect.' Mr Combe continues, 'According to the other, he must believe aright in religion and be the subject of spiritual influences, *independent of natural causes*, before he can become capable of any virtue or enjoyment.'" Mr Butler, in quoting this passage on page 516, omits the words "independent of natural causes," which form the real subject of the controversy; and, in repeating it on page 517, he transforms it into this proposition, "We do not believe, as he (Mr Combe) ascribes unto us, 'That no man can be capable of any virtue or enjoyment, who is not a true believer.'"

In quoting the following passage, he omits the words here printed in italics. "This may be attributed to the premature formation of a system of theology *in the dawn of civilization*, before the qualities of the physical world, and the elements of the moral world, *and their relationship*, were known; and to erroneous interpretations of Scripture in consequence, partly, of that ignorance." (P. 5.)

Perhaps the reader may suspect that Mr Butler and we are quoting from different editions of Mr Combe's work. But this is not the case: the "People's Edition," which we both cite, was stereotyped at first, and the same plates are still used. Only blank pages could preserve an author from condemnation, where such liberties as these are used with his text; and yet Mr Butler appears as the champion of the Gospel of truth, and his object is to convict Mr Combe of being its foe!

Mr Butler's article, we have said, is temperately, nay courteously, written, so far as Mr Combe personally is concerned. We do not wish to treat Mr Butler in a different spirit; but this very respectful treatment of his author was calculated to wound him more deeply than the foulest abuse, because it disarmed suspicion of the misrepresentations which were committed against him.

For the reasons before stated, we abstain from entering into any discussion of Mr Butler's theological views; and we have bestowed this notice on his article both for the sake of suggesting to our readers the line of argument which, in our opinion, every scientific phrenologist should adopt in answer to such attacks, and to solicit them to make it a general rule to scrutinize closely all quotations brought forward against phrenology by opponents professing a regard to religion as their motive; for, according to our experience, these controversialists seem to think that the end sanctifies the means, and that no misquotation or misrepresentation can be wrong, if only used to support what they conceive to be religious truth.

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All the British quarterly medical journals have noticed Dr Morton's *Crania Americana* in those terms of high approbation in which it so well deserves to be spoken of. The longest, and to the phrenologist most interesting, of the notices, is that in the *Medico-Chirurgical Review*, occupying thirty closely-printed pages. The reviewer has selected from Dr Morton's work a number of particulars regarding the heads and mental characteristics of different families of the human race, " with a view to elucidate that natural correspondence which subsists between the shape of the head and the character of mind, in active life, which," says he, " we regard physiologically as constituting the most important fundamental principle in Mental Science—not useless in education, government, and legislation, in moral, religious, and medical philosophy."—(P. 439.) On Dr M.'s anthropological classification and its elements he remarks, that, instead of adopting the forehead as a chief " physical," and " intellectual" capacity as a principal " moral," character in the distinction of races, the Professor "might have drawn three kinds of *organic* characters from the head, by viewing it under a threefold distribution, corresponding with the three recognised lobes of the brain. From the mind, also, in a similar way, he might have obtained three kinds of *mental* characters, by considering its faculties under the threefold distribution into affections, sentiments, and intellectual powers. Such an arrangement would have yielded the principles of a consistent, though limited, scientific system ; for, as in individuals, both families and races may be distinguished by the predominancy of one lobe of the brain over the other two, and of one order of the mind's faculties over the other two—for example, the anterior cerebral lobe may exhibit an ascendancy of size and energy over the other two, while the intellectual powers are displaying a high degree of vigour and activity over the two other orders of mental faculties. We find a clear illustration of this example in Dr M.'s system ; for, in ' *the large oval head*' and its ' *full elevated forehead*,' co-existing with the *highest* ' *intellectual*' *aptitude*, we distinctly perceive a remarkable confirmation of the psychosophical doctrine, that the anterior cerebral lobe, by its several parts, performs the functions of organic instruments, appropriated to the higher intellectual powers."—(P. 439.) With respect to the effects of artificial change of the form of the skull by compression, the reviewer is of opinion that this " does not change the structure or qualities of the brain, but merely

alter its form, so as to give the head an unnatural shape, rendering it altogether an unfaithful or delusive source of observation for the physiologist in conducting his researches to establish characters of organic and mental distinction, in persons, families, and nations."—(P. 435.) And again: "By this, we are told, the absolute internal capacity of the skull is not diminished, and the intellectual faculties suffer nothing: and why should they? Their organs are not lessened; they are merely pushed into an unnatural shape by displacement."—(P. 463.) In speaking of the Caribs, he states that this miserable custom becomes yearly less prevalent; and that thus, by opportunities not distant, the physiologist will be enabled to contemplate the Caribbean head under its natural configuration.

The reviewer treats at some length of the extinct Peruvian race, noticed in our last Number, p. 353, whose extraordinarily shaped skulls are found in great abundance at Atacama, and in the neighbourhood of Lake Titicaca. He gives a summary of what Dr Morton has written about these interesting relics, and thinks it a pity that the question has been overlooked, "Whether the people, with elongated and brutal skulls, were the *sculptors* of stone idols, resembling the human figure, gigantic in size and clothed in long vestments, and of colossal human figures cut from solid rock; and the *architects* of enormous gateways with their hinges, platforms, and porches, of a gigantic pyramid, and of innumerable tombs of a grand species of design and architecture, resembling Cyclopean remains, and not unworthy of the ancient Grecian and Roman artists?"—(P. 457.) From a consideration of the whole facts, he arrives at the following conclusions. "Thus," says he, "have we furnished a distinct and complete exhibition of Dr Morton's inquiry, under all its discursiveness; and, having weighed his facts and reasons with attention and impartiality, we unreservedly coincide with him in affirming these results:—that, at certain specified places in Peru, there are sculptural and architectural remains: that, in a certain district, there is a Peruvian cemetery containing numerous sepulchral relics of a people whose badly-formed skulls are small, greatly elongated, and narrow in their whole length, with a very retreating forehead: that, in the upper provinces of Peru, there are 'innumerable tombs' containing the mortal remains of men, the formation of whose crania seems to prove that they are an extinct race of natives: that, in those tombs, a traveller found skulls remarkable for their extreme extent behind the occipital foramen, with the facial bones much elongated, so that the general appearance of their p[illegible]sors must have been rather that of the ape family

than of human beings: that, although living in the utmost barbarism at the advent of the Incas, yet the Yuncas [tribes near the sea-coast before the advent of the Incas] had erected a remarkable temple: that the Chimuyans [contemporary with the Yuncas, and living farther south] appear to have possessed extensive and regular edifices, with some other attributes of civilization: and that, among the tribes whom the Incas found in occupation of the Peruvian territories, the inhabitants of Collao [in which Lake Titicaca is situated] and Chimu might have been as brave as bull-dogs and as unyielding as the Hurons, without evincing an ordinary degree of intelligence. At the same time, we do not see that the Doctor has ventured to determine, or succeeded in adducing evidence to prove, that the people deposited in graves of sand and salt at Atacama, or the ape-like race entombed at Titicaca, could have been endowed by nature with powers capable of designing and erecting the fore-described structural and architectural remains: far less, even, has he said or shewn that such heads ever devised or directed the construction of the works whose ruins are so interestingly depicted on his pages, as to fascinate the attention of artists and antiquaries. On the belief that the typal skull is quite natural and free from artificial distortion, we conclude that such a people never did or could produce such works: that the excavations, structures, monuments, and sculptures, were the workmanship of a race anterior to that which preceded the Incas: and that the men, whose corpses now moulder in the tombs of Titicaca, profaned the fabric of a nobler race by appropriating them for sepulchres."—(P. 458.) The reviewer expresses his regret that no account has been furnished of the form of the head given to the human figures and stone idols, the fashion of their vestments, and the kind of architecture adopted in the gateways, &c.; and then proceeds to shew, from a variety of physiological considerations, "that such people, *naturally* having small narrow heads, with two-thirds of the brain deposited behind the occipital foramen, are utterly incapable of producing works not unworthy of the arts of ancient Greece or Rome, for grandeur of design and architecture."—(P. 459.) This part of the subject he concludes by remarking, that if the Peruvian race in question "really did design and rear these works, and had heads depressed and denaturalized by mechanical appliances—as we can discover much reason to suspect it was—then had this people their heads converted into monstrosities, and consequently perverted into objects not amenable to this or any other law for directing the judgment of Nature."—(P. 460.) As mentioned in our last Number, it appears that Dr Morton, subsequently

to the publication of his work, has been led to believe these Peruvian skulls much more changed by pressure than is there allowed. Dr Gall, we may observe, says in reference to cases of distortion, " After all, we are very far from applying craniology to deformities resulting from violence."—(*On the Functions of the Brain*, Dr Lewis's translation, iii. 16).

The article on Dr Morton's work in *The British and Foreign Medical Review* is, likewise, very excellent; and it is illustrated by copies of ten of the woodcuts. Here also the skulls of the ancient Peruvians are specially discussed. Artificial flattening is next considered, and reference made to the circumstance, that, according to the concurrent testimony of all travellers who have visited them, the "flat-head" tribes are remarkable for their acuteness and capacity. " These facts," says the reviewer, " as well as those already stated in regard to the character of the ancient Peruvians, are of much interest in regard to phrenology. Now, it can scarcely be denied that, looking at the subject of artificial compression in a phrenological point of view, one of two effects must result; either the growth of some organs must be greatly impeded and that of others encouraged, in which case the influence on the character ought to develope itself as the individual approaches adult age; or the relative position of the organs will be so changed that common rules for admeasurement will not apply to them; and then the question arises whether these rules are applicable to uncompressed crania, of which the form so much resembles that of the skulls that have been submitted to the process. If not, they need to be greatly modified before their results can be *certainly* depended on in *any* case, even within wide limits. It will be remarked, however, that these observations do not apply to those fundamental principles with which we have, on a former occasion, expressed our concurrence; but only to the independent question, which we must regard as still *sub judice*, of the degree of certainty with which the relative size of the several organs can be predicated from the external configuration of the cranium."—(P. 483.) After some farther observations, which our limits prevent us from quoting, the reviewer expresses his surprise, that in Mr Combe's phrenological contribution to Dr Morton's volume, on the mental characters and cerebral developments of nations, all notice of the question of artificial compression has been omitted. The reason, we presume, was, that no certain data were believed to be yet possessed for deciding on the ts of such compression. The case of the Flat-headed Indi ed in our present Num-

ber (p. 42), is of considerable value in reference to this subject, and there is much occasion for regret that the brain was not inspected after death.

In the *Edinburgh Medical and Surgical Journal* is a review of the same publication, written, as we conjecture, by the editor, Dr Craigie. To this conclusion we are led by the erudition and ability which the article displays, as well as by the complete silence preserved with respect to phrenology, and to Dr Morton's acknowledgment "that there is a singular harmony between the mental character of the Indian, and his cranial developments." The article includes a learned historical retrospect of the previous attempts which have been made to classify the human race. Among the enumerated works in which representations of skulls of different nations are given, the reviewer mentions (besides the *Decades* of Blumenbach) the *Museum Anatomicum* of Edward Sandiford, published in 3 vols. folio, at Leyden, in 1793–1827; and an able work by Dr M. J. Weber, Professor of Comparative and Pathological Anatomy in the University of Bonn, on the primary forms and the generic varieties of the human skull and pelvis.* The former of these two publications contains figures of the crania of the Calmuck, the Tartar, the Ethiopian or Negro, the Russian, and the Swede, Englishman, Frenchman, and Hanoverian. Professor Weber also has delineated a number of skulls. According to the reviewer, he argues that, however similar the individual skulls of the same race may be to each other, and however distinct the characters of the races may seem to be, in well-marked skulls, yet between the skulls of the same race often the greatest differences are observed, so that often the pure general figure of the race is altogether obliterated, and actually here and there in one race forms take place which belong to another race, and that in general no individual sign or character of any definite race is so constant or appropriate that it may not be met with in other races. This statement, the accuracy of which is confirmed by our own observations, leads to the conclusion that no form of head should ever be inferred to be national, except from so large a collection of skulls as to shew what is really the prevailing and characteristic shape. This was Gall's opinion, and the same view was stated by ourselves in vol. viii. p. 289. The words of Gall are these: "To observe a small number of crania (of a nation) is usually thought sufficient in order to be prepared to draw deductions from them; it would in fact be

* Die Lehre von der Ur-und Racenformen der Schädel und Becken des Menschen, von Dr M. J. Weber, &c. Dusseldorf, 1830. 4to.

so, if the moral and intellectual character of all individuals composing a nation were the same. According to my observations and those of Spurzheim, there is, in this respect, the greatest difference between man and man, even among nations to whom a decided national character is attributed with reason." He adds examples, and concludes with the remark, that "we therefore pass a hasty judgment, when we think to discover the general character of a nation in a small number of crania." (*On the Functions of the Brain*, Dr Lewis's translation, v. 254.)

The article in the *Medical and Surgical Journal* is illustrated by lithographed copies from Dr Morton's plates of the skulls of two ancient and two modern Peruvians, an Aturian, a Chinook chief, a Natchez Indian, and an Oneida.

At p. 519 of the same Journal, a case of recovery from a gunshot wound of the forehead, with loss of brain, by Dr H. Janson, is abridged from the American Journal of the Medical Sciences, May 1840. The patient fully recovered, and, at the time the account was written, appeared to be in the full possession of all his faculties, "except," says Dr Janson, "perhaps a slight imperfection in those organs phrenologically ranged in the course of the ball."

There are several articles in the *Medico-Chirurgical Review*, the purport of which, did space allow, we would gladly impart to our readers. We cannot, however, do more than refer to a gratifying extract, at p. 304, from the recent Naval Medical Statistical Report to Parliament, from which it appears that considerable attention is now paid to the mental improvement of seamen; Remarks on Stammering, p. 489; Andral on the value of Physiological Experiments on living animals, p. 508; Physiology of Ventriloquism, p. 527; and allusions to the functions of the cerebellum, pp. 533 and 562. In the latter page is a case of softening of both lobes of the cerebellum, which were, moreover, found of a pale rose-colour. The facts, it is said, "do not seem to lend much confirmation" either to the prenological view of its function, or to the idea that it is a regulator of motion. We perceive, however, in the facts reported, nothing *against* the phrenological doctrine. The case appears at greater length in the Dublin Journal, September 1840, which we have not seen.

IV.—*Our Library Table.*

The article SPURZHEIM in Part CXVIII. of the *Encyclopædia Britannica*, just published, is an accurate and comprehensive sketch of his life and works. The following is the concluding paragraph. "As a phrenologist, Dr Spurzheim is generally regarded by his British disciples as having improved the philosophical aspect of phrenology, by classifying the facts better than Dr Gall, and also by pursuing them farther into their philosophical, moral, and practical results. At the same time, it appears to be the opinion of many that he sometimes proceeded to systematize prematurely, and that in his latter years he occasionally modified his views rather through caprice than from reason, or from the accumulation of new observations. It is justly objected to his writings, in comparison with those of Gall, that in announcing his discoveries he details neither the circumstances in which they were made, nor the cases by which they are supported. There has been much controversy on the relative merits of these two physicians in extending the boundaries of phrenology and elucidating the anatomy of the brain. On this subject the curious reader may consult the Phrenological Journal, ii. 185, vi. 307, and xi. 225; also the preface to Spurzheim's Anatomy of the Brain."

In *The American Journal of Science* for July 1840, Professor Silliman has published an excellent article on phrenology, written by himself. He argues with sound judgment and moderation for the truth or high probability of its general principles, and claims for it a calm and candid examination. "As it is a fair pursuit," says he,—"a legitimate branch of physical, mental, and moral philosophy—let it then have free scope, until additional observations, through a wider range of time, and made by many other men, equally or even better qualified for the investigation, shall either establish or overthrow its claims." While offering no opinion concerning phrenology as a whole, he regards its leading principles as sound, and its division of the brain into three regions—animal, intellectual, and moral—as borne out by facts. He vindicates it from the charge of having an irreligious tendency, and maintains that, if true, it is of vast importance to mankind. We mean to transfer the whole article to our pages in a subsequent number, but in the mean time quote the paragraph with which the professor terminates his truly philosophical observations. "We have appeared in the field as mediators, not as belligerents on either side, but hoping to recommend a suspension of hostilities preliminary to an amicable and fair discussion of the points at issue, in the confident hope that a permanent and honourable

pacification may be the result, and that all the parties in the controversy, having defined the boundaries of their respective dominions by more exact limits and more durable landmarks, may find in the end, that the independence of each is more fully established, while all the members of the alliance are bound more firmly together than ever, by a consistent and harmonious efficiency, as beneficent in its influence as it will be delightful to every truly enlightened and philanthropic mind."

The American Phrenological Journal continues to be conducted with vigour and ability. Only four of the recent numbers (from May to August inclusive) have reached us; and there is a gap in our file from October 1839 to April 1840. In a future publication we shall give some account of the contents of those numbers which have not hitherto been noticed in our pages.

The Phrenological Almanac for 1841, by L. N. Fowler, published at New York, seems, from the necessarily hasty examination which we have been able to give it, to be a meritorious and judicious production. It contains a Life of Dr Gall, a condensed account of the mental faculties, and articles on the difference between the heads of the sexes, physiology and phrenology in the formation of marriages, the laws of hereditary descent, and Dr Spurzheim's visit to a school in Boston. There are also many phrenological cases and short extracts, illustrated by a profusion of characteristic, though coarsely executed, woodcuts. Among the cuts is a good full-length profile of Dr Spurzheim, represented as lecturing at the Athenæum in Boston.

Select Discourses on the Functions of the Nervous System, in opposition to Phrenology, Materialism, and Atheism: To which is prefixed a Lecture on the Diversities of the Human Character, arising from Physiological peculiarities. By John Augustine Smith, M.D., *Professor of Physiology in the University of the State of New York.* (New York, 1840.) Such is the comprehensive title of an elegant duodecimo which has reached us just as we were going to press. We have had time as yet only to glance through it, reading a few pages in different parts of the book. So far as we perceive, Dr Smith has much to learn before he becomes qualified to discuss the evidences of phrenology; but as we have neither room nor time for a minute review of his observations, we shall content ourselves for the pres[illegible]t [illegible]th allow[illegible]g him to speak for himself. In [illegible]openi[illegible]t," he expresses himself as follows: "[illegible], in a great measure, constitu- [illegible]nd must have remarked. To

throw some light *on this curious phenomenon* is the object of the ensuing discourse. In perusing it, the reader will, I fear, charge me with being *less cautious in the formation of my own theories than I have been rigid in scrutinizing the speculations of others.* Such an allegation it is not for me to controvert. *Believing my opinions to a certain extent just, and ignorant of the limits which should be affixed to them,* I would remind those who may be disposed to agree with me, that *negative errors are commonly less dangerous than positive blunders.* Where consequently the hazard on either hand appears equal, it were *better to refrain from what may be true, rather than to plunge into what is more probably false, and more frequently pernicious.*" Such is the whole of Dr Smith's advertisement, which, to do him justice, although not the most inconsistent, is by far the obscurest part of his book; and as we are not sure that we have the happiness to understand what it means, we shall leave the reader to interpret it for himself. The only remark we shall now add is, that the juxtaposition in which Dr Smith has placed phrenology, materialism, and atheism, on his title-page, is a little unfortunate; as, so far from connecting them in the book, he expressly states that phrenology rather adds strength to the ordinary arguments *against* materialism.

Reviews of Mr Dean's *Philosophy of Human Life*, Mr Winslow's *Anatomy of Suicide*, the annual *Reports* of the principal public lunatic asylums for 1840, and *The Interdict*, a novel, have been prepared, and will appear in our next number; together with a second notice of the article PHRENOLOGY in *The Penny Cyclopædia.* We intend to review also, if possible, a pleasing little work on *The Influence of the Affections upon Character*, by Edwin Chapman. The author mentions, that its contents were originally delivered as lectures to Sunday school teachers, at the request of the Committee of the Sunday School Association; and says, he "feels it due to Mr George Combe to state, that the Lectures were first composed and delivered, while the impression was yet new and full upon his mind of that gentleman's admirable and popular work, 'On the Constitution of Man;' and that if his views have any clearness and consistency, they owe much of those qualities to that publication. It is no part of his duty or intention," he continues, "to impugn or defend the phrenological portion of that work. The conception of human nature which it embodies would stand out entire and clear though that portion were altogether removed. Phrenology does but point out what are esteemed external indications of the various faculties and affections of the human mind. Experience is the test of their existence; upon a careful con-

sideration of which it can scarcely happen, that any one should dispute the general correctness of Mr Combe's enumeration, the higher and lower stations which the various faculties and affections respectively occupy, and the valuable practical conclusions which are thence to be drawn by the self-cultivator, or by him whose high duty it is to do what in him lies towards the formation of a healthy, vigorous, holy, and happy character in the young intrusted to his care." (Preface, p. vii.)

In the appendix to his *Human Physiology*, Dr Elliotson has recently published an article headed "Phrenology," having for its principal object a farther exposition of "the injustice of Dr Spurzheim towards Gall."

A series of excellent letters signed M. B. S., on "Criminal Jurisprudence in relation to Mental Organization and Social Responsibility," has appeared in the *Spectator* newspaper of 10th October, and subsequent dates. The author, who is obviously Mr M. B. Sampson, proceeds boldly and avowedly on phrenological data. This subject is at present exciting much attention both in England and Scotland, and will be discussed in our pages on an early occasion.

IV. INTELLIGENCE AND SHORT ARTICLES.

The Phrenological Journal.—In this number the management of the Journal has been resumed by the Editor of the last three volumes of the Old Series. It was not without considerable hesitation that he resolved to undertake once more the fulfilment of duties, the sufficient performance of which demands a greater amount of both talent and knowledge than he is conscious of possessing. He is, however, encouraged by the promise of regular contributions from several distinguished phrenologists, and hopes that, with their assistance, the pages of the Journal will be rendered at least equally interesting and instructive as while it was formerly under his care. Of the principles on which the Journal will in future be conducted, it is unnecessary to say much: the great object in view is the advancement and diffusion of the physiology of the brain, and of the philosophical and practical doctrines logically deducible from it: what we desire, is the promotion of truth and the explosion of error, by whomsoever taught, and by whomsoever opposed. That our own wishes with respect to the efficiency of the Journal will be fully realized, it would be folly to expect; for within the limited number of pages at our command, and unaided as we are by a body of *paid* contributors, it will be impossible for us to perform, not only what variously-thinking readers may conceive to be desirable, but even what may to ourselves appear highly important and worthy of being executed. The present number may be taken as a specimen of what the Journal is intended to be. We desire to represent no *party* of phrenologists; but shall welcome truth from every quarter, and be glad to see the errors of all parties alike refuted. Phrenology we, in common with its best-informed adherents, regard as still incomplete; and we shall consider it our duty to aid in the removal of imperfections wherever they exist, as well as to advocate those departments of the science—and in our opinion they are of no small extent—which seem to be well ascertained and established. Without un-

dertaking to insert all that may be transmitted to us, we invite contributions of facts, and of well-considered reasonings founded on facts, expressed in precise, temperate, and courteous language. Every description of phrenological intelligence, whether in manuscript or in newspapers, will likewise be most acceptable; and we shall feel grateful for hints of all kinds, and for references to publications directly or indirectly bearing on phrenology. When facts are communicated by individuals not previously known to us, it will be desirable that the correspondent who transmits them should procure, if possible, an introduction to us through some person with whom we are acquainted; for it is obviously of importance that no means of imparting the character of authenticity to published cases should be neglected. In conclusion we have merely to add, that the only class of theological opinions which we are disposed to admit into the Journal, are such as, besides referring to points within the proper sphere of phrenology, are founded exclusively on the study of the Creator's works. Appeals to doctrines of revelation are out of place in a scientific journal; and moreover, the views derived from Scripture by different sects of equally sincere and thoughtful Christians are so various, that a general agreement among our readers as to the soundness of doctrinal premises would seldom be attainable.

Through the kindness of Richard Beamish, Esq. of Prestbury, near Cheltenham, we are enabled to promise our readers a series of engravings on stone, carefully executed by himself, from heads illustrative of phrenology. Mr Beamish proposes to furnish for some time two or more plates for each successive number, each plate containing two figures. The first specimen of them, he expects, will be ready for publication in March. The skill and accuracy of Mr Beamish as an artist are well known, and his liberal contribution cannot fail to be highly valued by the phrenological public.

The Phrenological Association.—The meeting of the Association at Glasgow in September last was highly successful; chiefly, we incline to think, through the judicious and active exertions of the local committee in providing business for the meeting, and securing the attendance of members. On 19th September, 158 phrenologists had joined the Association, of whom fifty-six were present at Glasgow. From the first, the ordinary meetings were well attended, and the audience gradually increased to such an extent, that on the last two days the hall was inconveniently crowded. Only members (each having the privilege of introducing a lady) were admitted. The attendance, on Thursday, was about forty gentlemen and ten ladies; on Friday, thirty-five gentlemen and twenty ladies; on Saturday, thirty-nine gentlemen and fourteen ladies; and on Monday and Tuesday, about forty-five gentlemen and fifty ladies. The public addresses with which the business was concluded were listened to by at least 600 persons, no more being able to find admittance. In the first article of this number we have given a copious report of the proceedings of the Association. All the papers were instructive and valuable: among those which excited most interest were Mr Deville's, on his collection, and on changes of the head produced by education and moral training; Mr Simpson's, on the results of change of treatment of youth; Mr Combe's, on the case of a flat-headed Indian; and Mr Goyder's, on education in connection with phrenology. The casts exhibited by Mr Deville in support of the highly probable doctrine, that the form of the head undergoes alteration under the influence of mental training, were in some instances striking, in others less so; and we agree with the suggestion of Dr Gregory, that all sources of error should be carefully scanned, whether connected with variation of thickness of the integuments, or, it may be added, arising from unequal contraction or expansion of the plaster of which moulds and casts are made. The minuteness of the difference between some of the casts compared was such as to show the necessity of caution in drawing conclusions. We had not leisure for measuring the casts at Glasgow, and therefore could not judge of the extent of the changes farther than as they appeared to the eye, and as they were hastily measured by Mr Deville while reading his paper; we hope, however, to be able, at no very distant

period, to take advantage of his liberal offer to show his collection to members of the Association. Mr Deville, it is proper to observe, judges of the size of organs at the top of the head, by measuring their distance from the hole of the ear; a method held by many to be of doubtful accuracy, since differences in height may and do arise from differences in the development of the *lateral* organs. Only one other topic seems to call for observation—it is the statement made, in the course of one of the discussions, by Mr D'Orsey, that an "Initiatory Division" in the High School of Glasgow, which he had instituted for the moral training of young pupils, had been capriciously suppressed by the Town-Council of that city. Desirous to learn the details of conduct apparently so irrational, we have made some inquiries on the subject, and are given to understand that the vexatious interference alluded to still continues in operation. The second class-room and playground are unoccupied, while the initiatory pupils are crowded together at the back of the benches on which the junior classes sit,—the business of both classes going on at once, very much, of course, to the disturbance of each other. Moral training, without a proper play-ground, is out of the question; and even intellectual progress must be greatly retarded by the present absurd arrangement. We shall take a future opportunity of explaining the nature of Mr D'Orsey's initiatory class, which, if allowed to be properly established, would, in our humble opinion, be of decided advantage to the High School pupils.

It will be seen at page 62, that the next session of the Association is to be held at London in the first week of June next. The reason for determining to meet at a time and place different from those adopted by the British Association, is, that the proceedings of the two bodies were found to interfere much with each other, thus distracting the attention of persons who were members of both. It is proposed that the future meetings of the Phrenological Association shall take place, at intervals not yet finally determined on, successively in the three capitals of the United Kingdom.

Proposed Central Phrenological Society.—At page 39 will be found a statement of the objects for which the institution of this society is suggested by Mr Bastard. In common with a large section of phrenologists, we doubt whether the time is yet come when such a society can flourish, or even be set on foot. This opinion, however, we are by no means disposed to press forcibly on those who take a different view. Among various suggestions which have come to our knowledge respecting the scheme, are several by Dr Engledue of Portsmouth, which we here quote for the consideration of our readers. After stating that he and some phrenological friends are disposed to become members of such a society, he says,—"We propose that there should be formed district branches, each embracing one, two, or three counties, according to circumstances; the members of the district branches being in fact members of the central society, but, from their distance from London, incapable of joining the meetings. This plan has been found to answer very well in the medical profession: Thus, we have a 'Provincial Medical and Surgical Association,' and we have several branches which meet every year in a different town. The members, although members of a branch, are members of the parent society, and equally with its members entitled to all the benefits, &c. Suppose we organize a district branch for Hampshire, Wilts, and Sussex—we are members of the central society also. Suppose, then, we meet next year in Portsmouth—cases, papers, casts, and any thing remarkable in the neighbourhood, may be brought forward, and afterwards communicated to the Central Society. By these means we gain a great deal which would otherwise be lost, and we rouse men, and make them think, who without these means might vegetate and pass their lives without observing or chronicling a single fact. The subscription to the branches would of course be the same as that to the parent society, and by the payment of that one subscription the party becomes a member of the parent." A similar plan, we learn, has been suggested by Dr Barlow of Bath; and a London correspondent expresses the opinion, that were the

provincial members to allow, as the medical men do, two-thirds of their local subscription to go to the parent society, the scheme might succeed, and there would be less difficulty in organising the whole of the provincials than the metropolitans. These suggestions, it will be observed, have reference to a society with objects considerably different from those of the central society spoken of at Glasgow, and one indeed which would altogether supersede the present Phrenological Association. It will no doubt be considered necessary to investigate minutely the extent to which Phrenology has found adherents in different parts of the country, before deciding on the formation of either parent or district associations: in the mean time, the subject may with advantage be talked of and reflected on by phrenologists at large, and we invite suggestions respecting it from every quarter.

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"My dear Sir,—Since I wrote the inclosed note, expressive of my hope that you might be the successful candidate for the Logic Chair, it has occurred to me that I might state that a conviction of the importance to mankind of a thorough knowledge of the Philosophy of the Mind founded on the functions of the brain, was at an early period awakened, and strongly impressed upon my mind, by the great author of the science, Dr Gall himself. I happened to be at Vienna in 1799. Dr Gall had previously developed his theory after long and careful investigation. He was a man most eminently qualified for philosophical inquiry; and, with a singular candour and simplicity of character, hazarded nothing without being founded on observations in nature, and supported by anatomical facts, and more particularly without being supported by a combination of facts founded on comparative anatomy. His medical friends, to whom he anxiously imparted all his discoveries, were satisfied that the great basis of his system was founded on unquestionable evidence, drawn from observations of the brain, and of human talents and dispositions. At the time I mention, he had begun to lecture publicly on his system in German, and, encouraged by the great interest it excited, offered to lecture and develope his views in French, for the sake of the strangers then at Vienna. I, with several English gentlemen, eagerly embraced the opportunity thus offered to us, to listen to Dr Gall. The impressions which the novelty and interest of his discoveries excited alarmed the priests, who, from a false and ignorant view of the subject, were led to imagine that such a theory might lead to results inconsistent with their religious tenets; and the result was, that the Government was induced to interdict him from lecturing any more. I was, however, so much struck and impressed with the truth of his discoveries,

sideration of which it can scarcely happen, that any one should dispute the general correctness of Mr Combe's enumeration, the higher and lower stations which the various faculties and affections respectively occupy, and the valuable practical conclusions which are thence to be drawn by the self-cultivator, or by him whose high duty it is to do what in him lies towards the formation of a healthy, vigorous, holy, and happy character in the young intrusted to his care." (Preface, p. vii.)

In the appendix to his *Human Physiology*, Dr Elliotson has recently published an article headed "Phrenology," having for its principal object a farther exposition of "the injustice of Dr Spurzheim towards Gall."

A series of excellent letters signed M. B. S., on "Criminal Jurisprudence in relation to Mental Organization and Social Responsibility," has appeared in the *Spectator* newspaper of 10th October, and subsequent dates. The author, who is obviously Mr M. B. Sampson, proceeds boldly and avowedly on phrenological data. This subject is at present exciting much attention both in England and Scotland, and will be discussed in our pages on an early occasion.

IV. INTELLIGENCE AND SHORT ARTICLES.

The Phrenological Journal.—In this number the management of the Journal has been resumed by the Editor of the last three volumes of the Old Series. It was not without considerable hesitation that he resolved to undertake once more the fulfilment of duties, the sufficient performance of which demands a greater amount of both talent and knowledge than he is conscious of possessing. He is, however, encouraged by the promise of regular contributions from several distinguished phrenologists, and hopes that, with their assistance, the pages of the Journal will be rendered at least equally interesting and instructive as while it was formerly under his care. Of the principles on which the Journal will in future be conducted, it is unnecessary to say much: the great object in view is the advancement and diffusion of the physiology of the brain, and of the philosophical and practical doctrines logically deducible from it: what we desire, is the promotion of truth and the explosion of error, by whomsoever taught, and by whomsoever opposed. That our own wishes with respect to the efficiency of the Journal will be fully realized, it would be folly to expect; for within the limited number of pages at our command, and unaided as we are by a body of *paid* contributors, it will be impossible for us to perform, not only what variously-thinking readers may conceive to be desirable, but even what may to ourselves appear highly important and worthy of being executed. The present number may be taken as a specimen of what the Journal is intended to be. We desire to represent no *party* of phrenologists; but shall welcome truth from every quarter, and be glad to see the errors of all parties alike refuted. Phrenology we, in common with its best-informed adherents, regard as still incomplete; and we shall consider it our duty to aid in the removal of imperfections wherever they exist, as well as to advocate those departments of the science—and in our opinion they are of no small extent—which seem to be well ascertained and established. Without un-

dertaking to insert all that may be transmitted to us, we invite contributions of facts, and of well-considered reasonings founded on facts, expressed in precise, temperate, and courteous language. Every description of phrenological intelligence, whether in manuscript or in newspapers, will likewise be most acceptable; and we shall feel grateful for hints of all kinds, and for references to publications directly or indirectly bearing on phrenology. When facts are communicated by individuals not previously known to us, it will be desirable that the correspondent who transmits them should procure, if possible, an introduction to us through some person with whom we are acquainted; for it is obviously of importance that no means of imparting the character of authenticity to published cases should be neglected. In conclusion we have merely to add, that the only class of theological opinions which we are disposed to admit into the Journal, are such as, besides referring to points within the proper sphere of phrenology, are founded exclusively on the study of the Creator's works. Appeals to doctrines of revelation are out of place in a scientific journal; and moreover, the views derived from Scripture by different sects of equally sincere and thoughtful Christians are so various, that a general agreement among our readers as to the soundness of doctrinal premises would seldom be attainable.

Through the kindness of Richard Beamish, Esq. of Prestbury, near Cheltenham, we are enabled to promise our readers a series of engravings on stone, carefully executed by himself, from heads illustrative of phrenology. Mr Beamish proposes to furnish for some time two or more plates for each successive number, each plate containing two figures. The first specimen of them, he expects, will be ready for publication in March. The skill and accuracy of Mr Beamish as an artist are well known, and his liberal contribution cannot fail to be highly valued by the phrenological public.

The Phrenological Association.—The meeting of the Association at Glasgow in September last was highly successful; chiefly, we incline to think, through the judicious and active exertions of the local committee in providing business for the meeting, and securing the attendance of members. On 19th September, 158 phrenologists had joined the Association, of whom fifty-six were present at Glasgow. From the first, the ordinary meetings were well attended, and the audience gradually increased to such an extent, that on the last two days the hall was inconveniently crowded. Only members (each having the privilege of introducing a lady) were admitted. The attendance, on Thursday, was about forty gentlemen and ten ladies; on Friday, thirty-five gentlemen and twenty ladies; on Saturday, thirty-nine gentlemen and fourteen ladies; and on Monday and Tuesday, about forty-five gentlemen and fifty ladies. The public addresses with which the business was concluded were listened to by at least 600 persons, no more being able to find admittance. In the first article of this number we have given a copious report of the proceedings of the Association. All the papers were instructive and valuable: among those which excited most interest were Mr Deville's, on his collection, and on changes of the head produced by education and moral training; Mr Simpson's, on the results of change of treatment of youth; Mr Combe's, on the case of a flat-headed Indian; and Mr Goyder's, on education in connection with phrenology. The casts exhibited by Mr Deville in support of the highly probable doctrine, that the form of the head undergoes alteration under the influence of mental training, were in some instances striking, in others less so; and we agree with the suggestion of Dr Gregory, that all sources of error should be carefully scanned, whether connected with variation of thickness of the integuments, or, it may be added, arising from unequal contraction or expansion of the plaster of which moulds and casts are made. The minuteness of the difference between some of the casts compared was such as to show the necessity of caution in drawing conclusions. We had not leisure for measuring the casts at Glasgow, and therefore could not judge of the extent of the changes further than as they appeared to the eye, and as they were hastily measured by Mr Deville while reading his paper; we hope, however, to be able, at no very distant

period, to take advantage of his liberal offer to show his collection to members of the Association. Mr Deville, it is proper to observe, judges of the size of organs at the top of the head, by measuring their distance from the hole of the ear; a method held by many to be of doubtful accuracy, since differences in height may and do arise from differences in the development of the *lateral* organs. Only one other topic seems to call for observation—it is the statement made, in the course of one of the discussions, by Mr D'Orsey, that an "Initiatory Division" in the High School of Glasgow, which he had instituted for the moral training of young pupils, had been capriciously suppressed by the Town-Council of that city. Desirous to learn the details of conduct apparently so irrational, we have made some inquiries on the subject, and are given to understand that the vexatious interference alluded to still continues in operation. The second class-room and playground are unoccupied, while the initiatory pupils are crowded together at the back of the benches on which the junior classes sit,—the business of both classes going on at once, very much, of course, to the disturbance of each other. Moral training, without a proper play-ground, is out of the question; and even intellectual progress must be greatly retarded by the present absurd arrangement. We shall take a future opportunity of explaining the nature of Mr D'Orsey's initiatory class, which, if allowed to be properly established, would, in our humble opinion, be of decided advantage to the High School pupils.

It will be seen at page 62, that the next session of the Association is to be held at London in the first week of June next. The reason for determining to meet at a time and place different from those adopted by the British Association, is, that the proceedings of the two bodies were found to interfere much with each other, thus distracting the attention of persons who were members of both. It is proposed that the future meetings of the Phrenological Association shall take place, at intervals not yet finally determined on, successively in the three capitals of the United Kingdom.

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which I considered so consistent with the wise simplicity and unity which mark so forcibly the laws of our Omnipotent Creator, that I was fortunate enough to obtain Dr Gall's permission to listen to his development of his views in private. From the persecution he met with, he, soon after that, found he could not follow out his favourite study with any advantage at Vienna; he went elsewhere, and at last fixed his residence at Paris. I can never forget the strong impression his philosophy made upon me, and, above all, the important results which must follow from a general system of education connected with it. When his views first attracted public notice, the able, the talented, and the enlightened attacked them, without deigning to inquire into their truth, because they were an easy prey for playful and ignorant criticism; but I am glad to find that they have been followed up by able and scientific pupils, and that they at last have gained a footing which must advance, and which cannot now retrograde. You, Sir, have become their eloquent and successful champion, and the current is now running strong in their favour. It is because I consider the Philosophy of the Mind founded on the functions of the brain most essential to the future advantage of education, not only in a practical, but in a philosophical point of view, that I consider your obtaining the Chair of Logic would ultimately benefit mankind most essentially. Ever truly yours, ROBT. FERGUSON."

London.—On the evening of 1st December, Mr Whitney delivered an able and eloquent lecture at the Cadogan Institution, Sloane Street, on mental Apparitions, upon Phrenological principles. On the evening of the 8th of the same month, Mr Deville gave, at the Society of Arts, an interesting discourse on National Crania, in which he adverted to the classification of the human race by the most eminent physiologists and naturalists, and shewed, with the aid of a variety of specimens from his extensive collection, that the most satisfactory ground of classification is the form of the skull, and that this knowledge might perhaps be usefully employed in ascertaining the authenticity of antiques and the works of the most eminent artists. His audience was a bumper, and he was frequently greeted with applause. A correspondent, who was present at the lecture, expresses the hope that medical men, such as Dr Prichard, whose attention is directed to the varieties of the human race, will avail themselves of the opportunity which Mr Deville's collection affords, of rectifying their theories before they publish. Such a procedure Tiedemann, when last in England, did not consider unworthy of him, and, no doubt, others of equal or minor note would be not less benefited and enlightened than he confessed himself to be. We are assured that Tiedemann acknowledged that L.1000 worth of plates must be sacrificed in consequence of what he saw in one morning in Mr Deville's museum. Want of space prevents us from noticing in this number the proceedings of the London Phrenological Society.

Edinburgh.—The following office-bearers of the Phrenological Society were appointed on 7th December:—GEORGE COMBE, Esq. *President.*—WM. WADDELL, Esq. W.S.; W. C. TREVELYAN, Esq.; JAMES SIMPSON, Esq. Advocate; and DR ANDREW COMBE, *Vice-Presidents.*—Dr W. A. F. BROWNE; Dr JOHN SCOTT; Dr NEILL; Dr FARQUHARSON; CHARLES MACLAREN, Esq.; and J. TOD, Esq. W. S. *Councillors.*—And ROBERT COX, Esq. W. S., *Secretary and Conservator of Museum.*

It was announced by the Secretary, that he had received a copy of the will of the late Dr Roberton of Paris, in which, after bequeathing 23,500 francs to his sisters, housekeeper, and cook,—15,000 francs to the Geological Society of France,—and his collection of busts, &c., with his own skull and 1000 francs, to the Phrenological Society of Boston,—he gives the surplus of his property to the Phrenological Society of Edinburgh. It had not yet been possible to ascertain to what extent this Society would be benefited by the legacy.

Exeter.—In Octol ar No Messrs Vernon and Kiste delivered two courses of r ...ogy, which are reported to have been

numerously and respectably attended. It speaks well for the quality of these lectures, that the second course was attended, as we learn, by above three times the number who listened to the first. Many members of the Society of Friends in Exeter have taken a lively interest in the subject.—We question whether the lecturers have acted prudently in styling themselves in some of their advertisements "*Professors* W. J. Vernon and Adolphe Kiste," the assumption of such a title having a tendency to throw around their proceedings an air of quackery which we are disposed to think does not really characterize them. Only the occupants of academical chairs are entitled to call themselves "Professors."

New Casts.—Casts of the following heads and skulls may be obtained from Mr Anthony O'Neil, 16 West Register Street, Edinburgh:—Head of a flat-headed Indian (p. 42 of this Number).—Head of Courvoisier (p. 57).—Skull of a Negro girl, aged 15, who died in the hospital at Philadelphia; presented by Professor Gibson of Pennsylvania University to Mr Combe in 1839, and now added to the Phrenological Society's collection.—Skull of a North American Indian, found in 1838 at Pulling Point near Boston, and now in the same collection.—Skull of Pierce, a convict and cannibal (Phren. Journ. xii. 377).—Skull of a Dutch officer (ib. 378).

Head of Napoleon.—Dr Guillard, the surgeon of the Belle Poule frigate, who was present at the recent disinterment of Napoleon's body, states, in his published account of the condition in which it was found, that "his skull, of ample volume, and his high and broad forehead, were covered with yellowish teguments, hard, and very adherent."

The Boy Jones.—This boy, who has lately attained notoriety by intruding into the Queen's palace, is stated by his father to be of unsound mind. Dr Fisher, of Argyle Street, physician of the A division of the London Police, and Mr Lavies, surgeon, King Street, were examined by the Privy Council as to his mental condition. "They were of opinion that his head was of most peculiar formation, but could not give any decided opinion as to his sanity or insanity."—*Newspaper report, Dec.* 1840.

M. MONAT'S *Experimental Researches on the Functions of the Encephalon.* (Bull. de l'Acad. Roy. de Méd., Juin 17, 1840.)—This is a long report to the Royal Academy, in which the author, after proving the insensibility of the brain, endeavours to point out the functions of its different portions. In this, however, he has but partially succeeded, and the Committee, MM. Ribes, Blandin, Amussat, and Bouillaud, came to the following conclusions. 1. That the three great nervous centres, the spinal marrow, the cerebrum, and the cerebellum, have distinct and special functions; 2. That sensation, properly so called, and motion, are under the immediate and direct influence of the spinal marrow, and have each particular nerves; 3. That the brain presides over the various manifestations of intelligence and volition; 4. That the cerebellum plays an important part over the functions of *Progression* and *Station.* As to the functions peculiar to particular parts of the nervous centres, much yet remains to be done for their determination.—*Brit. and For. Med. Rev. Oct.* 1840, p. 554.

Anecdote illustrative of the Size of Sir Walter Scott's Head.—"On Wednesday, a lady who called on Mr Dick (of Edinburgh), and left L.5 for the monument, related the following unpublished anecdote of Sir Walter.—When he was a boy, and residing with his family in George Square, he and his brothers, along with the brothers of the lady, were in the practice of vying with each other in feats of physical agility. On one occasion they proposed to force themselves through the railing of the square, the centre of which was then a sheep park. All of them got through but 'Watty,' as he was called by his companions, whose head, from its extraordinary breadth, stuck between two rails; nor could he be extricated until a blacksmith was sent for, who by lever power contrived his escape."—*Scotsman, 20th June*

1840. [Two of Scott's four brothers were elder than he, the younger of them by about three years. The spaces between the present rails, which, being not at all modern in their aspect, are probably the same that existed at the time referred to, vary from about 5¾ to 6¼ inches, as we have ascertained by measurement. With reference to the medical certificate published by Mr Lockhart, and which bears that Sir Walter's brain was found on dissection to be "not large," we have good authority for asserting that one of the medical gentlemen present at the post-mortem examination thought it, on the contrary, *large*, and was even struck with its unusual size. Though forbidden to publish the grounds on which this assertion is made, we are at liberty to answer privately the inquiries of any one who desires farther information on the subject.—EDITOR.]

Mr Combe's Visit to America.—A Phrenological Visit to the United States in 1838, 1839, and 1840, has been announced for publication by Mr Combe. It will appear on 1st March, and consist of three 12mo volumes of about 400 pages each. It is written in the form of a journal, and will embrace not only an account of the phrenological labours and observations of the author, but also his impressions of the manners, morals, and religious, political, educational, and legislative institutions and character of the American people.

Dr Combe's Observations on Mental Derangement, &c.—"In answer to numerous inquiries, we are happy to announce that a new edition of Dr Combe's 'Observations on Mental Derangement, being an application of the principles of Phrenology to the elucidation of the causes, nature, prevention, and treatment of Insanity,' is now in active preparation by Dr Browne, resident physician of the Crichton Asylum at Dumfries, and will appear under their joint names. From Dr Browne's admirable opportunities, great talent, and thorough acquaintance with both phrenology and insanity, the work may be expected to be greatly improved, especially in regard to all important practical points."

Books received.—The British and Foreign Medical Review, No. XX. Oct. 1840.—The Medico-Chirurgical Review, No. LXVI. Oct. 1840.—Annual Report of the Resident Physician of the Hanwell Lunatic Asylum, 1840.—Annual Report of the Directors of the Dundee Royal Asylum for Lunatics, 1840.—Silliman's American Journal of Science and Arts, July and October 1840.—The Phrenological Almanac for 1841 (New York).—The American Phrenological Journal for May, June, July, and August 1840.—An Essay on the means of improving Medical Education and elevating Medical Character. By Andrew Boardman, M.D.

Newspapers received.—The Western Times (Exeter), 24th Oct.—Woolmer's Exeter and Plymouth Gazette, 31st Oct. and 7th Nov.—The Manchester Guardian, 4th Nov.—The Wolverhampton Chronicle, 18th Nov.

The publication of the following Papers is unavoidably deferred: all, or most of them will appear in our next number. Mr Hytche on the Organ of Weight.—Mr Stocks's Translation of Erasmus on the Influence of the Body on the Mind.—List of the Members of the Phrenological Association.—Dr Combe on the Progress of Phrenology in Italy.—Mr Hudson Lowe on the Organ of Imitation. Part I.—Observations on the Character and Cerebral Development of Sir Thomas Browne.—Mr Noel's additional Cases of Suicides. Case of Hill, executed at Liverpool.—Controversy at Nottingham on the Negro Head and Intellect.—Various short articles.

Communications for the Editor (prepaid) may be addressed to "Mr Robert Cox, Edinburgh." Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall and Co., stationers, Hall Court.—Articles intended for the next following Number must always be with the Editor six weeks before the day of publication. Communications for the section of "INTELLIGENCE" should be in hand three weeks before the same day.

1*st January* 1841.

THE

PHRENOLOGICAL JOURNAL.

No. LXVII.

NEW SERIES.—No. XIV.

I. MISCELLANEOUS PAPERS.

I. *M. Leuret's Attack upon Phrenology.*

M. LEURET, physician to the Asylum of Bicêtre, is an old foe to Phrenology. He has recently published a work upon insanity, and has gone somewhat out of his way to attack principles which he evidently does not understand, and men whom he cannot appreciate. As his position may be supposed to confer some authority upon his opinions, we shall go somewhat out of our way to repel the aggression.

He presents us first with a morsel of biography. Gall is represented to have availed himself of the descriptions given by Esquirol during a visit to the great Asylum of Salpetrière, and to have pointed out the correspondence between the manifestations and development of certain of the patients, but to have declined to predicate the manifestations from the development when urged to do so. Were we to admit the insinuation or accusation here made in its widest application, to what would it amount? Gall might be convicted of duplicity, quackery, or timidity; but the principles upon which the doctrine which he taught is founded, must remain untouched by such fallibility or culpability; they must remain true or untrue according to the eternal laws of nature, open to verification by every inquirer, and in no way affected by the discrimination or lack of courage of those who may receive or reject them. Truths which are as accessible to M. Leuret as to Gall cannot be tested by the credibility of either. But we indignantly repel this assertion as a calumny; being anxious at the same time to attribute it rather to that want of philosophy which characterizes M. Leuret's writings than to want of candour or courtesy. We believe the correct version of the

story to be this. Gall spontaneously indicated cases where he perceived a marked correspondence between the features of insanity and the form of the head; but, on finding that Esquirol was desirous of putting the principles of Phrenology to the test, of obtaining, as Leuret says, a *contre-épreuve*, and of estimating their truth or error according to the result, he most prudently and wisely refused to adopt such a course, or to do what was directly in opposition to his own views, to nature, and to common sense. In a large majority of cases of mental disease, the character or condition of the existing powers or dispositions cannot be predicated from the development, with whatever accuracy the original tendencies and capabilities may be inferred. It is the nature of certain modifications of lunacy to obliterate the entire mind, whole classes of powers, or a single feeling, or to give inordinate activity to particular feelings not originally strong; in fact, to destroy those very conditions, the principal of which is a healthy brain, which are essential to correctness in drawing conclusions from development. Examples of monomania, or the exaggeration of particular feelings, do occur in which it is perfectly justifiable and easy to draw such inferences, and which afford most striking illustrations of the truth of Phrenology; as the disease frequently depends upon the large and disproportionate development of one region, and is in fact an extension or exaltation of the natural disposition. With the knowledge of these facts before him, Gall shewed where his views were applicable; but hesitated to apply them when he was utterly ignorant whether a maniacal, a fatuous, or a monomaniacal patient was submitted for examination. To have enabled him to put the science to a fair test, the same class of cases should have been presented as when Mr Combe visited the Richmond Asylum in Dublin.*

The second charge is, that three pieces of skull, exhibited in Gall's Museum as belonging to three individuals, a musician, a suicide, and an erotomaniac, and as instances of characteristic development, are actually parts of the same skull, and originally enclosed the same brain. This is a charge of bad faith, of gross deception, on the part of Gall or of some one, perpetrated to prop up a false and falling cause, and so boldly and bunglingly executed, that M. Leuret, and, we presume, any one who knows the relation of the frontal, parietal, and occipital bones, can at once detect the imposture. Now, although M. Leuret doubtless conceived that, in preferring this accusation, he was putting phrenologists to shame, it is obvious

* See vol. vi. of this Journal, p. 80.

that, if his assertion be true, it merely impugns the veracity of some reporter of Nature's laws, but leaves the laws themselves omnipotent as before. It is somewhat unfortunate, however, that this censor and scientific police-officer does not condescend to inform us of the grounds upon which he ventures to advance so grave an indictment of fraud. It is simply his opinion. We regard this opinion as utterly worthless; as we recognise no rules by aid of which a skull-cap separated by a saw, and a base in part disarticulated, and in part broken from right to left upon a level with the sphenoid bone, and separated also into an anterior and posterior portion, can be proved to have belonged to the same skull. If, however, the sawn portions, the sutures, and the broken fragments, should so fit as to sanction a suspicion of the genuineness of the account given of these specimens,—does M. Leuret conceive it probable, or in keeping with the charlatanry and cunning which he attributes to phrenologists, or will his readers believe, that they should commit at one moment so detestable a fraud and so egregious a blunder, as to place together, as portions of three different skulls, what were obviously the bones of one? But lastly, and to depart from this mode of treating the question, in order to give force to the assertion as an objection to phrenology, it is incumbent to shew that the individual of whose skull these bones are said to have formed a part, and of the shape of whose brain it is not denied that they form an index, was not musical, paralyzed by fear, and erotic; that, in short, the manifestations did not correspond with the organization which these bones are believed to indicate.

M. Leuret directs his next attack against M. Parchappe, who has contributed largely to improve our knowledge of the pathology of the brain.* That author has observed that diminution, or atrophy, of the grey matter of the brain—that portion upon which many phrenologists are disposed to hold the manifestation of mind to depend—takes place in chronic dementia or fatuity; but it is objected that this loss of substance was not measured, and that the fact, therefore, does not justify any conclusion as to the relation of the change of structure and the mental state. It is true that no measurement was attempted; nor is this very wonderful, considering the anatomical relations of the substance under examination, and the absence of a standard of comparison; but although the amount of the atrophy was not ascertained, its existence was proved by evidence as satisfactory as any micrometer could furnish. On this point, it is only necessary to mention,

* An analysis of his work will be given in our next Number.

first, that in some cases of chronic insanity the diminution of grey matter is so considerable that the white nervous matter is seen shining through the thin remaining layer; and, secondly, that in other cases the grey matter is totally removed, and the white matter is left bare.

M. Parchappe's valuable observation, that, in cases of complete fatuity, where one or more of the sentiments or propensities remain in an exaggerated form, there is found atrophy of the anterior lobes and augmentation of the posterior, is opposed by the trite remark that the limits of the phrenological divisions of the brain owe their origin to the venders of plaster-of-Paris casts. If M. Parchappe *has* observed decay of the intellectual powers, and undue preponderance of the affective, invariably, or generally, followed by the wasting of one region of the brain and enlargement of another, this is a truth independent altogether of Phrenology, although coincident with one of its doctrines, and even in no way indebted for support to phrenologists.

To a case of erotomania with delusions, in which the cerebellum was found enlarged, inflamed, and increased in weight, and the posterior lobes of the brain more developed than the anterior, it is objected that, to establish even the possibility of this alteration, it was necessary to shew that the occipital bone had yielded, and that the cavities in which the cerebellum is lodged had been increased in size. It is scarcely possible to suppose that M. Leuret is serious in advancing this cavil. But should he be so, he betrays his ignorance of the facts, that in hypertrophy of the whole brain in adults, there is no separation or yielding of the bones of the skull,—that in hypertrophy of parts of the brain, the unaffected portions are displaced and flattened against the inner table of the skull,—and that hypertrophy of one region of the brain may co-exist with atrophy of another, as it probably did in the case under discussion. Much valuable information was collected upon these points by the late Dr Syms.

M. Ferrus has published two cases; one in which the feeling of Self-Esteem was exalted and assumed the aspect of ambitious monomania, and where alteration of the structure of those convolutions regarded as the organs of the feeling was found; and one where adhesion of the membranes to the lower parts of the anterior lobes was found to have accompanied loss, or extreme deficiency, of language. M. Ferrus was the colleague of M. Leuret, and has deeply offended him by avowing his belief in Phrenology, and by converting the splendid Asylum of Bicêtre into a school for the propagation of sound views as to the pathology of mind; and M. Leuret has accordingly, in great

wrath, attempted to shew that M. Ferrus is not only inconsistent with nature, but at issue with phrenologists. He contends that, in both the cases described, the functions should have been extinguished, and quotes Drs Combe and Belhomme in support of this view. We do not yet venture to point out the precise effect of particular lesions of portions of the brain. Data are not yet possessed, sufficient to authorize us to assert that inflammation is the cause of exaltation, congestion the cause of irregularity, softening the cause of extinction; nor can we affirm in what degree, and at what point, these states become incompatible with health. But we *do* assert, and this is the proposition of M. Ferrus, that where diseased manifestation is demonstrated to be associated with diseased structure, it is presumable that a connexion subsists between the two facts; and that to the healthy exercise of Self-Esteem, integrity of certain convolutions indicated, and to the unimpaired use of language the integrity of certain other convolutions of the brain, are essential. M. Ferrus wished to establish the locality of an organ, not to connect particular mental states with particular conditions of the brain.

M. Calmiel, physician of the Asylum of Charenton, who is not in the ordinary meaning of the term a phrenologist, has offended M. Leuret by paying the following homage to truth: "The alterations of the brain are general when the derangement is general, whereas they are confined to a circumscribed space when a single propensity, for instance, presents morbid manifestations."* M. Leuret has not ventured to impugn the accuracy of this statement, and it is here quoted to shew the gradual advance that pathological anatomists are making towards the conclusions of phrenologists.

II. *Illustrations of the Functions of the Organ of Weight.*

By Mr E. J. Hytche.

When the primary function of any organ is disputed, or its mode of operation is shrouded by any obscurity, the only sure method of ending the controversy is by a collection and an examination of facts. Such an appeal may not, indeed, develope the principle for which we are seeking, but the liability to much error will be at least prevented, inasmuch as speculation will be thereby confined to its proper range, and be made secondary to observation. And besides this, by discussing or reasoning from facts, we shall be seeking for truth in the right

* Dict. de Med.: 2de edition, t. ii. p. 489.

direction, for from facts alone can phrenological opinions be derived.

Much of the erroneous opinion entertained of the functions of various organs is doubtlessly to be ascribed to the fact, that those opinions are derived from an excessive manifestation, and thus a philosophical estimate is difficult of attainment. But still it is probable that the obscurity which invests the operation of many faculties is to be ascribed to the partial neglect of facts, or to deductions having been drawn from an insufficient array of facts. This opinion is illustrated by the mode in which the organ of Inhabitiveness has been discussed: how much this controversy has been characterized, as it has been darkened, by an appeal to a variable and varying self-consciousness, and by a corresponding neglect of well-digested facts! But in the discussion of no organ has this tendency been more developed than in that of Weight, the attested facts from which our opinions are derived being scanty in number, and the conclusions being, as speculations generally are, vague and inconsequential. This may have partially arisen from the difficulties which are attendant upon the mere *act* of observing Weight. The *frontal sinus*, which generally extends to, if not beyond, its site, offers one impediment; its comparatively diminutive size is another obstacle; and the liability, from its contiguity, to confound a large organ of Size with it, or *vice versa*, increases the difficulty, as does the occasional thickness of the superciliary ridge. These impediments, though great, are not, however, insurmountable; they can be overcome but by a proportionate increase of diligent observation alone. Here the "division-of-labour" system becomes of great service, as, by a concentration of the powers on one subject, the individual is likely to obtain more accurate information than if he were occupied in the consideration of several and perchance diverse subjects; and as, by its adoption, the intrusion of suggestions unconnected with the one special inquiry would be in a great measure prevented. Actuated by these considerations it is, that I have been for some time past engaged in collecting illustrations of the functions of Weight as developed by individuals, and as manifested in certain trades and pursuits; the general result of which is as follows.

I shall first select an individual illustration, for the accuracy of which I can vouch. I am intimately acquainted with a person whose Weight is very deficient. So depressed is that organ, that, in the region assigned to it, an indentation or pea-shaped cavity is perceptible to every observer. The organ is smaller on the right side than on the left, although all his other organs are largest on the right side. It may also be

stated that Constructiveness is deficient, as it throws some light upon the want of manual dexterity subsequently detailed. Now one fact connected with this person is rather singular, namely, that during boyhood he was unable to succeed in the attainment of that common accomplishment called "spinning a top;" for, whatever the amount of force which he applied, he could never impart the proper quantity; and thus, when the top was cast from the string, no gyration ensued. This idiosyncrasy was, of course, a fertile source of Joe Millerisms to his companions, and of annoyance to himself, the latter of which was increased by his inability to account for his failure. Thus it was with slinging. The stone was hurled from the string, but he could not propel it with sufficient force to make it reach any required locality, or even beyond a few feet from himself. He was also obliged to discontinue the practice of sliding, as his "going off" served but as the signal of repeated laughter occasioned by his downfall. He has, farther, a natural inclination for skating; but any attempt to perform the simplest feat of which this pastime is susceptible is rendered futile, as he cannot preserve the requisite equilibrium. Thus also, although the efforts he has made are numberless, and though he has been taught by able masters, he cannot learn swimming, for, if he strike out, the balance is immediately lost. His Cautiousness is certainly very large; but the inability cannot be ascribed merely to the fear engendered by that organ, for he says that not only is he unconscious of trepidation, but that the result is similar when he bathes in the public baths, which, though deep enough to permit swimming, are too shallow to allow the most nervous to imagine the occurrence of an accident. It may be stated that the person referred to was to have been taught a mechanical pursuit; but, although he was taught the theory of the mechanical forces, yet he could not practically apply the principles deducible therefrom, nor, indeed, could he comprehend the means by which any mechanical end was obtained. To close this "chapter of accidents" with another illustration, he is a bad walker; and, if he desires to reach any point, he does not walk right onward, but approaches with a zig-zag motion, and in a manner which would make a stranger conceive that his limbs were insufficient to his support. This succession of failures has occasioned much astonishment to himself, which surprise has not been lessened by the fact, that his desire to overcome his peculiarity has been as great as his incompetence. Nor have his friends been passive; but they have assigned various causes for his failures. Thus, some have ascribed it to inherent clumsiness, others to disinclination, and the metaphysical portion to "habit." The

real cause is, however, I consider, to be found in his deficient organ of Weight, whereby he is rendered *practically* ignorant of the momentum requisite to propel bodies, and which, in the other cases, prevents his supporting equilibrium by balancing weight against weight. This opinion is strengthened by the fact that, though I am unacquainted with any other person who has manifested so general a deficiency, yet in cases of partial incompetence to succeed in these pursuits, there has been a relative deficiency of the organ of Weight; and in the converse cases, the degree of success in the accomplishment of these aims has been in correspondence with the development of Weight.

During several recent steam-excursions, I have observed that those persons who succeeded best in preserving the erect attitude when the vessel perceptibly oscillated had a large endowment of Weight, whilst those who most affected the prone position had it in as feeble a degree. I have also noticed that women, as a class, have a deficiency of this organ, which may account for their liability to sea-sickness, it being produced by slighter causes, and being more powerful in effect than in men, who, as a class, have the organ large. Some men, however, are as much liable to this affection as women, and *that* irrespective of their habitude to a sea-voyage. Thus, it is said that Lord Nelson rarely went to sea without being prostrated by this malady. There can be little doubt that the primary cause of this affection is to be sought in cerebral derangement, and not in mere physical debility, although the latter co-operates with the former by giving a greater tendency to its production. Although robust men, as a class, are less subject to the affection than men of feebler constitution, yet the instances in which this result is reversed are too numerous to allow the opinion, that general physical organization is the sole index to its production. In confirmation of the cerebral origin of this malady, the attendant phenomena may be referred to. The nausea is *preceded* by a whirling sensation, as if the brain were spinning round in an endless circle; surrounding objects become obscured by a pervading haze, yet with an evident and bewildering circular motion; and there is a manifest quickened, and almost audible, pulsation of the brain. But it may be said that, though the phenomena cited indicate cerebral derangement, the mere priority of their occurrence is insufficient to shew that they are not the result of bodily derangement, unknown though it be. To this it may be replied, that, unless the vessel oscillates, the affection rarely occurs; that such rocking motion is either continuous or of often recurrence before the production of the worst features of the malady;

that in correspondence with the development of the organ of Weight is the capability of resisting such oscillation; and that, if Weight can be kept undisturbed, approaching nausea is prevented. As a familiar illustration of the latter fact, it may be stated that, when I felt an inclination to nausea, it was warded off by stedfastly looking at the mainmast; and that the symptoms immediately returned when my eyes were withdrawn therefrom. Such surely would not have been the case had the cause of the approaching nausea been ascribable merely to physical derangement. This by itself would certainly only indicate the cerebral origin in my own case; but on tendering my advice to others there was a similar result.

In pursuing my observations on this organ, I have noticed, when comparing men in a state of intoxication, that he who walks with the least divergence has the organ of Weight more largely developed than he who affects the tortuous zig-zag mode. Again, the influence of this organ is farther illustrated by some men who possess the capability of drinking larger portions of alcoholic liquors, without any appreciable effect, than men more inured to the practice. Thus, I have seen some men drink thrice more than men who have been in the last stage of swinish drunkenness, without being affected thereby; and *that* at the outset of their drinking career, and without any perceptible superiority in physical constitution. This fact is too common to have escaped notice; and thus they have been dignified with the appellation of "strong-headed men" by their fellow-bacchantes, who have caught a slight glimpse of the truth, but carried it too far. It is scarcely needful for me to say, that in such cases the organ of Weight has been predominant; and thus, if not "strong-headed men" generally speaking, they have been strong in one region at least.

This organ also renders assistance to the effective performance of several musical instruments. The instruments which I shall first notice are the triangle and the drum, the mastery of which requires the possession of a nice appreciation of the qualities of force; or the one would yield but a feeble tinkling sound, and the unmeasured noise of the other would be the antipodes of harmonious effect. The organ of Tune cannot give this executive power, its province being to impart the idea of graduated sound; but a theoretical knowledge of the gamut, and the power of developing that knowledge, are distinct qualities, depending, as they do, upon different powers for their production. Thus, the drummer may possess a thorough knowledge of the management of his instrument, yet, were he unable to impress the requisite degrees of force thereon,

and that with celerity and exactness, the discordance produced would totally prevent the production of any harmonious effect; and even those discords which master-minds have occasionally introduced with sublime effect would become unbearable, were they not produced with precision and with nicety of touch. Simple as the kettle-drum appears, there is scarcely an instrument which requires more dexterity in its management; for an unregulated stroke, whether loud or soft, elicits either a monotonous or dissonant sound; but when struck with varied degrees of force, it admits of a variety of tone, so that it can either elevate or depress, and become the "harsh dull drum," or the "spirit-stirring drum," as its master desires. Similar remarks are applicable to the triangle. The range of this instrument is limited; but it would be a mere plaything, were it not for the certainty with which a few, yet measured sounds, created by the force applied being graduated, can be extracted by the skilful player. Now, in accordance with these facts, I have found that the degree of success which has attended the performance of these instruments has been in correspondence with the development of the organ of Weight; and I have not met with one instance of a person who has mastered either, in whom Weight has been deficient. Many persons, indeed, have vainly attempted the performance of these instruments, whose organs of Tune have been sufficiently large to discriminate between the quality of sounds; but the organ of Weight has been small, and they could not employ their knowledge in the attainment of these instruments.

It also appears, from the facts which I have observed, that Weight assists the trumpeter to judge of the *quantity* of air requisite to give the resonance creative of the loud, medium, or soft note. The keys of the trumpet merely modulate sound, and a specific portion of air, blown with greater or lesser intensity, is requisite, according to the particular notes to be produced. Thus, also, this organ assists the violinist in giving the proper stroke, and in enabling him to bear upon the strings in a proportioned degree. Without the assistance of Weight he might bear too much or too little, and thus the tone produced might be uncertain in quantity and duration. In all the cases which I have observed of this class of performers, manual *delicacy* of execution has been in accordance with the development of the organ of Weight. Thus, again, the pianiste who possesses a large organ of Weight has much greater delicacy of touch than he in whom it is deficient. In fact, I doubt whether any person who has it below the average can impart sufficient expression or grace to his performance, however great his musical judgment may be. Those who excel

in this instrument do not strike the keys at random, or, in other words, are not careless as to the degree of force which they impress; but the keys are touched so that the proper *quantity* of sound may be elicited, and no more or less. There is, however, a class of performers who strike the keys with such unmeasured force that the mere act of striking becomes audible; and though such men are occasionally called brilliant performers, the misapplication of the phrase may be partially occasioned by our wonder that, with so much noise, any harmony can be produced. In such men I have observed the organ of Weight deficient.

Many women, and indeed some men also, are liable, when conveyed inside a carriage, to a sickly sensation, and occasionally fainting occurs. The symptoms are analogous to those presented in the first stages of sea-sickness, but less marked and debilitating. This affection does not arise if they sit outside the vehicle, nor are they so much subject to its influence if the windows are closed; and the intensity of the malady varies with the materials of which the road is made. Whether the phenomena are ascribable to the disturbance of equilibrium, produced by incessant jolting,—increased by limited space and impure air,—I am incompetent to decide. But I am acquainted with several persons who have experienced the malady, and who, through fear of the affection, dare not enter a carriage; in all of whom the organ of Weight is deficient.

The influence of Weight is seen in the equestrian, whose success in the management of the horse is mainly dependent upon the mode in which he accommodates his motions to its movements, so that a due balance may be preserved. In accordance with this fact, I have observed the large endowment of weight of successful horsemen,—the man with a large development succeeding soonest in the management of the animal, whilst he who has it deficient, if he ultimately succeeds, does it after many lessons and more falls; and even then he is forced to mount the quiet horse, not one whose eastern pedigree is attested by its contour and stately qualities. In confirmation of these statements I may appeal to jockeys, in whom, as a class, Weight is well developed; and although their riding is distinguished by characteristic differences, yet they all agree in one quality, that is, keeping the seat well. As a farther illustration, I may cite the large development of this organ in the cavalry compared with the infantry.

The same large endowment of Weight may be observed in farriers. The farrier requires, when making horse-shoes, that the density of specific portions should vary according to the office they have to perform. To do this with celerity a practical

knowledge is requisite of the force necessary to be impressed on the bar-iron. Now, I have observed in several farriers, that the facility with which they have accomplished this task has been in accordance with the development of the organ of Weight. There are also perceptible differences both in the mode and force of hammering, even in some of the most experienced workmen, whose muscular power is apparently equal, and in whom there is a similarly developed Constructiveness. Thus some appear to possess intuitively a knowledge of the momentum and velocity requisite in striking; whilst others, after the experience of years, fail in impressing the requisite force; and thus the former can accomplish as much with five blows as the latter can produce with ten, and that apparently without employing half so great an effort to attain their end. In shoeing horses a similar difference is perceptible, some men occupying much less time in the performance of this operation than others, and that principally through their ability to drive home the nails sooner and surer. The power in all these cases has been in correspondence with the development of the organ of Weight. Nor has this been the case with farriers alone, but there has been the same correspondence between the size of this organ and the hammering capability of blacksmiths and coppersmiths. For some time I entertained the notion that this power of impressing force by the hammer was but the exercise of that manual dexterity imparted by Constructiveness. But I have met with so many instances in which Constructiveness was large, and yet with a certain degree of defect in this respect; and with other cases in which that organ was deficient, and yet in which there was great hammering capability; that I was compelled to abandon my opinion. When, however, Constructiveness was deficient, there was a manifest *awkwardness* in accomplishing this operation, though well performed; but, when largely developed, it was performed in a more workmanlike manner. But the capacity itself was dependent upon the development of Weight, Constructiveness not being an indispensable accessory.

The influence of this organ extends beyond what are considered as mechanical trades, and its activity is perceptible in butchers, grocers, and other tradesmen from whom mental weighing is required; or, in other words, who find it desirable to judge of weight previously to the employment of the balance. Thus, as regards butchers, many of this class can tell the weight of a joint of meat previously to weighing it, with a near approach to certainty. This is not merely the effect of experience; for there are perceptible differences in different persons, even in the first year of apprenticeship; some pos-

sessing the knowledge almost intuitively, others not obtaining the same amount of power after the experience of years. In these cases a deficiency of the organ of Weight has been concomitant with the lowly manifested power of mental weighing; and when the organ has been large so has been the power.

A well-developed organ of Weight is noticeable in those ladder-balancers with which London abounds. It is scarcely necessary to indicate the accordance of this fact with their peculiar ability; the success of their art being dependent upon their capability of overcoming the natural tendency of a body to fall unless counteracting forces can be brought into action; and this task they would be unable to accomplish without the possession of that practical knowledge which this organ imparts. So again with carpentry; the designer has a larger organ of Weight than the mere constructor. For an instance, staircase-building requires a mathematical accuracy in the due proportionment of weight, and the adjustment of each portion must be in accordance with the specific degree of weight which it has to support; or the partially self-poised structure would inevitably fall. This will become very apparent in the wall-staircases which have scarcely any abutments; and whose spiral convolutions accurately balanced, and their noble length and breadth, form a beautiful illustration of what practical science can perform. Now, I have observed that those men whose labour is principally confined to this and similar branches of carpentry, possess a larger relative endowment of Weight than those from whom mere construction is the greatest requisite; and that when the organs of Constructiveness and Weight have been equally large, the powers of designing and constructing have been equal. I am acquainted with an individual who has great powers of mechanical design, but who is totally incompetent to execute; he can also communicate his ideas to others, and is able to distinguish between good and bad workmanship, as well as to give directions for requisite alterations; but he cannot effect those alterations himself, and, indeed, is the veriest infant in handicraft capability. In him Weight is large and Constructiveness is deficient.

I have refrained as much as possible from adducing individual illustrations of the influence of Weight, because, as such cases can rarely be verified by others, they must be taken on trust. But my general remarks are selected from a large aggregate of observations, and from classes within the cognizance of every observer, who has thus an opportunity afforded of testing their accuracy for himself.

The conclusion at which I arrive from a consideration of the foregoing facts is, that the primary function of Weight is to give an intuitive knowledge of the relative gravity of bodies, and thus to enable us to produce equilibrium by balancing weight against weight. Its secondary uses are varied, but pervaded by the same principle modified in a greater or lesser degree. Thus, by it we are enabled, without the requirement of any theoretical knowledge, to regulate our movements in accordance with the laws of gravitation, and in this way to overcome that downward tendency which we possess in common with other bodies. It likewise imparts the power of judging of the force requisite to be employed in hurling or propelling bodies, so that, the exact quantity of momentum being employed, there may be no unnecessary expenditure of force. From this organ we derive an instinctive knowledge of the application of the lever, wedge, and the other mechanical powers; the basis of which is the just application of force. And by it we possess the capability of opposing sufficient resistance to any opposing force. There is, then, a manifest adaptation between the functions of this organ and our relation with the external world. Governed, as the physical world is, by fixed laws, from an acknowledgment of which man cannot escape, it requires the existence of a fixed power of the human mind to cognise and appreciate them, as, without its assistance, we should have been powerless to control or direct, and have thus been at their mercy. Thus, the grand principle of gravitation would still have existed, and we should have been unable to compete with, by accommodating ourselves to its dicta; and thus we should have been prostrated by a more powerful antagonist than bodily debility. But with Weight we master nature instead of being mastered; and laws which otherwise would have been direful enemies become cherished friends; and the stately mansion is erected, instead of our burrowing, mole-like, beneath the ground. Suffice it to say, that of all the proofs of design which nature presents, none are so noble as those derived from the adaptation which exists between the laws of the external world and the accordant powers of the human mind!

12 Brunswick Terrace,
Barnsbury Road, Islington.

III. *List of Members of the Phrenological Association, at 19th September* 1840.

HONORARY OFFICERS, ELECTED AT BIRMINGHAM IN AUGUST 1839.

George Combe, Esq.	President.
Sir G. S. Mackenzie, Bart. F.R.S. L. & E.	Vice-Presidents.
W. C. Trevelyan, Esq. F.R.S.E.	
Professor Evanson, M.D., M.R.I.A.	
Edward Barlow, M.D.	
Joshua Toulmin Smith, Esq.	Secretaries.
Hewett C. Watson, Esq.	

LOCAL COMMITTEE AT GLASGOW, 1840.

James M'Clelland, Esq.
R. S. Cunliff, Esq.
Dr Robert Hunter, Professor of Anatomy in the Andersonian University.
Dr Hutcheson.
Dr Maxwell.
A. J. D. D'Orsey, Esq.
Dr Weir.

MEMBERS.*

1839. *August* 27.—James Simpson, advocate, Edinburgh, M.P.S.; W. Hawkes Smith, notary, Birmingham, M.B.A. (deceased); John Isaac Hawkins, civil engineer, Quality Court, Chancery Lane, London, M.P.S.; Joshua Toulmin Smith, barrister, now in the United States, M.B.A.; Hewett C. Watson, Thames-Ditton, Surrey, M.B.A.; Simon Logan, artist, Wallworth, London, M.P.S.; James Inglis, M.D. Halifax, graduate of Edinburgh; William Coreless, surgeon, Preston, M.P.S.; Samuel Hare, surgeon, Leeds, M.B.A.; George Thompson, Madeley, Shropshire, M.B.A.; James M'Clelland, accountant, Glasgow, M.P.S.; W. R. Lowe, Wolverhampton, M.B.A.

1840. *May* 16.—Cornelius Donovan, 8 King William Street, West Strand, London, M.P.S.

May 17.—Andrew Carmichael, attorney, Dublin, M.R.I.A.

* The names of members are arranged according to the dates of their applications for enrolment. To each name and address is added the qualification on which the applicant was admitted. M.P.S. signifies Member of the Phrenological Society of the town where the person resides, except where otherwise specified. M.B.A. means "Member of the British Association." The other abbreviations do not require to be explained.

May 18.—Richard Carmichael, surgeon, Dublin, M.R.I.A.; Neville Wood, Campsall Hall, Doncaster, Hon. M.P.S. Warrington; David Nicol, surgeon, Swansea, M.R.C.S.; Richard Caldwell, architect, Blackburn, M.P.S.; Charles Bray, Coventry, M.B.A.; E. J. Hytche, law-stationer, 2 Bartlett's Buildings, Holborn, London, recommended by two members.

May 19.—Robert Walker, M.D. Greenock, graduate of Glasgow; W. A. F. Browne, M.D. Dumfries, M.P.S. Edin.; Patrick Neill, LL.D. printer, Edinburgh, F.R.S.E.; William Jackson, surgeon, West Bromwick, Staffordshire, M.R.C.S.

May 20.—Henry G. Atkinson, architect, 18 Upper Gloucester Place, London, F.G.S.

May 21.—Robert Ainslie, writer to the Signet, Edinburgh, M.P.S.; Patrick Clerihew, Aberdeen, graduate of Aberdeen; John Connon, Aberdeen, graduate of Aberdeen.

May 25.—Arthur Trevelyan, Wallington, Northumberland, M.P.S. Edin.; George G. Bird, M.D. Swansea, M.R.C.S.; John P. Lynill, salesman, 38 Mosley Street, Manchester, M.P.S.

May 28.—James Robertson, surgeon, Johnstone, Renfrewshire, licentiate of the Royal College of Surgeons, Edinburgh.

May 29.—John Rylands, manufacturer, Warrington, M.P.S.; Peter Rylands, manufacturer, Warrington, M.P.S.; George Johnston, 16 Regent Square, London, recommended by two members.

May 30.—Joseph Moore, M.D. 10 Saville Row, London, member of the Royal Medico-Chirurgical Society, &c.; Richard Poole, M.D. Montrose, F.R.C.P.E.

June 1.—F. C. Goodwin, M.D. Mosley Street, Manchester, graduate of Edinburgh; T. B. Lloyd, 40 Mosley Street, Manchester, M.P.S.

June 2.—William Stark, Norwich, F.G.S.

June 4.—E. J. Holm, medical student, 106 High Street, Portsmouth, recommended.

June 6.—G. R. Rylands, manufacturer, Warrington, M.P.S.

June 8.—John Molyneux, Catholic priest, Warrington, M.P.S.; Daniel Noble, surgeon, Manchester, M.P.S.

June 11.—John Dennistoun, merchant, Greenock, M.P.S.

June 13.—Alexander Rodger, Greenock, M.P.S.; Thomas H. M. Dutton, 25 Milsom Street, Bath, M.P.S.

June 18.—James Marr, M.D. 25 Dundas Street, Edinburgh, graduate of Edinburgh.

July 4.—Nicholas Adam, surgeon, Lymington, Hants, licentiate of Apothecary's Company.

July 10.—Alex. Hood, surgeon, Kilmarnock; John Miller,

surgeon, Kilmarnock; John Thompson, surgeon, Kilmarnock; Robert Crawford, publisher, Kilmarnock; John Crooks, surgeon, Kilmarnock; F. G. P. Neison, actuary, Kilmarnock; all recommended.

July 11.—A. G. Hunter, hatter, Glasgow, M.B.A.; Andrew Leighton, manufacturer, Redcross Street, Liverpool, M.P.S.

July 13.—Edward Stallard, clerk, 23 New Bond Street, Bath, M.P.S.

July 14.—James Bunton, merchant, Glasgow, M.P.S.

July 16.—William Robson, postmaster, Warrington, M.P.S.

July 18.—William Weir, M.D. Glasgow, M.P.S.

July 20.—Richard Beamish, civil engineer, Sans Souci, Prestbury, Cheltenham, F.R.S.

July 22.—Abram Cox, M.D. London, graduate of Edinburgh.

July 23.—John Maxwell, M.D. Glasgow, graduate of Glasgow.

July 28.—William Tait, surgeon, 8 Hill Place, Edinburgh; recommended.

Aug. 1.—Robert Kaye, merchant, Glasgow, M.P.S.

Aug. 3.—Adolphus Kiste, Liverpool, M.P.S.; W. J. Vernon, Liverpool, M.P.S.

Aug. 6.—Duncan Morrison, merchant, Glasgow, M.P.S.

Aug. 14.—Richard Cull, professor of elocution, 14 Caroline Street, Bedford Square, London, M.B.A.

Aug. 18.—Rev. W. R. Evans, Kingsland Rectory, Leominster, graduate of Cambridge; William Cumming, at J. Bartholomew and Company's, Glasgow, M.P.S.

Aug. 19.—J. B. Anderson, Ingram Street, Glasgow, M.P.S.; Robert Forbes, at Cuthbertson & Tweedie's, Glasgow, M.P.S.; John Grattan, chemist, Belfast, recommended.

Aug. 20.—Frederick Gould, chemist, Kingston, Surrey; recommended.

Aug. 21.—Rev. William Whitear, Brockdish, Scole, Norfolk, graduate of Cambridge.

Aug. 22.—Samuel Eadon, schoolmaster, Pisgah Vale, near Sheffield, graduate of Edinburgh.

Aug. 24.—Andrew Bain, printer, Glasgow, M.P.S.

Aug. 25.—James O'Beirne, M.D. graduate of Edinburgh.

Aug. 26.—George Dalton, banker, Dudley, recommended; Samuel Dalton, clerk, Dudley, recommended; W. B. Hodge, writer, Glasgow, M.P.S.

Aug. 27.—W. B. Hodgson, Secretary of the Liverpool Me-

chanics' Institution, M. Edin. Ethical Soc.; William Hancock jun. Wiveliscombe, Somerset, recommended.

Aug. 31.—W. J. Morgan, M.D. 4 Parago Buildings, Bath, F.R.C.P. Dublin; E. T. Craig, Nottingham, M.P.S.

Sept. 1.—Thomas Wilson, Blackburn, Lancashire, M.P.S; C. J. S. Jackson, manufacturer, Heaton Street, Blackburn, formerly M.P.S. Preston; James L. Drummond, M.D. Belfast, graduate of Edinburgh.

Sept. 2.—James Kennedy, M.D. Ashby-de-la-Zouch, graduate of Glasgow; William Dewes, attorney, recommended; John Stirling, civil engineer, Aberdeen, M.P.S.; H. P. L. Drew, surgeon, 33 Torrington Square, London, Member of the Medico-Chirurg. Soc.; H. G. Wright, Secretary to the Edin. and Glasgow Railway Co., M.B.A.

Sept. 3.—James Deville, lamp-seller, Strand, London, F.Z.S.; M. B. Sampson, clerk in the Bank of England, London, recommended.

Sept. 4.—A. W. Paulton, Bolton, Lancashire, recommended; Robert Patterson, ironmonger, Belfast, M.B.A.; Charles Cary Elwes, Bath, M.P.S.; Bryan Donkin, civil engineer, Paragon, Old Kent Road, London, F.R.S.; Robert Maugham, attorney, Chancery Lane, London, Member of an incorporated Law Society.

Sept. 5.—Nicholas Brewer, 29 Mitre Street, Great Charlotte Street, Lambeth, Member of the London Anthropological Society; John Scott, M.D. Edinburgh, graduate of Edin.; Charles Randolph, millwright, Glasgow, M.P.S.; Alexander Faulkner, cashier of the Commercial Bank, Newcastle, recommended; Charles Cowan, M.D. now or formerly of Bath, graduate of Edin.; Edward Jackson, surgeon, Chaddesley Corbett, near Kidderminster, M.R.C.S.; Charles J. Gast, 28 Hanway Street, Oxford Street, London, Member of the Phren. Class, Lond. Mech. Inst.; Richard S. Cunliff, merchant, Glasgow, M.P.S.; John Liddell, manufacturer, Glasgow, M.P.S.

Sept. 6.—William Gregory, M.D. Aberdeen, F.R.S.E.; G. R. Lewes, artist, 2 Berner's Street, London, M.P.S.; Robert Marshall, builder, Argyle Street, Glasgow, M.P.S.; James Muir, merchant, Greenock, M.P.S.

Sept. 8.—James Morgan, merchant, Argyle Street, Glasgow, M.P.S.; William Stewart, merchant, Candleriggs, Glasgow, M.P.S.; Robert Cox, writer to the Signet, Edinburgh, M.P.S.

Sept. 9.—William Cargill, merchant, Charlotte Square, Newcastle, M.P.S.; D. G. Goyder, dissenting minister, Glasgow, M.P.S.; William Johnstone, Blackburn, M.P.S.

Sept. 10.—Robert Rettie, brass-founder, Glasgow, M.P.S.; James Smith, manufacturer, Deanston Works, near Doune, M.B.A.

Sept. 11.—Thomas Henderson, clothier, 15 Hutcheson Street, Glasgow, M.P.S.; James E. Harvey, merchant, Buchanan Street, Glasgow, M.P.S.; Andrew Muir, Greenock, M.P.S.; Thomas Witherington, chemist, Blackburn, M.P.S.; John Sharpless, cotton-spinner, Blackburn, M.P.S.; J. L. Levison, dentist, 25 Upper Temple Street, Birmingham, recommended; Andrew Combe, M.D. Edinburgh, M.P.S.

Sept. 12.—Alex. Stuart, merchant, Greenock, M.P.S.; John G. Gullan, teacher, Glasgow, graduate of Glasgow; J. H. Bally, merchant, Liverpool, M.P.S.; J. C. Duncan, manufacturer, Liverpool, M.P.S.; David Thom, minister, Liverpool, M.P.S.

Sept. 15.—Peter Robertson, teacher, M.P.S. Glasgow; James B. Crease, merchant, Edinburgh, M.P.S.

Sept. 17.—Henry Smeaton, writer, Glasgow, M.B.A.; John Macharg, merchant, Glasgow, recommended; A. J. D. D'Orsey, teacher, Glasgow High School, M.P.S.; John R. Robertson, writer to the Signet, Glasgow, recommended; W. W. Mitchell, merchant, Glasgow, recommended; George Mitchell, merchant, Glasgow, recommended.

Sept 18.—John Elliot, millwright, Glasgow, M.B.A.; Daniel Macrobie, paper-maker, Bridge of Allan, Stirling, M.B.A.; William Burns, writer, Glasgow, recommended; Sir Francis A. Mackenzie, Bart. Gairloch, Dingwall, M.B.A.; Peter Macintyre, M.D. 25 Slater Street, Liverpool, M.P.S.; George Taylor, merchant, Ayr, recommended.

Sept. 19.—T. H. Bastard, 110 Great Titchfield Street, Regent Street, London, recommended; Bindon Blood, 22 Queen Street, Edinburgh, M.P.S.; William M'Kerrell, Paisley, M.B.A.; William Thomson, Bellfield, Glasgow, M.B.A.

RICHARD S. CUNLIFF, TREASURER, IN ACCOUNT WITH THE PHRENOLOGICAL ASSOCIATION.

Glasgow, September 1840.

Dr.

Subscription received from George Combe, Esq.	L.5	0	0		
Subscription received from 54 Members who attended the Meeting, each 10s., . .	27	0	0		
Subscription from Dr Andrew Combe, .	0	10	0		
Do. Robert Ainslie, Esq. W.S.,	0	10	0		
				L.33	0 0

Cr.

Paid Carriage of Casts from Sundries, and expense of preparations,	L.2	2	3	
Paid for alterations and fittings in Hall for General Meetings—for Cleaning Hall—Doorkeeper's Wages—and Charges for the Public Meeting in Mechanics' Institution,*	5	8	6	
Paid for Stationery,	0	12	6	
Paid Postage of Circulars and Reports,	2	13	6	
Paid for Advertising and Printing Circulars, Notices of Meetings, Tickets, Reports, &c.	15	6	0	
Balance in Treasurer's hands,	6	17	3	
				L.33 0 0

GLASGOW, 2*d February* 1841.—We have examined the details of Mr Cunliff's accounts with the Phrenological Association, of which the above is an abstract, and have found the same fairly and accurately stated; and we find that the balance due, as of this date, by Mr Cunliff to the Association, amounts to L.6 : 17 : 3.

(Signed) JAMES MACCLELLAND.
WILL. WEIR.

The above balance (after deducting the banker's charge for the exchange), namely L.6 : 16 : 9, has this day been transmitted to Thomas H. Bastard, Esq. the Secretary to the Association in London. RICHD. S. CUNLIFF.

Glasgow, 4*th February* 1841.

IV. *An Angry Reviewer.*

A writer in the Westminster Review for January 1841, whose signature is H., in noticing George Combe's "Moral Philosophy," says—"The volume before us is really one that has made us *angry*,—angry that a work, which contains abundant evidence of practical good sense, and many pages of which are worthy to form a text-book for educationists and statesmen, should yet be utterly spoiled by the harping of the writer constantly upon one string; his favourite idea,—that the science of all sciences is the science of Phrenology."—We, on the other hand, have been rendered by this notice of the science to which our labours are devoted, not angry, but merry,—merry to see the reviewer appreciating phrenological wisdom when presented to him, yet denouncing as folly the source from which it flows.

* No charge was made by the Directors of the Mechanics' Institution for the use of the Hall.

In the article from which the foregoing sentence is quoted, the reviewer says—"George Combe and Dr Andrew Combe are both talented writers, but not of equal merit, and it is of some importance that the public should learn not to confound the one with the other, as we find has sometimes happened. Dr Andrew Combe, whose physiological works are beyond all praise, and whose excellent Treatise on the Management of Infancy we reviewed in our last number, is not the same with the author of 'Moral Philosophy.' George Combe, the author of the present work, is known chiefly for his works on phrenology, and for the phrenological bias given to every subject upon which he has written. It is difficult to decide, when we take up a work by this author, whether to smile or to weep; *to smile at the monomania that would find engraved upon the skull all the mysteries of the human mind*, or to weep that, as in the case of Bishop Berkeley (who wrote both the theory of vision and a treatise on the virtues of tar water), the wisdom of the wisest among us should be sometimes mixed up with the wildest folly."

We request the reviewer to dry his tears, and to listen to the following facts. Dr Andrew Combe was one of the earliest proprietors and most assiduous contributors to this Journal; the germs of all his subsequent writings are to be found embodied in our pages, many of them bearing his name; and he continues to assist us with articles to the present day. Between his opinions and those of George Combe respecting phrenology and its applications, there is scarcely a shade of difference that is known either to these writers themselves, or to us who are intimately acquainted with both of them; and, moreover, we have the direct testimony of Dr Andrew Combe himself to the merits of phrenology, in the very "Treatise on the Management of Infancy" which the reviewer so highly commends. On p. 341, Dr Combe says, "Thanks to the invaluable discovery of Gall, we are now in a position to explain why the past efforts of mankind in the education of the higher portions of human nature—*of the intellectual and moral powers*—have been comparatively unsuccessful; and we are in possession of principles, by the judicious application of which, a great and steady advance may speedily be made, and by means of which a great improvement has already been effected. By demonstrating that the various propensities, and powers of emotion, observation, and thought, are independent and distinct in their nature; that they act each through the medium of an appropriate portion of the brain, commonly called its 'organ;' that each mental faculty is, by its natural constitution, related to a different class of objects, and is prone to

start into activity when these objects are presented; and, lastly, that we can no more cultivate the emotion of justice or of pity than we can the sense of hearing or seeing, by a mere intellectual exposition of its propriety; Phrenology has thrown upon the science of education a flood of light which will not be duly appreciated for years to come, but for which posterity will assuredly be grateful, when the benefits resulting from it shall be widely felt. To enter upon the consideration of all the applications which may be made of phrenology to the improvement of infant training and general education, would lead me far beyond the limits assigned to the present work. But I should be insensible of what I myself owe to its assistance, were I not to express in the strongest terms my obligations to its guidance, and to affirm that, in the hands of a rational and well-educated parent, it is calculated to remove many a discouraging difficulty, and to implant in the mind a profound, pervading, and unshaken, because enlightened, reliance on the goodness, stability, and wisdom of the Divine arrangements, as the safest, clearest, and best which can be followed in bringing up a child in the way in which he should go."

George Combe has written few stronger testimonies in favour of phrenology than this, and we therefore are warranted in affirming that Dr A. Combe labours, as much as he, under what the reviewer ignorantly and most absurdly calls the "monomania that would find engraved upon the skull all the mysteries of the human mind." The light in which these two authors and the reviewer appear to us is this. In so far as the reviewer's information is commensurate with that of Dr A. Combe and George Combe, he recognises them both as "able writers," and describes the works of the former as "beyond all praise," and the "Moral Philosophy" of the latter as affording "abundant evidence of practical good sense;" but, whenever they enter into a field which he has not explored, and express their opinions of the value of truths *which to him are unknown*, he takes it for granted that their talents and sense have deserted them, and charitably charges them (for the charge is equally applicable to the one as to the other) with labouring under a *monomania*. Were they disposed to return the compliment, they have good logical grounds for affirming that such an inference, founded on such premises, presents strong symptoms of a monomania in the reviewer in the department of Self-Esteem. That his ignorance of phrenology and of the evidence on which it rests is unbounded, is apparent from every line he writes regarding it: for example—"We are told," says he, "of a faculty called 'Destructive-

ness,' but there is nothing in human actions to shew its existence." No man of the reviewer's talents who had considered the facts in human nature brought together in the article on this faculty in vol. ix. pp. 402 and 498 of this Journal, however prejudiced before, could have written such a sentence as this. But the day when such oracular decisions could injure phrenology is long past. This critic has been laughed at by hundreds whose knowledge enabled them to take the vantage-ground of his ignorance, and we can afford to leave him in the unenvied enjoyment of his present opinions, until that strong sense and right feeling which he obviously possesses when not misled by prejudice, shall induce him to apply his mind to the study of a science of which a critic can no more remain ignorant with impunity than can a judge of the principles of law.

V. *Indications of the Progress of Phrenology in Italy.* By Andrew Combe, M.D.

Among the many indications which have lately presented themselves of the gradual diffusion of phrenology, and its adoption as a practical system of philosophy by reflecting and intelligent men, we have observed none more gratifying or more illustrative of the innate strength and vitality of truth, than those which have emanated from Italy. In England, France, and America, where public discussion is unfettered, and where new discoveries have therefore the best chance of being early appreciated and generally received, it is only natural to expect that phrenology should meet with many talented and powerful advocates, and that among the young and unprejudiced it should have already spread its roots over a large extent of fertile ground. But when we find that in Italy, where the working of the human mind is impeded by the most stringent censorship, and the most active political and priestly surveillance,—where the results of free and liberal discussion are dreaded almost as much in morals and philosophy as in politics,—the doctrine of Gall has, nevertheless, many and able cultivators, and bids fair to take permanent root at a very early day, we cannot but regard the fact as an additional evidence, not only of the omnipotence of truth, but of the existence of a class of minds in that country worthy of the cause which they have undertaken to advocate, and possessed of no small share of that high moral devotion which does not shrink from the sacrifice of personal interests at the shrine of truth.

These observations have been suggested to us partly by

two Italian works on phrenology, which have lately come into our possession, and partly by the recollection of the noble conduct of the late Professor Uccelli of Florence, of which we gave an account in the 6th volume of this Journal, when reviewing his excellent work in six volumes, entitled, *Compendium of Comparative Anatomy and Physiology, for the use of the Medical Schools, &c.*, one volume of which is dedicated to a temperate, clear, and able exposition of the new physiology of the brain, which it justly characterizes as the greatest discovery of modern times. By the publication of this work in 1825–6, Uccelli may be said to have laid the foundation of phrenology in Italy. It was known, indeed, to individuals before that time, and referred to incidentally in the lectures of several professors; but till then the scientific public of Italy had no book from which they could derive an extensive knowledge of the subject. No sooner, however, was that work published, than a scene of persecution began, worthy of the darkest ages of barbarism, but which, like all other persecutions, has not been without its advantages in forcibly directting the attention of independent thinkers to the investigation of the nature and evidences of Gall's discoveries. As the circumstances were little known in Britain at the time, and Uccelli is entitled to the honour of having made greater personal sacrifices for phrenology than any other of its advocates, we think it due to his memory shortly to repeat the facts of the case as they occurred. In doing so, we shall not derive our statements from any phrenological authority, whose judgment might by some be supposed to be biassed by his previous opinions; but from the correspondent of the Morning Herald newspaper, who, in a letter dated Florence, 18th October 1828, gave an account of the proceedings, because "the *discussion occupied all parties*" in that city, and was likely, he thought, to be talked of in England. To prevent any one supposing this gentleman to be a disciple of Gall, he expressly guards himself by stating, "I am no convert to the doctrine of the twenty-seven departments or boxes of organs, each separate and distinct; but I honour the man who carries on the duty of investigation in a frank and fearless temper, and am sure mankind will be greatly served by the result, be it what it may."

Of Uccelli himself, the Morning Herald's correspondent says—"His reputation as a physiologist stands second only to that of Vacca of Pisa. The fourth volume of his book may be deemed a defence of the new theory. The discussion is carried on throughout in a mild, modest, and philosophical spirit; and whatever may be thought of his system, nothing can be urged against his manner of treating it."

So much for the character of the author, and the spirit and scope of his treatise. Now for the reception which he and it met with. No sooner was it published than "the howl of ignorance and barbarism" began. "The first point was for the knaves who set on the howlers to cover themselves with the proper mask, and to swear they were influenced by *nothing less than a love of virtue and of religion.*" Thus prepared, the accusation was launched against Uccelli that "he preached the doctrines of Gall and Spurzheim,—in other words, heresy, necessity, materialism, *protestantism* (!), atheism, and the devil;" and, to add force to the accusation, his character was blackened by anonymous slander, the worst of which was soon traced to Lippi, a colleague of Uccelli's, who owed his advancement to him, and who took advantage of his intimacy with him to seduce his wife as well as traduce himself. Lippi, on being discovered and prosecuted, was ordered by the court to be *temporarily suspended* from his professorship. Uccelli, indignant at this result, and impatient at the idea of continuing to have his traducer for his colleague, proffered his own resignation to the Grand Duke, who refused it. For a time matters rested here. Shortly after, however, Professor Grimaldi of Lucca published a pamphlet in support of Lippi, in which he held up Uccelli's phrenological opinions "*to the execration of all good Catholics.*" The Grand Duke, although still unwilling to move, now referred the work to the Theological College of Pisa, by whom it was of course condemned. In conformity with this decision, the Duke deprived Uccelli of his chair. But the latter did not long survive—he died, we believe, the following year.

In the same letter from which we have borrowed the preceding account, it is stated that two professors of Bologna, Oricoli and Tomasini, also gave umbrage by speaking from their chairs in favour of phrenology, and that in consequence they were both favoured with a "polite" note from Cardinal Opizoni in the following terms:—"I beg to apologise for the trouble I give; but as all mankind are not so enlightened as you, you will be so good as not to scandalize them by preaching the dangerous and immoral doctrines of Dr Gall." The Herald's correspondent adds,—"It is known that both Lippi and Grimaldi, who have been fanning this flame of persecution, have not the wretched excuse of the ignorant and the fanatic—*they know better;* but in Italy it is difficult for public opinion to apply its scourges for the punishment of the vile, or to stretch out the encouraging hand for the protection of the injured."—(Phren. Journal, vol. vi., p. 29.)

Such was the apparently unpromising root from which

phrenology in Italy was destined to spring up. Smothered and seemingly extinguished amidst the triumph of its enemies, it was, nevertheless, not long of shewing signs of returning animation. Some of these have been already brought under the notice of our readers in former numbers of this Journal, but of two or three of later date, it still remains for us to speak.

When in the act of beginning the present article, a gentleman called upon us with a letter of introduction from that zealous phrenologist, Signor Molossi of Milan, whose name is well known as the author of several phrenological pamphlets. The bearer proved to be Dr Rigoni, professor of physiology in the university of Pavia, who is stated by Signor Molossi "to have already supported our science with great honour in spite of prevailing prejudices, and, what is more worthy of remark, against the hostile doctrines of Lhoenossek, whose physiological work forms the text generally followed in our universities. These circumstances deserve to be mentioned in the Phrenological Journal; and I can assure you, that from the instant that the illustrious Professor began to speak frankly from his chair in favour of the doctrines of Gall, the students of medicine in Pavia studied it with ardour and no inconsiderable success." Here, then, is another example of an Italian professor rising above the prejudices of his age and country, and openly advocating what he believes to be an important discovery; and we return our best thanks to Signor Molossi for making him known to us as a fellow-labourer in our field of inquiry. We found Dr Rigoni a well informed, very intelligent, and agreeable man; and we have no doubt that he will do much to accelerate the progress of phrenology in his own country. He informs us that there are about 1400 students at the university of Pavia, and that of these about one-half belong to medicine; so that he enjoys excellent opportunities of usefulness. The want of a good collection of skulls and casts is much felt, and Dr Rigoni was glad to have it in his power to pay a visit to the rich collections of London and Edinburgh.

The next evidence of the progress of phrenology in Italy is one for which we are indebted to Dr Zarlenga of Naples, namely, a work entitled *Memorie Risguardanti la dottrina Frenologica ed altre scienze che con essa hanno stretto rapporto*, by Luigi Ferrarese, M. D., physician to the Royal Lunatic Asylum of Aversa, &c.; Naples, 1838. This little volume, which by the way is very tastefully printed, is, we believe, the fifth of a series published within the last few years by Dr Ferrarese, and containing a variety of articles by himself and other phrenologists. The present volume sets out with a pre-

face, in which the titles of twenty-nine works on phrenology, and a list of the names of a still greater number of phrenologists, are given; into both of which, although they are correct in the main, a few inaccuracies have crept, which we need not now stop to rectify. The first article treats of "the application of physiology, and especially of that of the brain and nervous system, to the study of the philosophy of mind;" and in it Dr Ferrarese points out the impossibility of acquiring an accurate knowledge of the operations of mind unless they are studied in connection with the organization, and inculcates the necessity of strict adherence to the Baconian rules of observation and induction, as the only certain method of attaining truth. In treating of the fundamental position of the connection between the mind and its material organs, he laments that "unhappily a class of philosophers—most moral and most religious men—professing *pure spiritualism*, and disregarding the body altogether, have, with refined art, succeeded in misleading the august ministers of our most holy religion of Christ, and at the same time in acquiring for themselves the protection of the sovereigns of Europe; and have dared, thus unequally armed, to wage war against that opposite class, whose principal object is to study man in the compound form in which he really exists." Some of the natural results of this warfare are to be found in the fate of Uccelli, and in the tender rebuke of Cardinal Opizoni, already quoted. Dr Ferrarese next enters into some details to prove that the phrenological or Baconian method of inquiry, instead of being injurious to religion, is far more calculated to strengthen its foundations than the system of pure spiritualism; and his argument is completely successful. He adds that, in his opinion, founded on irrefragable facts and observations, every organ of the brain stands in direct relation with some other organ of the body, or nervous centre, in some other part of the body; and that a mutual influence, such as that between Amativeness and the genitals, and between the love of offspring and the female breasts, subsists between the corresponding bodily organ or viscus, and the organ in the brain. He believes Combativeness, for example, to stand in this kind of relation to the heart, Firmness to the liver, and so on; and he is anxious to direct attention to the observation of the fact. In one individual, who had a very large but healthy liver, predominating over all the other abdominal viscera, he found its influence operating so vigorously upon the intellect, the propensities, and the affections, as to impress upon the moral character the most disgusting obstinacy, and give the blackest colouring to all the ideas. Dr Ferrarese does not mention the develop-

ment of the organ of Firmness in this individual, which is rather an important omission, as, whatever may have been the influence of the liver over the mode of action of the cerebral organ, we feel assured that the organ itself must also have been of the largest size.

At the same time we agree with Dr Ferrarese in thinking that much advantage might arise from studying more accurately the mutual influence of the brain and other organs of the body. Many facts shew how much the functions of the stomach, heart, lungs, kidneys, and skin, may be disordered by vivid mental emotions of various kinds, and also how much the feelings of the mind are at times influenced by the state of the stomach, bowels, or liver; and we should be glad to see the exact relation in which each stands to the rest more clearly ascertained and defined. It is in this point of view probably that Dr Ferrarese notices the connection of the temperaments with the cerebral organization, a relation which he exhibits in the following table:—

The relation between the Temperaments and the Cerebral Development.

Temperaments.	Organs which correspond.	Organs opposed.
Lymphatic.	Secretiveness. Cautiousness.	Almost all the other faculties.
Sanguine.	Amativeness. Combativeness. Self-Esteem. Hope. Wonder. Wit. Imitation. Eventuality. Language.	Reflecting faculties. Firmness. Destructiveness.
Bilious.	Amativeness. Adhesiveness. Combativeness. Destructiveness. Self-Esteem. Firmness. Secretiveness. Comparison. Causality.	Wit. Marvellousness.
Nervous.	Destructiveness. Self-Esteem. Approbation. Intellectual faculties in general.	Sensual faculties.

The next article in Dr Ferrarese's volume is an explanation of a singular dream, published in the Phrenological Journal, No. LII., p. 620; but we have not room to do more than refer to it.

Immediately succeeding this appears a very interesting "Examination of the principal causes of Insanity," by Dr Zarlenga of Naples. The author is evidently a thinking and well-informed phrenologist, and fully appreciates the facilities afforded by the new physiology for investigating the morbid manifestations of mind. In giving a brief but clear exposition of the physical, moral, and predisposing causes of insanity, Dr Zarlenga mentions several cases which occurred in his own practice, confirmatory of the views now generally taught by phrenological physicians. Two of them were examples of insanity caused by external injuries of the brain; and he quotes a third, shewing the pernicious influence of mercury as an active cause of cerebral and mental disease. In this country, where blue pill is in familiar use as a domestic remedy, we have seen it ultimately produce a degree of nervous irritability approaching to insanity, and far worse to bear than the "bile" which it was intended to cure.

Under the fourth head Dr Zarlenga treats of the sympathetic affections of the brain; and as an illustration of the influence of cerebral development on intellectual power, he mentions having, in 1836, seen a little child, the son of a peasant of the *Terra di Lavoro*, who presented a splendidly-formed head, and who, after being very imperfectly taught to read, learnt Italian, Latin, French, Greek, English, &c. with marvellous rapidity, and was visited as a prodigy by most of the distinguished men of Naples. We wish that his general talents also had been mentioned. The superiority of this child's brain was admitted by Assalini, and every one who saw him. Dr Zarlenga refers also to the case of the Sicilian boy Mangiamele, who was noted for his calculating powers, and whose cerebral organization was so remarkable as to constitute "a triumph for phrenology." This case, we may mention, is one of those said by the antiphrenolgists to be fatal to the truth of Gall's discovery.

Under the head of "Necroscopic results and brief reflections on the foregoing observations," Dr Zarlenga introduces a concise outline of the morbid anatomy of insanity, and many practical remarks which want of space forbids us to dwell upon. We rejoice, however, to see phrenology and its applications in such hands; and the only suggestion we have to offer is, that both he and Dr Ferrarese would give greater value to their facts and observations if they would state the

prominent particulars of the development in the individual cases which they bring forward. Phrenology being still a disputed science, such precision would enable their facts to be received as evidence of its truth ; whereas at present they serve only as illustrations of its utility, assuming its truth to be already established.

So far as we are personally concerned, we cannot but feel grateful to Dr Zarlenga for the frequent and honourable mention made of our own writings on mental derangement.

The concluding memoir in Dr Ferrarese's present volume is an able and satisfactory exposition of the "principles of the science of phrenology," from the pen of Dr Fossati of Paris, who is well known to the readers of this Journal as the friend of Gall, and a zealous advocate of his doctrines. But as Dr Fossati's essay (which is translated into Italian by Ferrarese) is purely elementary, and contains nothing beyond what most of our readers are familiar with, we need not stop to examine it in detail. It must be very useful in its present shape and situation. Before taking leave of Dr Ferrarese's volume, we must congratulate him on his persevering efforts in the cause of truth ; and hope soon to see him put forth another fasciculus.

We shall notice, in a subsequent article, another Italian work, entitled *Studii Phrenologici*, by Pietro Molossi of Milan, which throws additional light upon the progress which Phrenology is making in that portion of Europe.

VI. *Erasmus on the Influence of Organization upon the Mind; being a Translation of part of his Dialogue entitled "Puerpera."* (*Erasmi Colloquia ;* edit. Elzevir, 1677, p. 294.) Communicated by Mr J. E. Stocks.

Fabulla—I am not so very anxious about the body, provided that the mind be such as I desire.

Eutrapelus—Your intentions are very good, but you reason unphilosophically.

Fab.—How is that ?

* * * * *

Eut.—Why do those, who have need of a sharp vision, avoid darnel and onions ?

Fab.—Because these injure the eyes.

Eut.—Is it not the mind that sees ?

Fab.—It is ; for the dead see not.

Eut.—You acknowledge, then, that the body is the organ of the mind?

Fab.—It appears to be so.

Eut.—And you confess that, when the body is diseased, the mind does not act, or acts with less freedom?

Fab.—You do not speak very far from the truth.

Eut.—Suppose that the mind of a man should migrate into the body of a cock, would it utter the voice which we now utter?

Fab.—Certainly not.

Eut.—What would hinder it?

Fab.—The lips, teeth, and tongue, are different; nor is the epiglottis similar; nor are there three cartilages moved by three muscles, appertaining to which are nerves sent down from the cerebrum; nor are the fauces or the mouth alike.

Eut.—What if it should enter into the body of a sow?

Fab.—It would grunt as sows do.

Eut.—What if into a camel?

Fab.—It would utter the cry of a camel.

Eut.—What if into an ass?

Fab.—It would bray as an ass.

* * * * *

Eut.—Then, when the eyes are sore, the mind sees less acutely; when the ears are stopped by dirt, it hears less clearly; when rheum chokes the brain, it smells less distinctly; when a limb is torpid, it feels less acutely; when the tongue is foul with baneful humours, it tastes less plainly.

Fab.—It cannot be denied.

Eut.—And for no other cause than that the organ is corrupted.

Fab.—So I think.

Eut.—And I am sure you will not deny, that it is mostly corrupted by meat and drink.

Fab.—I own it; but what is this to a sound mind?

Eut.—Then what is darnel to clear eyes?

Fab.—It injures the organ of the mind.

Eut.—You answer well. But tell me—how happens it that one man understands more quickly, and recollects more tenaciously, than another? that one man is more irascible, or less easily moved to hatred, than another?

Fab.—Because the mind is so constituted.

Eut.—You shall not escape so easily. How is it, that he who once had a quick apprehension and a good memory, becomes in the course of time slow and forgetful, whether by a blow, an accident, disease, or old age?

* * * * *

Fab.—I think your meaning is this—that as the mind sees and hears by means of the eyes and ears, so by some organs it understands, remembers, loves, hates, is angry or placable.

Eut.—You conjecture right.

Fab.—What then are these organs, and where situated?

Eut.—You see where the eyes are.

Fab.—And I know where the ears, and the nostrils, and the palate are; and I see that touch resides in the whole body, unless when the limbs are affected by rigidity.

Eut.—The mind perceives, though the foot be amputated.

Fab.—Yes, and so with the hand.

Eut.—But he who receives a violent stroke on his temples, or his occiput, falls like one dead, and loses every sense.

Fab.—I have witnessed it sometimes.

Eut.—You gather from this, that within the cranium are the intellectual faculties, the organs of will and memory, of a less solid consistence than the ears or the eyes, but still material, seeing that the most delicate spirits which we possess are corporeal.

Fab.—Are these organs, too, vitiated by improper food and drink?

Eut.—Most certainly. * * * Why have those persons treacherous memories, who gorge themselves with immoderate quantities of wine? Why are those more quick in intellect, who are nourished by more delicate food? Why does coriander assist the memory? Why does hellebore clear the mind? Why does an excessive debauch bring on epilepsy, which affects all the senses by stupor, as does a deep sleep? Finally, as severe thirst or hunger impairs in boys the powers of the ability, and of memory; so a too abundant supply of food causes in boys a stagnation of the intellect—since, as Aristotle has it, the fire of the mind is choked by too much fuel. * * * *

Fab. Of what appearance is the soul?

Eut.—It is silly to inquire about its size and figure, when you confess it to be incorporeal.

* * *

Fab.—But I should very much like to know what this same soul is, of which we hear and talk so much, although no one has seen it.

* * *

Eut.—Do you believe that there is a God?

Fab.—Most certainly.

Eut.—Yet nothing can be less seen than God.

Fab.—He is seen in His works.

Eut.—Just so is the soul seen in its actions. When you

perceive a man feeling, seeing, hearing, moving, understanding, remembering, reasoning, you more certainly see the presence of the soul than you see this jar before you: for one sense may be deceived; not so the united testimony of so many.

* * *

Fab.—But all that we have said hitherto applies as much to the soul of a cow, or that of an ass, as to that of a man.

Eut.—Ay, and to the soul of a beetle and of a snail, as well.

* * *

Fab.—But I will not allow that a beetle and a man have the same soul.

Eut.—It is not the same, but the circumstances of both are similar. Your soul animates, vegetates, and renders sensitive *your* body; the soul of a beetle does the same in *its* body. For whatever difference there is between the actions of a man and a beetle, is partly the result of the material organization. A beetle does not sing, does not speak, because it is destitute of the requisite organs.

Fab.—Then you say this—that if the soul of a beetle should occupy the body of a man, it would do the same as *does the human soul?*

Eut.—Ay; if the soul of an angel was to do so. For there is no difference between the soul of an angel and that of a man, save that the soul of a man is so ordained as to direct the body provided with natural organs, as the soul of a beetle moves but the body of a beetle; whereas an angel is not ordained to animate a body, but to act without material organs.

Fab.—Can the soul do the same?

Eut.—It can when removed from the body.

Fab.—It is not, then, its own master when in the body?

Eut.—No, truly, unless something out of the common course of nature should happen.

Fab.—But, instead of one soul, you have told me of many; an animating, a vegetating, sensible, percipient, mindful, willing, irascible, lustful soul. For me one is enough.

Eut.—These are different actions of the same soul; from these it acquires various names.

Fab.—I do not precisely understand your meaning.

Eut.—Then I will explain it. In your chamber you are a wife, in your shop a worker in tapestry, in your kitchen a cook, among your men and maids a mistress, among your children a mother; and yet you are all these things in the same house.

* * *

Fab.—But while I am cooking in the kitchen, I am not working in the shop.

Eut.—For you are not a soul alone, but a soul conducting the body; and the body cannot be in many places at the same moment. But the soul, inasmuch as it is simple in form, is so distributed in the body that it is entire in its separate parts, although it does not act the same in all parts. For it understands and remembers in the brain, is irascible in the heart, desires in the liver,* hears in the ears, sees in the eyes, smells in the nose, tastes in the palate and the tongue, and feels in all parts of the body to which any nerves are distributed: For it does not feel in the hairs, or in the tips of the nails; and the lungs do not feel, and perhaps not the spleen.

* * *

Fab.—Then, as to what relates to nature, the soul of a buffoon is on a par with that of Solomon?

Eut.—Nothing more likely.

Fab.—Angels, too, are all alike; seeing that they are destitute of matter, which, as you say, produces inequality.

Eut.—Philosophically enough inferred. But let these abstruse questions puzzle divines.

VII.—*Remarks on the Function of the Organ of Imitation.* By Mr Hudson Lowe.

In considering the various organs and faculties of the mind, the establishment of a connection between certain portions of the brain and particular actions can be regarded as only the first step of inquiry. By exclusively confining ourselves to such a process, we should fall into a double error; that of exaggerating in one particular, and of under-estimating in all others, the action of every organ: for while there can be no question that there is no single action, not even those attending the performance of the simplest animal functions, which does not require the co-operation of several—on the other hand, there is probably no organ which does not exercise an habitual influence over the various actions or judgments of the man; an influence varying, of course, both according to the general size and the individual proportions of the organs, but which is scarcely unfelt even from the smallest and least developed. To determine the primitive principle, or what, in the case of the sentiments and propensities, might be more justly termed the elementary feeling, manifested by each par-

* Our readers do not require to be told that these notions about the heart and liver are now exploded.—Ed.

ticular portion of the brain, must therefore be looked upon as the great task of the phrenologist; it is only when this is done that we can hope justly to estimate the precise share of the organ in every action, and its influence in combination. In order to arrive at this primitive principle or elementary feeling, one of the most effectual proceedings is an *analysis* of the function observed in combination with large development. We may take, as an instance of the light which such *analysis* throws over the various faculties, that of Acquisitiveness. Gall, as we know, having observed this organ large in thieves, termed it, in the first instance, the organ of Theft. But what is theft? Dishonest acquisition of property. Was it, then, to be supposed that a specific propensity for the *dishonest* acquisition of property was implanted in human nature; or not rather, that the desire for the acquisition of property was the real faculty manifested by the portion of brain observed largely developed, and that the dishonesty was the result of the absence of controlling motives? Whether such reflection had any influence in inducing Gall to change the name of the organ subsequently to that of "Organe du Sens de Propriété," or whether the change was forced on him by the observation of cases in which this organ was large, without corresponding inclination to theft, but with desire for property, we are not informed. I am inclined to suppose the former, although I find it nowhere distinctly stated. But in any case, I do not suppose that, as an example of the utility of analysis, this can be contested. Other instances may be given, illustrating its necessity more effectually; such as the original designation of the organ of Constructiveness as "Organe du Sens de Mécanique," and the representation of the organ of Number as the cause of general proficiency in mathematics. Had Gall not confined himself somewhat too *exclusively* to his own peculiar method of the combined *observation* of mental phenomena and cerebral development, he would scarcely have fallen into either of these errors. The analytical process would have forced on his mind the conviction, that the observation of the very various details, requisite to the just knowledge and application of mechanical forces, could scarcely depend on any single faculty; while still less could he have fallen into the error of attributing to another such single faculty the power of at once enabling Zerah Colburn to perform his mental calculations, Pythagoras to prove that the square of the hypothenuse is equal to the squares of the other two sides of a right-angled triangle, and Laplace to write "La Mécanique Celeste." Observation has corrected these errors; analysis would have enabled Gall to avoid them. They all exemplify the most prevalent of fallacies, that of

considering a partial as a complete or general cause. We should be no more warranted in concluding that because Number is indispensable to the mathematician, therefore Number alone is sufficient to make a Laplace, than in supposing that, because we cannot speak without a tongue, the tongue is therefore all that is essential to speech; or that because health requires a due supply of food, therefore a due supply of food is all that is essential to health.

The method I propose pursuing in the following paper is, firstly, To give an abstract of the views of Gall, Spurzheim, and Combe on the organ and faculty of Imitation; secondly, To endeavour to analyze the imitative process, and shew what other faculties are concerned in this process; and, lastly, To develope my own views of the nature or primitive principle, and the mode of action and the objects, of the faculty connected with the organ No. 21. The theory of Mr Scott regarding the function of the organ of Secretiveness I shall discuss incidentally under the first head; partly because this theory will be, to such as admit it, an objection *in limine* to my own views; partly because an inductive line of argument—the only fit one in matters of science—must necessarily be *broken* by the introduction of controversy. With the views entertained by the founder of Phrenology and his two leading disciples, I coincide, even though I seek to modify and enlarge them; but those of Mr Scott are directly at variance with my own.

Part I.

The first instance observed by Dr Gall of a large development of the portion of the brain now designated as the organ of Imitation, was in the case of one of his friends, who imitated, with sufficient success to procure immediate recognition, the manners and tone of his originals. The second was that of a boy of the name of Casteigner, pupil of the Deaf and Dumb establishment at Vienna, of which Gall was physician, who, from the day of his admission, had drawn attention by the remarkable talent for mimicry which he exhibited. After enumerating many other examples either of private persons exercising great power of mimicry, or of professional actors, and closing his list by that of a thief in the House of Correction at Munich, whom he rightly conjectured, from the large development of the organ, to have been at one time a comedian,—Gall proceeds in words of which the following are an exact translation: "Since this time, I have so multiplied my observations on this subject, that I think myself authorized to admit that the talent of imitation, the talent for mimicry—that is to say, the faculty of personifying, in some

manner (*en quelque façon*, a vague expression), ideas and sentiments, and of justly representing them by gestures—is a special fundamental faculty, depending on a special organ. This organ, doubtless, contributes much to make of the poet a dramatist, such as were Terence, Shakspeare, Corneille, Molière, Voltaire, &c.

"There can be no doubt that it is to this organ that we owe the art of the actor.

"This talent for mimicry will manifest itself with greater energy and extent, the more it is accompanied with vivacity of feeling, and the more numerous are the other faculties possessed in an eminent degree. The various distribution of other organs accompanying that of mimicry constitutes the diversity of actors. The parts of waiting-maids, valets, fools, buffoons, coxcombs, lovers, coquettes, tyrants, and thieves, demand each a very energetic special disposition; and if an actor is equally great in parts of an opposite character, it must be presumed either that his talent is complex, or that he owes more to study than to nature." (*Sur les Fonctions du Cerveau*, tom. v. pp. 327–332.) Farther on, the following confirmatory facts are added: "A young idiot," says M. Pinel (*Aliénation Mentale*, 2d edition, p. 99, § 115), "whom I have long had under my eyes, has the most marked and irresistible inclination to mimic all that she sees done in her presence. She repeats automatically all that she hears said, and imitates the actions of other persons with extreme fidelity, without being embarrassed by a sense of propriety." "Cabanis," adds Gall, "relates the history of a man so volatile (*d'un homme si mobile*) that he felt himself impelled to repeat all the movements and attitudes which he witnessed. 'If he was prevented obeying this impulse, either by the seizure of his limbs or by making him take other attitudes, he experienced insupportable pain; here,' adds Cabanis, 'as will be seen, the faculty of Imitation was carried to the extent of disease.' (*Du Physique et du Morale de l'Homme*, tom. i. p. 195.) All the phenomena which I have related are inexplicable, unless it be admitted that the talent for mimicry is a fundamental faculty, founded on a special organ. This organ is in general more useful than might appear at first sight. It is of great utility to the orator, enabling him to animate his discourses with correct declamation, and accompanying his words with suitable gestures. But it is, above all, in the arts of design that it plays a very important part. It is this organ which gives expression and life to works of art. I have already mentioned that I have found the organ of Imitation extremely developed in the skull of Raphael [since Gall wrote discovered to be spurious, but the development is the same in the preserved portraits],

who, in regard to expression, holds the first rank among painters. I find it also very much developed in Domenichino, Rubens, Poussin, and Le Sueur, all particularly distinguished by their powers of expression." He then adds some short remarks on the love of wearing masks and disguises, which he attributes to this organ, and which Dr Spurzheim, with a greater appearance of probability, has attributed to the organ of Secretiveness. The preceding extracts contain all the substance of Gall's remarks on the organ of Imitation.—(Pp. 333–337.)

Dr Spurzheim's section on this organ contains much the same account as that given by Dr Gall; the following are the only original remarks with the exception of that point of difference from Dr Gall to which I have just adverted. "The existence of the faculty of imitation is proved in the same way as every other primitive power. It is in general more active in children than in adults; and it is known that children learn a great deal by imitation: they do what they see done by others; they repeat what they hear told."—"Its sphere of activity is very great, especially during infancy. Some, throughout life, manifest it in an eminent degree, and *feel a particular pleasure in theatrical performances.*

"It is difficult to say to what extent animals possess this faculty. Monkeys do various things like man, but is this in consequence of mere imitation, or of their having certain powers in common with man? The latter part of the question would seem to be well answered in many cases in the affirmative. On the same principle the imitation of singing birds may be explained rather by the faculty of Tune than by imitation alone. The power of melody perceives, recollects, and repeats the song of other birds or of man. Yet I admit that the primitive power of imitation exists among many tribes of the animal kingdom. Parrots not only repeat harmonious tones, but all sorts even of harsh and discordant noises. The three faculties last discussed (Ideality, Gaiety, and Imitation) are essential to theatrical performances. They must generally act in combination with the intellectual faculties, but their nature seems, *nevertheless, to be rather affective than intellectual.*"

I extract the following remarks from Mr Combe: they relate chiefly to the views which Mr Scott is known to have advanced on the influence of the organ of Secretiveness, which he conceived to give the power of enabling the actor to enter into the spirit of the character he represented, believing that of Imitation confined to the representation of externals. The first extract is from the section on the organ of Imitation. "This faculty produces the talent for imitation alone; and

Mr Scott observes, that in perfect acting there is more than imitation, there is expression of the propensities and sentiments of the mind in all the truth and warmth of natural excitement; and this power of throwing real expression on the outward representation he conceives to depend upon Secretiveness. Thus, says Mr Scott, a person with much Imitation and little Secretiveness could represent what he had seen, but he would give the externals only in his representation; add Secretiveness, and he could then enter into any given character as it would appear in actual nature: he could, by means of this latter faculty, call up all the internal feelings which would animate the original, and give not a copy merely, but another of the same—a second edition, as it were, of the person represented. In this analysis of acting, perhaps too much influence is ascribed to Secretiveness, and too little to Imitation: my own opinion, as expressed on p. 253, is, that Secretiveness produces chiefly a restraining effect, and that Imitation enables its possessor to enter into the spirit of those whom it represents." The observations on p. 253, here referred to, are as follows: "I have uniformly found Secretiveness large in the heads of actors and artists, of which I have been permitted to examine a considerable number. In the cast of Miss Clara Fisher's head, it will be seen amply developed. The theory of its effects in aiding the former, seems to be this. The actor must conceal or shade his real character, and put forth the natural language of an assumed one. Now Secretiveness will enable him to suppress the manifestations of all the faculties which are not essential to the character of the personage whom he for the time represents; while, by withdrawing the restraint from other faculties, it will allow them to develope themselves with full energy. Thus, suppose an actor, in whom Benevolence and Conscientiousness are large, to be called on to play Iago, a character in which selfishness and villany predominate, the Secretiveness will enable him to suppress the natural language of his own superior faculties, while, by withdrawing its influence from Combativeness, Destructiveness, and Self-Esteem, it will permit the most forcible expression of these in looks, tones, and gestures; and this will be Iago to the life. It aids the artist in a similar way. A painter or sculptor, in working a figure, first studies the mental feelings which he intends to convey, then goes to a mirror and produces the expression of them in his own person, and copies it in his picture or block of marble. In this process he resembles an actor, and Secretiveness assists him in the manner before explained. In this analysis I differ in one point from Mr Scott. He thinks that Secretiveness confers not only the negative power of suppressing the real character, but also the

positive power of calling up at will the natural language of such faculties as we wish to exhibit for the time. Thus, some persons are able to load others with expressions of great esteem, attachment, and good will, while internally they hate them. Mr Scott conceives that Secretiveness enables such individuals not only to disguise their enmity, but to call up for the occasion the natural language of Adhesiveness, Benevolence, Veneration, and Love of Approbation, and to use these as instruments of deception. This latter effect appears to me to depend on Imitation and Secretiveness combined." I have yet another short extract to make from Mr Combe, but this appears the most appropriate place for the discussion of Mr Scott's theory.

In the first place, it seems to me entirely at variance with phrenological *analysis*. The function of Secretiveness *is universally* allowed to be that of *repressing* the *natural language* of the various faculties: where a predominant development of the organ exists, the manners are reserved, and the various emotions of the mind are not allowed to betray themselves. Mr Scott, while not denying that such is its function, yet attributes to it at the same time one not only different, but *directly contrary*, namely, that of calling internal feelings and their natural language into activity. Is such an opinion less extravagant than would be the attribution of the desire of inflicting pain to the organ of Benevolence, or the emotion of contempt to the organ of Veneration? At least it requires the strongest array of facts to support it; but those of Mr Scott may be considered as making equally for either side of the question. Of course few things would so effectually mar the spirited representation of any character as the constant protrusion of the every-day tone and demeanour of the performer, and all acknowledge that an active Secretiveness is necessary to suppress these. Further, we are to consider that, to the comic actor, Secretiveness is indispensable as a constituent of humour, and that there are, besides, tragic parts in which Secretiveness constitutes a main element in the character represented. Thus the facts of the case do not appear more favourable to the views of Mr Scott than to those of Mr Combe; while philosophical analysis is manifestly in favour of the latter. But the instance which Mr Combe has chosen as an illustration, has suggested to me an argument still more decisive against Mr Scott's theory. It will, I think, be obvious that Mr Combe has been infelicitous in his description. The character which he has drawn is almost nearer to that of Coriolanus than to that of the "super-subtle Venetian:" *he has omitted two essential features* of Iago's character, *intellect*

and cunning; and the inclusion of Combativeness, as a *leading element* of character, does not seem well founded. Now the consideration of the powers necessary to the representation of a cunning character will afford the best criterion for the trial of Mr Scott's theory. According to this theory, the influence of Secretiveness in such a process must be threefold: it must give the power (1.) of suppressing the manifestations of such feelings as are unsuited to the part; (2.) of calling up the natural language of such as the part demands; and (3.) of exhibiting forcibly *its own natural language* in the shape of underhand and sinister looks, &c. Now, if we reflect that the various affective faculties, *with one exception*, have each their special natural language, and that the several groups of the intellectual organs have also theirs, and that the excepted organ, which has no natural language, is that of Imitation; nay farther, that the very phrase, "natural language of Imitation," is absurd and nonsensical; we shall be at no loss to which faculty to assign the power of calling forth (whether mediately or immediately I do not *in this place* attempt to determine) the natural language of the other faculties;—whether to the organ of Imitation, all the operations of which hitherto observed have been *in connection* with the manifestations of other faculties—or to Secretiveness, an organ having well ascertained definite functions, and an equally definite natural language, of its own.

One additional remark I have stated it was my intention to quote from Mr Combe. This is as follows:—"As imitation consists in reproducing existing appearances, it will easily be understood that its effects should be greatly augmented by vigorous powers of observation; and, accordingly, this faculty is greatly aided by a large endowment of Individuality and Eventuality. In the heads of Garrick and of Matthews the comedian, these organs are very largely developed in addition to Imitation." This last quotation may serve as a preparation for the second part of our inquiry.

Part II.

Firstly, We must consider imitation as comprising—1*st*, An object to be imitated; 2*d*, Observation; 3*d*, Reproductive or imitative process; 4*th*, Effect to be produced. With respect to the first, it is obvious that, in considering the nature of objects to be imitated, the only distinction of real importance to mental analysis is that between the various faculties by which they are observed. A pair of tongs and a ho
are cognizable by the same faculties: all distinctions be

them are without significance for mental philosophy. It would be difficult to assign an exact boundary to the province of Imitation, or to determine with satisfactory precision the demarcations which divide that province; but there are some leading classifications which at once suggest themselves to the mind. Thus we may, in the first instance, consider the objects of Imitation as divided into—

1. The imitation of such general phenomena as are cognizable by the senses and perceptive faculties, where such phenomena are to be imitated for their own sakes.
2. The imitation of the sensible external signs of the various emotions of the mind.
3. The imitation of such phenomena as address themselves not only to the senses and perceptive powers, but also to the understanding generally considered.

The first and simplest kind of imitation is also the most universal, and comprises almost wholly the arts of the landscape painter, the painter of still life, the dressmaker, the tailor, the bootmaker, &c.

The second kind of imitation is necessary to the portrait and historical painter, in addition to the first; it constitutes much the greater part of the profession of the actor, who also, however, has need of the first.

The third kind of imitation is necessary to the mechanic, civil-engineer, and also to the copyist of style; it was alike exhibited in the construction of an orrery by the young Ferguson, and in the composition of the "Rejected Addresses" by James Smith.

Secondly, All imitation must be considered as comprehending, firstly, observation; secondly, reproduction, or imitation proper. And it is obvious that the excellence of all imitation will depend, in the first instance, on the correctness of observation, and only in the second, on the extent of reproductive power. Or, as there are instances in which the properties of an object are conferred by mechanical means (as for instance in casting), it may be more correct to say that in all cases the correctness of imitation will depend, in the first instance, on the exactness with which the properties of the object to be imitated are ascertained, and that in all cases where the means of doing so are not mechanical, this will depend on the accuracy with which its properties have been observed. Such cases are those of the painter, sculptor, musician, and actor.

Thirdly, We must consider imitation as divided according to the nature of the effect intended to be produced. Either we intend to make something as nearly as we can exactly si-

milar, not only in appearance, but in internal properties; or we intend only to imitate external attributes for themselves; or we intend to imitate the external signs of internal feelings. In copying a piece of mechanism we do the first, in painting a scene from nature the second, in personating a dramatic character the third.

Fourthly, We must consider imitation as divided according to the nature of the reproductive process. This is either analogous to the manner in which the phenomenon to be imitated was produced, or it is otherwise; the imitation of a piece of mechanism may again be cited as an instance of the first, and such also is the process of histrionic representation where contortions of countenance are imitated by contortions of countenance, and movements of the limbs by movements of the limbs. On the other hand, the art of the painter or sculptor offers to this a striking contrast; here contortions of countenance and movements of the limbs are imitated by the work of the brush or chisel on canvass or marble.

I have said that it is obvious that the excellence of all imitation will depend, in the first instance, on the accuracy of observation, in all those cases where the properties of an object are not attainable by mechanical means. Now, in the cases of the painter and sculptor, this truth has already been fully recognised; but has it been so in the case of the actor? The statement of Mr Combe, that, as "imitation consists in reproducing existing appearances, it will easily be understood that its effects should be greatly augmented by vigorous powers of observation," is not sufficiently strong. To imitation, in so far as it is a representation of existing appearances, observation is indispensably necessary; and we should therefore expect to find that in all successful mimics, and in actors in so far as they have occasion for mimicry (and under the term mimicry I here include all copying of external actions—even, for instance, the manifestations of natural language, where these do not spring from strong internal conceptions, but are modelled on what *we have observed of the actions of others under excitement)*; in all such, to resume, we should expect to find a large development of Individuality and Eventuality. Now, all actors are mimics to a great degree in this sense; and, accordingly, in all the eminent actors and actresses whose developments I have either seen or found recorded, one or both of these organs have been largely or very largely developed, with, for the most part, a good accompanying general development of the perceptive organs. I divide these instances into cases taken from observation of the actual head or of casts from nature—cases from busts and portraits—and re-

corded developments. In the first class I have Messrs Yates, Harley, Macready, Charles Matthews senior and junior, Mad. Schroeder Devrient, Signor Lablache, Messrs Terry, Buckstone, John Reeve, Liston, Mrs Stirling, Mad. Malibran, Mr Sheridan Knowles, Giulia Grisi, Mr William Farren, Clara Fisher, E. Kean. In the second class are Garrick (bust and several portraits), John Kemble, Foote, Mademoiselle Mars, Mademoiselle Clairon, Mademoiselle Levert, Mademoiselle Duchesnoy (all four celebrated French actresses), M. Grandmesnil (portraits), Talma (medal). The recorded developments are of Alexandre the ventriloquist; W. L. M., a juvenile ventriloquist; Miss W., a very successful juvenile actress, not a public one however; all mentioned in various numbers of the Phrenological Journal; Master Burke, the lower part of whose forehead is, in the article relating to the two last-mentioned instances, described to be full, and whose development, as to the two organs specially mentioned, was described to me as large by Dr Elliotson. In some actors not of *eminent* merit, as Bartley and Cooper, whose casts are in the museum of Mr Deville, Individuality is more conspicuous than Imitation.

In the observant process, in so far as it is confined to mere external appearances, I think it will be admitted that it would be vain to look for the operation of the organ of Imitation. We must therefore look for it in the process of reproduction. But when we consider the extreme diversity already alluded to, as existing between the various modes of this process, it is found difficult to attribute them to the same organ. The development of Imitation has been found equally large in actors and in artists, in those who imitate the appearance of the human countenance with brush, colours, and canvass, and those who copy it by the movements of their own muscles. Besides, it is generally admitted that in the art of the painter it is Constructiveness that is the executive organ. And, again, have we any reason for concluding that it is Imitation which gives us the knowledge and power of moving our own muscles? I need not stop to answer a question so absurd. It would appear, then, that an accurate determination of the true elementary function of Imitation, is yet a desideratum, at least in a great measure; for although Dr Spurzheim's view of the faculty, as purely affective, goes much farther to explain its operations, when taken in connection with the facts adduced of large perceptive organs in actors and mimics, yet, on the whole, it does not explain the *power* satisfactorily or sufficiently. The heads in which the organ has been observed, and in which we have observed it *largest*, are those of novelists, dramatists, and historical painters, the principal and common feature of whose

tasks is the embodiment of character. The further elucidation of the subject forms part of our third division, where the enunciation of our special views on the organ will be found.

(*To be continued.*)

II. CASES AND FACTS.

I. *Case of Inability, from partial Amaurosis, to distinguish certain Colours.**

In a former volume (vii. 144), we published a collection of cases of inability, from natural and original constitution, to distinguish certain colours. Such cases are of frequent occurrence; but we are not aware that, till recently, any instance has been recorded, in which this peculiarity supervened on disease, and disappeared when health was restored. In the *American Journal of Medical Sciences* for August 1840, there is a highly interesting account of a case of this sort, by Dr Isaac Hays, who has added some valuable remarks on the subject in general. The leading feature of the case is given in the *Medico-Chirurgical Review* for January 1841, whence we think it highly worthy of being transferred to our pages:—

An unmarried girl, aged 20, had suffered two attacks of cerebral disease, one in the spring of 1837, the other in the winter of 1837–38. After recovery from the first attack, objects for a time appeared to her double. The second attack left her entirely blind, in which condition she continued for four months. After this her sight began to return, and at the period of her admission into Wills' Hospital, Philadelphia, in February 1839, she was able to read large print. In May she came under Dr Hays's notice.

Whilst examining her at this time to ascertain the degree of vision she possessed, her reply to one of Dr Hays's questions led him to suspect that she was unable to distinguish colours. When asked whether she could see the figure in her dress, which was a calico one with red spots, she replied, "Yes, I see the *brown* spots." Dr H.'s attention thus directed to the subject, he soon ascertained that, while she could distinguish forms, even of small size, with accuracy, her perception of colours was exceedingly imperfect. Repeated

* For the information of non-medical readers, it may be stated that *amaurosis* is a disease in which the sight is obscured or lost, without any perceptible injury of the eye, but from a morbid affection of those parts of the nervous system which are connected with the function of vision.

and careful investigations during this and on several subsequent occasions, satisfied him that the only colours which she knew with certainty were yellow and blue. Nearly all other colours she termed brown, or hesitated to name; designatin , however, their shades or intensity of colour accurately. Thus a deep red she called a dark brown, a bright green a light brown, and a very pale pink a very light shade of brown.

Dr Hays exhibited to her, both by day and by candle light, a number of colours, and has them now in his possession with the names she bestowed on them. With the exception of yellow and blue, all the colours were named with much hesitation, and some only after his insisting on her doing so, and she then manifestly named them by guess.

The treatment adopted was that calculated to remove cerebral fulness; and under this her sight improved, and with it the ability to distinguish colours. By the end of October, we are told, she distinguished all the primitive colours readily, and named most of the secondary ones as correctly as could be expected from one of her moderate intelligence, with the exception of violet: this last she seemed always at a loss to name.

The remarks of Dr Hays embody most of what is known upon the subject of the inability to distinguish colours. We think our readers will be well pleased if we quote them.

" The feature," says he, " of most interest in this case is the inability to distinguish colours. This is, we believe, the first example hitherto recorded of this inability having resulted from disease, or been co-existent only with it. As a natural defect, the power of distinguishing forms being perfect, it is not rare. Several instances of this have come under our own observation, and not a few others have been mentioned by writers. Such of these last as have been recorded with sufficient details to furnish data for comparison, viewed in connection with the case we have recorded, lead to conclusions which it may not be uninteresting to notice.

" 1. As a natural defect, inability to distinguish colours may exist in different degrees.

" 2. In the worst degree, the individual is able merely to distinguish shades,—the perception of colour is entirely absent. Examples of this are afforded in the two Harrises, who could distinguish a striped ribband from a plain one, but could not perceive the difference between any one colour and another, except as darker or lighter, and in Dr Elliotson's second case.

" 3. In the next degree, the individual can distinguish only a single colour, and that colour is always yellow. Thus Dr Butter states, that Robert Tucker knew to a certainty *yellow*

only; and it appears that the boy whose case is recorded by Dr Nicholl was in the same condition. Now it may be called to mind that Mary Bishop states, when her sight improved, the first colour she recognised was yellow.

"It may be mentioned here, as connected with this subject, that we noticed a similar phenomenon in the case of a lady whom we attended for amaurosis in the winter of 1837–8. This patient, who was quite blind, began to recover her sight, and among the early evidences of improvement she mentioned, was her ability to distinguish shades of colour, as the stripes in a Venetian carpet; she could not perceive, however, a single colour. When further improvement took place, she stated that she could recognise the *yellow* colour of a large looking-glass frame. A relapse then took place, from which she has not since recovered.

"4. We may consider as the next degree of this defect, where the individual can recognise two colours only; and these seem to be always *yellow* and *blue*. This is the most common grade of this defect. Examples of it are afforded in Scott, Dalton, and his brother, in the case recorded by Dr Nicholl in the Med. Chirurg. Trans. ix. 359; in that of J. B. related in the Transactions of the Philosophical Society of Edinburgh, vol. x. p. 253; James Milne, Mr C., Mr Troughton, and Dr Elliotson's first case, and Sir David Brewster's case. Mr Scott, J. B. and Mr C. were imperfect in their recognition of blue; in the other cases the perception of yellow and blue seemed complete.

"It is remarkable that, whilst all the individuals who belong to this class of cases are able to discern yellow and blue, they cannot distinguish these colours when presented in a state of mixture. Green they do not know—they seem blind to it. They cannot perceive any difference in colour between a stick of red sealing-wax and a green table-cover; between the colour of the scarlet fruit of the Siberian-crab and the green of its leaves, &c. &c.

"So it was with Mary Bishop: whilst able to detect yellow and blue, she could not see the difference in colour between the red roses and their green leaves. It was not until her eye had become sensible to red that she could distinguish green.

5. It seems probable that individuals who are able to recognise *accurately* the three primitive colours can also distinguish the secondary ones. To future observations must, however, be left the decision of this question. But persons whose perception of red is imperfect do not accurately discriminate the secondary colours.

"As the imperfection in vision we have been noticing is a

very curious one, it may be allowable here to call attention to some further facts connected with it.

"It must be remarked, that, whilst those who labour under this defect naturally are unable to distinguish certain colours, though of the most vivid kind, they can discriminate any marked difference in *shades* or degrees of colour, and can see minute objects often with perfect distinctness. It occurs in persons whose point of vision is natural, as was the fact in most of the cases on record; and also in those who are far-sighted, as Mr Nicholl's fourth case and Mr Colquhoun's second case; and in those who are near-sighted, as in Mr Dalton.

"This defect appears often to be hereditary, or at least to prevail in certain families. Thus Harris had two brothers who were unable to distinguish colours, while two other brothers and sisters, as well as his parents, had not this defect. Scott's father and one sister had the defect; his mother and another sister were free from it; but his mother's brother had it. The former sister had two sons, both labouring under the defect. Scott had two children who were able to distinguish colours. In Nicholl's first case, the mother and father, and his four sisters, were free from this defect, but his mother's father had it. This last had two brothers and one sister; one brother had the defect, the others not. In Dr Nicholl's second case, several of the family were similarly affected. Mr Dalton had a brother who laboured under the defect, and he mentions that he knows of a family of six sons and one daughter, in which four of the sons were unable to distinguish colours. Tucker's maternal grandfather had this defect; Wardrop states, that several branches of a noble family in Great Britain have been remarkable for having it; and we know of a family in this country similarly circumstanced.

"We have often noticed that persons affected with cataract, who were unable to discern the *form* of objects, in consequence of the irregular refraction of some of the rays of light and the interception of others, could distinguish generally, very accurately, *colours*. Connecting this fact with the inability to perceive colours while forms could be discerned, as observed in Mary Bishop and some other cases of amaurosis, it occurred to us that we might derive from this a means of diagnosis between the two diseases. Subsequent investigations have not confirmed this idea. The subject may, however, be worthy of a more extensive examination than we have bestowed on it.

"We fancy it is hardly worth while to notice the theories that have been proposed to account for the phenomenon. The most probable is that which places the defect in the sensorium."

II. *Case of Arithmetical Talent.* Communicated by Dr Hirschfeld of Bremen.

Zacharias Dase, of whom I have brought a cast to Edinburgh, is a native of Hamburgh, and is now fifteen years of age. From his earliest childhood he evinced a great delight in playing at dominos; and when about eight years of age, he used to tell his parents and relations that his schoolmaster could no longer give him any arithmetical problem which he was not able to solve with facility. His liking for arithmetic gradually became stronger in proportion to the skill he acquired; and in the course of the following years he went through a series of different volumes filled with arithmetical questions, answering every one of them by means of a slate-board, and sometimes sitting up all night in the pursuit of his favourite occupation.

I saw him in Bremen in the beginning of summer 1840, when he was just beginning his travels under the guardianship of a senior relation of his. And much he required a tutor; for even in the course of a few hours I became quite satisfied with the truth of his tutor's assertion, that the pupil, when engaged in his pastime of calculating, paid no attention to anything like business; neither to the coach just ready to start, nor to his dinner, nor to neatness in his dress and outward appearance. Whenever I tried to make him answer some questions about his manner of proceeding, or his habits, tastes, and thoughts in different directions, the next minute he abruptly went on again, "If any one has lived—how many years—and every second of his life has used—which fraction of a penny &c.?" wanting to stimulate me to give him another problem of some kind or another. The only distinct account I got from him was, that he attributed his acquired skill to his early predilection for the game of domino, and his habit of calculating on the slate-board. He was very anxious to know whether he was to find his equal anywhere: to this question he returned repeatedly. His tutor could not mention any particular turn of his mind, but that he was a very good-hearted boy, and very fond only of sweets in a confectioner's shop, and of calculating. Neither his parents nor other relations, as far as he knew, in this respect bore any resemblance to him.

Zacharias Dase possesses equally the power of readily surveying a great number of unities, and that of solving mentally any questions of common arithmetic in a very short time. It is only puzzling questions, as he calls them, *i. e.* questions for the solution of which reflection is principally required,

which he begs to be spared. If from ten to twenty dominos are placed in a line on a table before him, and he is required to name the number of eyes they contain, he just casts one glance upon them, and either pronounces the number immediately, or, when there are about fifteen and upwards, raises his head for a moment, allowing the impression he got by his eyes to repass before his mind, and then gives his answer with confidence and precision. When in my study, he observed a long line of volumes of some periodical in the book-shelves, and on my asking him how many there might be, he made his eyes rapidly pass along them, and named their number, which proved to be perfectly exact. He likewise wanted to tell me the number of hairs which had come off his eyebrows with the plaster of the cast's mould; which exercise of his skill I, however, thought better to decline seeing performed, as, for want of practice, I unluckily had omitted to grease the eyebrows separately with a more consistent ointment.

In solving arithmetical questions, he proceeds on a similar principle of repassing the account before he pronounces his definitive answer. When any problem is given in public, he marks down on a board the sums he is to calculate upon, and, generally immediately after the last number of the question proposed, notes under it his answer, which, however, he does not speak out before having made sure by a second more deliberate, but still rapid, trial of its correctness. When in the act of calculating, a remark, or even a question, may be addressed to him, which he will attend to, and even answer, without being thereby disturbed in his mental operation.

The appearance of the development of the organ of Number in the cast of Dase, strongly resembles that of Zhero Colburn, as given in Vimont's Atlas, the highest elevation being above the outer junction of the eyelids, and sloping down on both sides so as to extend nearly to the middle of the orbit in the inward direction. At the same time, the position of the eyeball, in this instance, was such as to make the pupil appear to be turned somewhat inward and downward,—principally so when Dase was in the act of calculating; which seemed to be an effect produced by the large development of the organ of Number, similar to the pushing the eyeball outward by a large development of the organ of Language. Among the rest of the intellectual organs, Individuality is the most predominant, the knowing organs in general preponderating over the reflective, and, among these, Comparison being larger than Causality.

[The principal feature seems to us to be the vertical depression of the organ of Number, producing a corresponding

depression of the outer angle of the eyelids. "The highest elevation" spoken of by Dr Hirschfeld is in the region rather of Order than of Number. We think it doubtful, however, whether the cast gives a correct representation of the living head in the superciliary region, the plaster of the mould being apt to displace by its weight the soft integuments.—EDITOR.]

III. *Measurements and Remarks on the Heads of Suicides.* Communicated by R. R. NOEL, Esq. of Dresden. (In continuation of an Article in Vol. xiii. p. 297.)

HEADS OF SIX MALE AND THREE FEMALE SUICIDES (THE HAIR BEING CUT OFF), TAKEN AT THE CLINICAL ACADEMY, DRESDEN, IN MAY AND JUNE 1840.

No.	TAPE.	CALLIPER MEASUREMENTS IN ENGLISH INCHES AND EIGHTHS.									
	Circumference over Individuality and Occipital Spine.	From Occipital Spine to Individuality.	From Ear to Occipital Spine.	From Ear to Individuality.	From Ear to Self-Esteem.	From Ear to Benevolence.	From Ear to Veneration.	From Destructiveness to Destructiveness.	From Cautiousness to Cautiousness.	From Ideality to Ideality.	From Organ No. 1. to Individuality.
1	...	7 1/8	4 3/8	5 1/8	5 3/8	5 3/8	...	6 1/2	6.	...	...
2	21 1/8	7.	4 3/8	4 3/8	5 1/8	5 1/8	5 3/8	6 3/8	5 7/8	4 3/8	6 3/8
3	22 3/8	7 3/8	4 3/8	5 3/8	5 1/8	5 3/8	...	6 1/8	5 7/8	5.	7.
4	22 3/8	7 3/8	4 1/8	4 7/8	5 3/8	5 1/8	5 3/8	6 1/8	5 7/8	4 3/8	7.
5	23.	7 3/8	5.	4 7/8	5 3/8	5 5/8	5 3/8	6 3/8	5 7/8	5.	7 3/8
6	23 1/8	7 1/8	5.	5 1/8	5 1/8	6 1/8	6.	6 3/8	6 1/8	5 1/8	7 1/8
7	21 1/8	7.	4 1/8	4 3/8	5 1/8	5 3/8	5 1/8	6 1/8	6.	4 1/8	6 1/8
8	20 1/8	6 7/8	4.	4 3/8	5.	5.	5 1/8	5 3/8	5 1/8	4 3/8	...
9	20 1/8	6 7/8	4.	4 3/8	4 7/8	4 5/8	4 5/8	5 3/8	5 1/8	4 3/8	6 1/8

No. 1. Hanged himself. About 45 years of age. Nothing known of his character, &c. N. B.—The body in too disgusting a state of decomposition to allow of more measurements being taken. The animal organs less preponderating than in general with these suicides.

No. 2. Hanged. Age about 40. Basilar region very wide, and great protuberance around the ears. Frontal lobe narrow and retreating, and not extending inwards beyond outer angle of eyebrow. Sinciput flat and angular; depression at organs of Concentrativeness and Adhesiveness. Benevolence small in comparison to other organs. Body strong and healthy. No disease discovered on dissection.

No. 3. Hanged himself in gaol; condemned to seven years' imprisonment for theft, one year of which only he had undergone. Age 32. Organs of Acquisitiveness and Secretiveness very strongly developed.

No. 4. Drowned himself. About 68 years of age. Lateral organs very prominent, especially behind the ears. Largest organs, Combativeness, Destructiveness, Secretiveness, Self-Esteem, and Love of Approbation.

No. 5. Hanged himself. From 45 to 50 years of age. This man bore a tolerable character, but was out of employment and driven by distress to commit the rash act, after giving the last piece of bread he had earned to his wife and children. The organs of the propensities and the egotistical feelings, however, rather preponderating.

No. 6. Hanged himself. Age 65. Nothing known of his character or circumstances. A large head. Frontal lobe well developed. Destructiveness and Cautiousness very large. Stout frame, but coarse temperament.

Females.

No. 7. Hanged herself. Age 23. Sister to a peasant in tolerable circumstances. An organization of an over-sensitive and egotistical character. The organs of Combativeness, Destructiveness, Secretiveness, Acquisitiveness, Self-Esteem, and Love of Approbation, preponderating in size. Benevolence and Attachment moderate, with small frontal lobe. Cerebellum large.

No. 8. Drowned herself. Age about 45. Nothing known of her character or circumstances.

No. 9. Drowned herself. Between 16 and 17 years of age. A virgin—with very handsome frame and features. Nothing known of character, &c. Frontal lobe very small in proportion to lateral organs, and Self-Esteem, Love of Approbation, and Firmness. Attachment not deficient—but an organization of a very sensitive character.

P.S.—Among a number of casts which I took last winter and spring in Dresden, are those of the heads of two murderers; one of whom destroyed his three children owing to strong love for them, his circumstances being bad; and the other killed his child and wife, from sheer cold-heartedness, as it is termed. The first had Philoprogenitiveness very large; the second singularly small.

IV. *Mr Barber's Visit to the Gaol at Bath.* From the Bath Herald of 13th February 1841.

Wednesday morning Mr Barber, in company with a magistrate and several other gentlemen, made a visit to this prison; Mr Barber examined the heads of a number of the prisoners in the presence of the parties before referred to, and of the gaoler and turnkey. We forbear, for obvious reasons, to mention names of prisoners; but the gaoler and turnkey were referred to in the cases that will be mentioned, after Mr Barber's examination of each head. Necessarily a few only are selected:—

No. 1.—Mr Barber pointed out the large size of Acquisitiveness and Secretiveness, the small size of Conscientiousness, Caution, and Hope; Firmness and Self-Esteem

were large.—*Inference:* Mr Barber thought this boy might have been often committed, and was gloomy and desponding in his character. The organization found in notorious thieves.

Each specification mentioned, confirmed by the gaoler and turnkey.

No. 2.—Aged 12 years. A large head; active temperament; intellect large. The moral region in this head was fairly developed, but very inferior in size to Acquisitiveness, Secretiveness, and Amativeness.—Mr Barber intimated that his plans for theft would be contrived, distinguished by address and cunning, and that the size of his head and intellect would give him a lead in iniquitous practices.

The gaoler stated, that he was the leader of a gang of boys, that his skill and cunning were marked, and it was found that he was addicted to other vices connected with his organization, which had been particularly pointed out by Mr Barber.

No. 3.—Aged about 10 years. A superior head to No. 1. A funny character, and capable of being reformed; committed for the first time.*

His tendency to fun and tricks confirmed by the gaoler.

No. 4.—A fair intellect, good-natured and funny; Acquisitiveness large; Cautiousness and Conscientiousness small; very capable of reformation.

Every particular confirmed by the gaoler and turnkey —Committed for the first time.

No. 5.—Mr Barber requested to express his opinion of this character as violent, ruthless, sanguinary, and probably incorrigible.

Stated by the gaoler as a most dangerous character, and from whom he should expect personal violence more than any other person in the prison.

Many other heads were examined.

It was shewn as a general fact, applicable to a large majority of the cases, that the organs of Self-Esteem and Firmness, Acquisitiveness and Secretiveness, were large; Conscientiousness and Caution, and the reflective organs, decidedly small. In every case examined the gaoler and turnkey confirmed Mr Barber's opinion, with the exception of one notorious character, in whom, however, the organ of Conscientiousness was small, but whose career was ascribed by Mr Barber and two other phrenologists who were present to the dominating in-

* This particular could not be inferred from the development, and must have been either conjectured by Mr Barber or mentioned by the gaoler.—Ed.

fluence of circumstances. Those present at this examination were struck with the importance of phrenology as furnishing an efficient means for a classification of prisoners, founded on their respective developments; and great regret was expressed that the corrigible and incorrigible, as estimated by palpable differences in organization, should not be separated from each other. Speaking on grounds of probability, the differences in the above respect were great in several instances; and it appeared that among about 30 individuals, two or three classes might be formed requiring differences of discipline, and especially of association with each other.

V. *Case of Change of Character accompanying Injury of the Brain.* By David D. Davis, M. D.*

A child of four years old, healthy and lively, fell from a height of three feet, with his head against a hard board, and wounded himself on the nape of the neck with a piece of a china pot, which in his fall he threw upon the floor. He lost from the wound a considerable quantity of blood. The child, however, soon recovered; but his good temper and docility changed to a stubbornness bordering on viciousness.

The lids of the right eye were always swollen; the eye itself appearing deeper in the head, and smaller, than the left. His gait was without steadiness, and he was apt to stumble. The digestive functions and the general habits of the patient underwent no change. In the course of the winter he was attacked with croup, for which the most appropriate medicines were administered by two excellent physicians. The symptoms of croup suddenly ceased, and those of turgescence of the head supervened; and soon after those of inflammation of the brain. On the succeeding day the patient died, the subject of a water-stroke.

Dissection:—This post-mortem examination exhibited the traces of violent turgescence and inflammation of the contents of the cranium. Lymph was found in considerable quantity at the base of the skull, whilst there was but little on the corpus callosum, in the ventricles, and other parts, with no watery fluid in the cavities of the brain. Instead of this, the right ventricle was seen to contain a quantity of ex-

* Extracted from p. 197 of "Acute Hydrocephalus or Water in the Head an Inflammatory Disease," &c. By David D. Davis, M.D., M.R.S.L. &c. 8vo. London, 1840.

travasated blood, together with an organized oviform growth, of the size of a pigeon's egg, which weighed two ounces, and appeared to be indurated lymph covered over with blood. The latter had probably its origin from the fall, and was the cause of the child's change of character.

VI. *Instances of Phrenological Deductions by Dr Spurzheim.* Communicated by a Phrenologist in Nottingham.

The following anecdote I received from a lady, the mother of a family with whom I am well acquainted, and I believe it to be strictly correct. "When Dr Spurzheim was here," said she, "he visited us and examined the heads of our children. As soon as he saw them, he said, 'No music in the family, but this one may be made to play.' This is actually the case; none of my family can do anything at music, except Jane, and even she dislikes it. In reference to James, he said, 'He has the largest moral powers; he won't do for a large public school: this boy Robert (being a spirity active fellow) is quite different; he will fight his way through.' This is their essential character. In reference to Henry, he said, 'Don't trouble him with Latin and Greek, but give him *the facts, the facts.*' He mentioned chemistry as the line in which he would expand. Now it is strictly true that Henry never could be made to learn languages; but having studied chemistry, and having found that in German works there are a great many chemical *facts*, he has lately acquired that language solely for the sake of the facts. Dr S. moreover stated, 'With application, all could draw well.' Now one is an *artist*, another an architect, and all have a taste that way. Such is an account of the lamented Spurzheim. How truly have his predictions been fulfilled." [The lady's name has been communicated to us.—EDITOR.]

III. NOTICES OF BOOKS.

I. *Annual Reports of the Glasgow, Hanwell, Dundee, Wakefield, Armagh, Belfast, York, Montrose, Perth, Aberdeen, Edinburgh, and Dumfries Lunatic Asylums, for* 1840.

It is somewhat extraordinary, that, although the morbid affections of the eye have been employed to illustrate the laws of vision, no attempt has been made, until within a few years,

and then only by phrenologists, to render the study of mental disease subservient to the purposes of philosophy. To indicate the differences, natural or artificial, healthy or morbid, of individual minds, should constitute an essential part of every philosophy, and there is no place in which these can be better traced than in an asylum. We conceive that it is contributing to the promotion of correct views of the human mind, to chronicle, from time to time, the observations of practical men, who are daily in contact with the workings of the diseased intellect and feelings, who have constant opportunities of comparing these with a healthy standard, and whose duty and object it is to apply all the knowledge which has been accumulated as to the government or culture of different characters and dispositions, in re-establishing the laws and relations of reason. We will, at the same time, be forwarding the interests of humanity; for while it may be confessed that in no portion of our moral economy has more progress been made in the application of right principles than in the treatment of the insane, much still requires to be amended, and understood, and improved, before the lunatic is placed in the most favourable circumstances for recovery, and the great duties of the community towards its most suffering members are performed. It may be safely asserted that, until the impulse was imparted by phrenologists, or until their opinions mingled with, and so far influenced, the current of public opinion, the lunatic was bled, blistered, and, it might be, humanely cared for, but was otherwise, in a great measure, left as if the mind was inaccessible save through the apothecary's shop. But now every physician who undertakes the treatment of the insane mind is acquainted, less or more, with its laws, and adopts and acts upon some system of philosophy in his dealings with it. Such are the authors of the Reports before us. We shall very briefly enumerate the principal results and recommendations contained in each of these.

That for Glasgow is remarkable chiefly as urging the withdrawal of light, noise, and various other apparently insignificant irritants of the brain during treatment; and as containing a proposed new nomenclature and classification of mental diseases. This is founded upon the disturbance or deficiency of the powers; and embraces the original distinctions of mania, melancholy, and dementia, with the addition of subdivisions or species, determined by the extent or intensity, or by the moral or muscular aspect, of the affection. There are, then, a monomania and polymania, a furious and ecstatic polymania, a dementia displayed in simple imbecility or in absolute fatuity. There is a grave objection to the introduction and

inevitable confusion of different irreconcilable principles as a basis of arrangement; to the defining, for instance, of one description of polymania ecstatica, by means of its complication with a peculiar condition of the motive powers, and to the creation of another, iracunda, because it is accompanied with anger, or fury, or any emotion. But there is the much graver objection that this classification is founded, neither upon the parts of the brain affected, nor upon the classes of faculties affected (which, conjoined, we believe to be the true and natural foundation for arrangement), nor upon the nature of the disease; but upon the secondary symptoms,—features which, in fact, may, and often do, characterize *all* kinds of mental derangement.

In the Hanwell Report, likewise, there is an attempt to systematize the cures then under treatment, less pedantic, and sufficiently practical, but open to similar criticism. Mania, melancholia, monomania, hypochondriasis, incoherence, imbecility, dementia, idiocy, constitute the generic distinctions; complications with other diseases are supposed to afford grounds for subordinate groups. But, that incoherence with paralysis is a different disease from incoherence without it, however widely they are separated by the prospect of cure, and by the treatment and the suffering of the patient, cannot be readily admitted. If recognised, we might venture to elect incoherence with dyspepsia, or incoherence with inflammation of the lungs, into a legitimate species of alienation. Again, that incoherence, which, with the exception of the *folie raisonnante*, typifies and indicates *every* mental disease in which the intellect is implicated, should be recognised as a distinct disease, must be either the result of some wire-drawn theory, or in violation of the principles of the system with which it is incorporated. But Dr Conolly sanctions—for his high character and cultivated mind confer authority upon all that he recommends—other matters which are beyond cavil. He has supplied most valuable statistical tables of the cases in his vast establishment; he has given some most useful suggestions as to the adoption of uniformity in drawing up the reports of British asylums, so as to render the medical and moral results available; he has exploded the starvation-system, and introduced a substantial and generous diet; and has condemned the employment of restraint in the treatment of lunatics, as, "in fact, creative of many of the outrages and disorders to repress which its application was commonly deemed indispensable, and consequently directly opposed to the chief design of all treatment—the cure of the disease." At the date of the Report, several months

had passed unmarked by a single instance of restraint of the harsher kinds, and this among eight hundred patients! The abolition of bodily coercion, of chairs, chains, and straps, is at present matter of keen controversy among medical men. But whatever may be thought of the practicability or propriety of the proposal, its humanity cannot be questioned. It is the rebound from the cold-blooded, timid tyranny of the past; the reaction after a season of moral stupor and indifference: yet it may be the dictate of benevolence acting without, or in opposition to, the sanction of intellect; there may be the sacrifice of a duty to the claims of a feeling of pity. The opinions of other practical men shall be quoted as we proceed.

The present Report of the Dundee Asylum, like many of its predecessors, insists strongly upon the utility of occupation as a means of distraction and cure. That the exercise of Constructiveness, and the organs of perception, is infinitely preferable to that state of total inactivity, or to that predominance of the propensities, in which lunatics formerly lived and died, and that it contributes to exclude painful and morbid emotions and thoughts, requires no proof. But its efficacy has been too highly lauded, and too extensively confided in. It has, at last, been tried by the pound shilling and pence standard, and found unproductive; so that it will speedily assume its true position as a curative agent. Time and Tune, Mirthfulness, and Ideality,—all those powers which, in health, give so much of beauty and happiness to life,—have been neglected as channels through which to tranquillize and exalt the unsound intelligence, and there is neither amusement nor relaxation for the lunatic. Repose and recreation are absolutely demanded in many cases of derangement, and for this and other reasons we consider the sentiments contained in the following extract from the Report of the Crichton Institution, Dumfries, to be worthy of serious attention. "The effects which amusements are calculated to produce in tranquillizing and suggesting pleasing emotions in the lunatic are not sufficiently appreciated. A considerable portion of mankind regard recreation in some form as a pursuit; where the time and talents of others are directed to higher aims, relaxation occupies a part of every day; and to all it may be pronounced a healthy and necessary accompaniment to toil, and a preparation for new exertions. Evidence exists to shew that irremediable injury is inflicted upon the youthful mind by over-exertion, unrelieved by that cheerfulness and enjoyment which nature suggests; and even the strong and mature intellect requires and demands for itself frequent and agreeable interruptions to the ordinary thoughts by which it is engrossed. The in-

sane can plead both the feebleness of the one and the engrossing speculations of the other, for an extension of their enjoyments, for the alternation, at least, of toil and pleasure, and for scenes of temporary mirthfulness and interest, which may disturb, if they do not destroy, that hurtful abstraction in which so many are plunged."

These medical men object to the relinquishment of restraint; arguing that such a step involves the substitution of human force, of keepers actuated by passions, for a passive, passionless strap or strait-waistcoat.

The Wakefield Report is brief, but is rich in statistical tables, one of which, tracing the degree of consanguinity of the parties in cases of hereditary predisposition, or the transmission of diseased organization, is worthy of being imitated. The Report contains a protest against the non-restraint system.

According to the experience of the directors of the Armagh Asylum, restraint is "absolutely necessary," and "employment one of the most active agents in the cure of insanity."

Dr Stewart of Belfast Asylum more fully investigates the anticipated advantages of perfect liberty, and repudiates these with scorn. Much of this Report is devoted to an exposition of the evils and injustice of confining criminal lunatics in public asylums, where they necessarily associate with those who have violated no law, nor offended any principle of morality. Grave inconveniences may accrue from such an incongruous classification; but it is difficult to conceive that there is any degradation to those who display madness in fraud, violence, voluptuousness, or despondency, in being placed with pilfering or destructive lunatics, if theft and fire-raising be regarded, as in such instances they should be, as symptoms of diseased Acquisitiveness and Destructiveness. The declaration of a court, in such cases, exempts from the penalty of the law and the consequent dishonour, by consigning the individual to medical treatment.

The Retreat at York claims the priority in treating the lunatic rationally and kindly. The philanthropists by whom the institution was founded are now engaged in putting the safety and utility of labour for lunatics to the test of experiment, and in extending the means of accommodating patients.

A history of every case admitted during the year furnishes the greatest attraction of the Montrose Report. These biographies are interesting; but a description of the cerebral development, temperament, and constitutional tendency of each patient, would have much enhanced their value. An unqualified approval is given of the abolition of restraint (on which

subject an extract from the Report will be found in the *Medico-Chirurgical Review* for October 1840, p. 542); but the arguments by which this is supported, evidently justify an opposite conclusion. The following remark on the benefits of the penny-postage deserves to be extracted here. "Among the hitherto unascertained though expected benefits of a diminished rate of postage charges, it is most agreeable and promising to all concerned, that an augmented interchange of reports and sentiments between the functionaries of Public Charitable Institutions has been experienced. No department of these is likely to be more advantaged by the facilities so afforded than lunatic asylums."

In the Perth Report, there occur some well-merited strictures upon that religious excitement which recently prevailed in some parts of Scotland, and which, whatever might be its effects upon the strong-minded, reduced many of the weak, and susceptible, and excitable, to madness; and thus contributed to augment the number of admissions in almost every asylum in the country. The brain is injured as much by that excitement which has its origin in virtue, or is in itself virtuous, or tends to virtuous results, if immoderately indulged in,—that is, in a degree disproportioned to the character and capabilities of the individual,—as by the excitement of intoxication or crime.* The Report concludes with the enforcement of the principle that insanity requires co-ordinate moral and physical treatment.

With the exception of some allusions to insanity occurring before puberty, which we believe is caused, in the majority of cases, by the irritation arising from the rapid growth of the cerebral substance, participating in the general growth of the

* Enthusiastic religious feeling, like other results of high excitement of the nervous system, is transient in its nature, and, except in some cases of organic disease, is sure to be followed by a degree of frigidity proportioned to its own fervour. The following passage, quoted from a letter addressed, in the summer of 1840, to the Rev. Dr Willis, Moderator of the Presbytery of Glasgow, by the Rev. Mr Burns, the clergyman of the Established Church at Kilsyth, the scene of a noted "revival," goes far to confirm this remark. "I have not," says Mr Burns, "the slightest hesitation in saying, that the remarkable out-pouring of the Divine Spirit, with which we were lately so graciously favoured, has, for some time back, appeared to have entirely ceased. The general interest in the public mind on divine things has now, in a great measure, disappeared. Multitudes, once impressed with concern about their souls, but never having reached the point of decided conversion, have relapsed into their former indifference: several, of whom good hopes were once entertained, have returned more or less decidedly to their former ways; prayer-meetings have in many instances fallen off, both in numbers and in fervour; the house of God does not continue to be thronged on week-days and on Sundays as heretofore; and, in general, the administration of divine ordinances seems now to be attended with little more than an ordinary blessing."—EDITOR.

body; and to moral insanity, which depends rather upon the ill-balanced state of the cerebral organization, or upon vicious training, than upon disease of the structure of the brain; the Aberdeen Report is in no way remarkable. It contains, however, a clear and copious detail of the annual movement of the establishment.

The managers of the Edinburgh Lunatic Asylum do not present any facts in which the public are interested, except that a medical resident has at length been appointed, and that, to provide for the large number of lunatics belonging to the county, and at present badly lodged and imperfectly treated, additional buildings are now erecting on a plan by Mr Burns, whose reputation and experience afford a guarantee that the structure will be in accordance with what medical men have found not merely conducive to the comfort, but instrumental in the recovery, of the insane.

The Crichton Institution at Dumfries is a new and splendid asylum, calculated to contain nearly three hundred patients; and so constructed as to secure great scope for labour, exercise, classification, and other means of moral treatment. The Report is characterized by several peculiarities. There are a tabular classification of the cases under treatment, upon phrenological principles; tables of the causes, ages, sexes, domestic condition, profession, and duration of the disease, in relation to the *results* of treatment; and a table shewing the stature, pulse, respiration, and temperament, in fifty patients. The writer recommends, in addition to the usual means of rousing and soothing the mind, amusement of various kinds, for reasons previously quoted; ready access to a well selected library; and education. These innovations have been carried into effect, and the advantages which have arisen from the introduction of teaching as an element of moral treatment,—founded as that has been upon the similarity between the education of the young and undeveloped mind, and the invigoration and restoration of the infirm and diseased mind, and the tendency which intellectual training has to impart strength, and order, and precision to the faculties,—are highly gratifying.

From all these sources it would appear, that what may be styled a practical philosophy of diseased mind is making rapid progress; that a large body of humane and enlightened men are engaged in an experimental inquiry into the nature and treatment of insanity; and that, whether boldly avowed or unconsciously held, they act upon one common opinion as to the functions of the brain and nervous system.

W. A. F. B.

II.—*The Philosophy of Human Life. Being an Investigation of the Great Elements of Life: The power that acts—the Will that directs the action—and the Accountability or Sanctions that influence the formation of Volitions. Together with Reflections adapted to the Physical, Political, Popular, Moral, and Religious, Natures of Man.* By Amos Dean, Professor of Medical Jurisprudence in the Albany Medical College. Boston: Marsh, Capen, & Co. 1839.

"The Philosophy of Human Life" is a well-sounding name for a book, but it is very vague, and one might look for almost anything to be said under it. In the long title which we have quoted, Mr Dean explains a little more definitely what he means, and in his preface still farther so, when he informs us, that it is his object to teach "the great principles that regulate the movement, and are developed in the action, of conscious human life." But after all, we are disposed to say that vagueness is the characteristic of the volume, and that, in attempting to place acknowledged and valuable truths in a new light, Mr Dean has merely changed their position, and, we had almost said, made them more obscure.

"All the phenomena of human life," he says, "are resolvable into three great elements—Power, Will, and Accountability,—the power to perform, the will to direct the performance, and the accountability that influences the will. In the first are included all our primitive powers; in the second, all our volitions; in the third, all the sanctions, or binding forces annexed to certain great laws or principles that influence the formation of volitions. In the definition of life, so far as human nature is concerned, is intended to be included all those acts and things of which these elements form constituent parts. There is no deliberate act of a rational being into which each, to some extent, does not enter; and which, it may also be added, they do not together entirely compose. A particular examination of the nature and characteristics of each element, and of the extent of each in the production of that joint result of all—human action, will better enable us to entertain correct ideas of human nature as a whole, and of the conditions under which its varied exhibitions are made."

These words form a text on which Mr Dean's book is a commentary. Under the head of Power, he has embodied an account of the mental faculties, in the usual language of phrenologists, but in a way which shews that he is speaking from his own observation, and out of his own thoughts, rather than

from his memory of what others have said before him. When he is purely practical,—that is, when he speaks of the great duties of life, and of those high sanctions by which their performance is enforced,—we like him, because he then seems to be speaking the language of a warm heart, unaffectedly and in earnest; and occasional passages might be transcribed, which, in their simplicity and dignity, shew Mr Dean to be no unworthy countryman of Channing. We are least satisfied with the dogmatical parts of the work; and this because the author now and then appears to us to indulge in general and sweeping assertions, which have little or no foundation in fact. For instance, at page 291, he remarks, "The man of deep thought seldom dreams;" and then he adds, "Those dream most during the night who think the least during the day, and whose waking and sleeping thoughts may be, perhaps, about equally worthless." Now, really this does seem to us a very inaccurate statement. Possibly Mr Dean himself is no dreamer, and we are not going to say that *he* is no deep thinker; possibly, too, he has known persons subject to dreaming, who were anything but profound thinkers; but this is scarcely sufficient to warrant so hasty a conclusion. Dreaming is dependent on circumstances which are just as likely to affect the highest class of thinkers as the lowest; and it strikes us that if the number or nature of dreams is in any way affected by the number of ideas which pass through the waking mind, dreaming will be found to occur more frequently, as well as in a more complicated form, with those persons whose minds are at other times most active. Then, again, we have the following description of death (p. 298)—"There is no regularity in its occurrence; no established antecedents that universally precede it; no uniform conspiring of every thing to its production, at the time and place of its visitation. It surprises the infant in its helplessness; stills the innocent voice of youth in its playfulness; prostrates the athletic and vigorous form of early manhood; and dispatches to its repose the worn and wasted remnant of an expiring century. It comes when the glow of health is on the cheek, and the language of feeling beams from the eye, and the stamp of thought is affixed upon the brow. While revelling amid the depths of his higher natures, and glorying in his strength of feeling, and power of thought, and energy of intellectual action, the man dies."

Death no doubt has occurred under all these circumstances, and it may occur again. But the nature of things has not made it inevitably so; and with growing knowledge of his own constitution and of the external world, we have reason to expect that man will be more and more able to rise above the

chances of these misfortunes, and be more and more guided by those laws which nature meant for his welfare, and not for his destruction. We think too well of Mr Dean to suppose that he does not believe this; but why, in a work professing to teach "the great principles which regulate the movement of human life," has not such a view been given, in preference to the vague and declamatory representation which we have quoted?

But a reviewer performs only half his task, and that the most disagreeable half, when he merely finds fault. Let us now extract a passage which calls for our hearty approbation. "Moral accountability has been made by some to embrace the judgments we form; the opinions we entertain; all our different modes of belief. This is an error. Judgment, opinion, and belief, are all intellectual operations. In their formation the affective faculties have no necessary agency. They are not, therefore, acts of the whole mind, and hence differ from volitions. In the formation of their judgments, opinions, and modes of belief, the intellectual faculties act in obedience to their respective functions. We believe, not according as we will, but according to the evidence furnished. On that evidence those faculties are framed to act, and to believe or disbelieve, according to its strength or weakness. We can no more resist a conclusion, when the evidence is sufficient, than we can, with our eyes open, at mid-day, resist the seeing of objects." If men had known and respected this simple truth, the sword of persecution would never have been unsheathed. But even now the time seems distant when it will be practically acknowledged. *Quam parvâ sapientiâ regitur mundus!*

We close our remarks by quoting from different parts of the volume two short extracts which may be regarded as favourable specimens of our author's style. In taking leave of Mr Dean, we indulge in the hope that we may meet him again, treading in the same path, and continuing to instruct his countrymen, with increased efficiency, in the sources of their duties, and truest happiness.

"It is in the bloom of early life, ere the corruptions of the world have penetrated into the sanctuary of the soul, while the sources of power yet bear about them the freshness and the purity of innocence, that the groundwork of future action should be laid; the impulse of affection followed; the noble resolve formed; the course of future conduct marked out; the great bearings of existence investigated, and the high mark set, for the attainment of which are to be expended all the energies of a life. In the determination of all those questions, the results of which are to run parallel with our existence, we

should take counsel of ourselves alone, and we should take that counsel early. Those determinations regard the present and the future. With the view of enabling them to be properly made, the affective powers are early developed. Their peculiar energies are susceptible of display prior to the intellect accumulating its stores of experience. Man feels before he reasons. Those powers are, therefore, fitted, both by their strength, and by their freshness and uncorrupted purity, to contribute largely to those decisions that are so deeply to affect all his after-being."

* * * *

"Attainments of this high character [obedience to the laws which regulate human happiness] are the more easily made, as the progress of mind becomes more rapid and elevated. The seductions of vice are the less alluring, as the acquisitions of virtue are the more numerous and perfect. The ties of earth lose their peculiar force and energy, as the higher powers, natures, and sanctions maintain, their sway in the conduct of affairs. The upward and onward flight of the eagle is accomplished with constantly diminished effort, as the receding earth withdraws her gravitating influence, and the dense media are left behind in his ascent into higher and more ethereal regions. So also does the progress of the just and the good become the more easy and delightful, as the lower natures and their sanctions disappear, and the bonds of mere worldliness are sundered, and the disfranchised spirit is allowed to course its way onward, undisturbed, to its native heaven."

III. *The Penny Cyclopædia. Article "Phrenology."* (Second Notice—Comparative Phrenology.)

The most fair and accurate representation of phrenology that we have met with, proceeding from a writer who is not a phrenologist, appears in the Penny Cyclopædia, article "Phrenology." After presenting an outline of the doctrines, and discarding as untenable most of the objections urged by previous opponents, the author proceeds to state his own reasons for withholding belief; and as these are obviously dictated by an honest spirit, and moreover some of them have been pronounced to be weighty by the late talented editor of this journal,* we propose to scrutinise them at some length.

The first inquiry to which the Cyclopædist proceeds is,

* See the Number for October 1840, Article vi. of "Notices of Books," p. 383.

how far phrenology is what it professes to be—" a system of philosophy of the human mind, founded on the physiology of the brain." His method of appreciating this high claim or " profession" of the phrenologists, is announced in these introductory terms: " Neglecting for the present," he observes, " all metaphysical views of the subject, and regarding the theory of the existence of some such primary faculties of the mind as are assumed in phrenology, and of the dependence of each upon a separate portion of the brain, as one deserving of being tested by observation, we will examine only how far the doctrine, as it now stands, is supported by facts of anatomy and physiology, and whether it is capable of being established by the evidence of craniological investigation." This term " *craniological*" is much too often used indiscriminately; often with impropriety. We cannot institute observations on the skull proper, in living subjects: neither is it the skull that regulates the shape of the head; for the skull itself is moulded on the brain, and this is the primitive cause of the head's definite conformation. Every way, therefore, it is preferable, when we speak of observations made on the head during life, to denominate them *cephalogical*, dropping one of the syllables, *lo*, for the sake of euphony.

So far as the sentiments of a candid and intelligent physiologist deserve to be esteemed valuable as authority, the following summary disposal of certain superannuated antiphrenological sophisms, is favourable to phrenology; with all fairness, therefore, the concessions of our Cyclopædist may be exhibited as preliminaries to the exceptions which the same writer takes to the evidences whereon some of the phrenological principles are grounded.

His observations are these: " Many of the objections commonly made against phrenology are undoubtedly of little weight: such, for example, are the statements that, in consequence of the irregularities of thickness in the coverings of the brain, it is impossible to determine its form by examination of the exterior. This objection only shews that there are sources of fallacy in the practice of craniology, a fact which no phrenologist denies. But, on the greater part of the head, the differences of thickness of the coverings of the brain are not such as would lead into error; the majority of them are nearly constant in their amount, and are easily recognised by any one acquainted with the anatomy of the skull, and the rest are not sufficient to give that degree of elevation or depression to any part of the exterior of the head, which would be regarded as indicative of excessive or deficient development of any organ. No one accustomed to post-mortem ex-

amination can hesitate to admit that the form of the greater part of the exterior of the head corresponds as nearly with that of the surface of the brain as is necessary for craniological purposes. The parts in which the correspondence is often inexact are those over and in the neighbourhood of the eye-brows. The thickness of the superciliary ridge of the frontal bone is variable, and would certainly in some cases make a moderately developed organ appear large; and still more the size of the frontal sinuses (the cavities between the two plates of the frontal bone immediately above and by the sides of the root of the nose) must always be a source of fallacy in determining the size of that part of the adult brain in which the organs of Form, Individuality, Size, and Weight, and part of that of Locality, are supposed to be placed. The estimate of the supposed organ of Language, also, which is indicated by the prominence of the eye, must be liable to error from the varying quantity of the contents of the orbit. From these several circumstances, however, the utmost objection that can be raised is, that there must in general be some difficulty in determining the size of these few parts of the brain. In consequence of disease, also, the whole or parts of the brain may diminish in size, without being accompanied by any corresponding change in the external form of the skull. But, as a general rule, the subjects of disease are excluded in phrenological observations. The objection that parts of the brain have been destroyed without affecting any of the faculties of the mind, is also of little weight, unless it be first proved that the organs are not double. The cases of this kind recorded before the promulgation of phrenology, cannot fairly be deduced as evidence, because the statements which they contain relative to the preservation of the mental faculties after injuries of the brain, regard only the general powers of sensation, volition, memory, imagination, &c., and not the primary faculties of phrenologists, some of which might have been deficient without their loss being observed. The observations that have been made since, it must be confessed, are not of more weight against phrenology, than those of the loss of peculiar faculties (especially those of Language and Amativeness) by injury and disease of the brain are in its favour. Experimental mutilations of the brains of animals must be regarded as affording still less conclusive evidence; when a part of the brain is thus removed, the condition of the whole of the rest of its mass is altered by the removal of the pressure of the skull, exposure to the influence of the atmosphere, interference with the circulation of its blood, &c. It is impossible that a correct conclusion upon any part of the functions

of the brain should be drawn from experiments of this kind; and the whole of the arguments deduced from them by Rudolphi, Magendie, and others, may therefore be neglected."

In a foot-note connected with the foregoing, we find these observations. "It is commonly stated in phrenological works that as the brain diminishes in size, the internal table of the skull grows inwards, increasing the thickness of the skull. The writer is convinced from numerous observations that the space left in the cavity of the skull by the diminution of the volume of the brain, is in a large majority of instances filled up by an accumulation of fluid in the pia mater, and in the ventricles, and that the skull rarely undergoes any such change in its thickness as would be phrenologically important. Even when the whole, or, as is more rarely the case, a part of the skull does thus increase in thickness, it does not indicate that there was wasting of the parts of the brain immediately beneath it, but more frequently is consequent on a diminution of parts deeply situated, as the optic thalami and corpora striata. The examination of the skulls of those in whom particular organs are supposed to have wasted, must therefore be too fallacious to admit of any conclusions being drawn from them."

Here we have a twofold testimony to the trust-worthiness of phrenological representation. The Cyclopædist confirms the statement that "the brain diminishes," that "a diminution of the volume of the brain" does supervene; but he abstains from stating the causes of this occurrence. It is ascribed to old age and disease by practical phrenologists: hence, with them, the heads of aged persons, the diseased, the insane, are always expressly distinguished as exceptions from the subjects by which phrenology is to be tested. Years and years ago, these exceptions were specified by Gall, Spurzheim, Vimont, and Combe (in his "System," i. 105); hence, therefore, the foot-note might have been otherwise expressed than to imply that their disciples stand chargeable with the practice of instituting fallacious examinations against which they are constantly and explicitly guarded.

We shall now advert to the objections against phrenology stated by the Cyclopædist.—"Fully admitting," says he, "the insufficiency of these, as of some other minor objections to phrenology, we come to the consideration of some which must be regarded as more important. If phrenology were true, it might be expected that its applications would extend *through the whole animal kingdom*, and that according to the degree in which each mental faculty is developed in each animal, we

should find a corresponding portion of its brain large or small when compared with that of man."

Phrenology is the "Physiology of the Brain;" and if we were to ask the Cyclopædist *why* "it might be expected that its applications would extend through the whole animal kingdom," we presume he would answer, Because, in comparing the bones, muscles, and bloodvessels of man with those of animals, we find a general analogy prevailing, whence we are authorized to expect a similar correspondence between the nervous systems of the human and animal races. Let us inquire, then, to what extent this analogy holds good in the other structures of different races.

The nearer an animal approaches the human race in physical and mental condition and power, the more complete is the analogy between the structure and functions of particular organs in each, and the more numerous also are the organs in which this resemblance presents itself; nor is any exception to this rule perceived in the nervous system. At certain points, however, the analogies fail, and good grounds may be assigned for this fact. Many persons reason on analogies between man and the lower animals, as if they imagined a man and a monkey to stand in the same relation to each other, as a large horse does to a diminutive pony; they seem to expect that all the organs, or at least all the parts of the brain, should be moulded in the same form, and occupy the same relative positions, and differ only in size. But this is absurd. A monkey is not a man made down into an inferior animal; it is a creature of a distinct species. In so far as it possesses functions of mind and body similar to those of the human race, we may reasonably expect it to present organs of *similar* characters; we say *similar*, and not perfect counterparts in the strictest sense of the word; because the animal being a distinct creature, its organs will be *modified* to suit its particular condition. The non-professional reader will be enabled to appreciate the force of this remark by a single illustration. The function of a clock is to measure time, and that of a watch is the same: Is there any close analogy between their structures? If the two machines were presented to a person ignorant of mechanics, and unacquainted with the uses of the clock and watch, it is probable that he might examine them in a general way, and declare that there was but a slight resemblance between them: But if we were to submit them to the examination of a philosophical watchmaker, he would declare that the analogies were numerous and striking; he would point out wheels and pinions in each in which the resemblance was com-

plete; and he would add, that even between the weights and pendulum of the clock, and the mainspring and balance-wheel of the watch, a striking analogy was discernible by reflecting intellect, although to the eye their *forms* and appearances were widely different. He would draw these conclusions in consequence of his knowing accurately the *structure* and *use* of *every part* in *each* machine. It may well be conceived, that an observer, ignorant of all these particulars, might be blind to the analogies, not because they did not exist, but because, owing to his want of knowledge, he was not in a condition to perceive them. The watchmaker would without hesitation declare, that the two machines acted on similar principles, and accomplished similar ends by similar means; and that the differences between them necessarily arose from the different situations in which they were intended to act—the one stationary and perpendicular, the other subject to locomotion and to all varieties of position.

Keeping in view, then, that the inferior animals are not human beings made down by the mere omission of some organs, and the diminution of others, but distinct and independent creatures, whose parts, in so far as they resemble those of man, are modified to suit their own condition, and in whom special organs (wings and fins, for instance) exist, of which man is destitute, let us trace some of the analogies in particular parts of, for example, the osseous systems of both. We quote from the article "Comparative Anatomy" in the last edition of the Encyclopædia Britannica.

"In general characters the bones of the mammalia resemble those of the human subject. Like them, they are white, firm, elastic, and incompressible." "In the carnivorous animals the compact structure is exceedingly dense, and gives the bone much greater weight than in other animals." "Though the long bones in general possess a medullary canal, *this cavity is imperfect, or wholly wanting*, in the bones of the cetacea and amphibia."

"The bones of birds are in general whiter, firmer, and smoother than those of the mammalia."

"The bones of the reptiles are not remarkable in any respect, unless in being void, in general, of medullary cavity."

"The bones of fishes are remarkable for great softness, flexibility, and elasticity."

In these instances we discover general resemblances combined with particular modifications.

Again, we discover that in man, and in the mammalia, birds, fishes, and reptiles, the *spine* appears of a structure and de-

voted to uses clearly analogous; but when we descend to *individual* bones, we find numerous differences and modifications. Thus—

"The number of *cervical* vertebræ is," almost without exception, "the same in animals with the longest and shortest necks; in the horse, camel, and giraffe, and in the mole and ant-eater. They are always seven." The ai, or three-toed sloth (*bradypus tridactyla*), however, has nine cervical vertebræ. In birds, on the other hand, the number is much greater. The sparrow has nine, and the swan twenty-three cervical vertebræ.

"The *dorsal*, thoracic, or costal vertebræ, are distinguished by forming the central fixed basis of the ribs; and their number depends on that of the latter class of bones, which is very variable." The costal vertebræ vary from eleven to twenty-three in different animals. The most common number is twelve, which is that of man, the ourang-outang, silky monkey, and other animals. In the horse eighteen, rhinoceros nineteen, Indian elephant twenty, and in the unau, or two-toed sloth, twenty-three. In birds, the number of dorsal vertebræ is generally about seven or eight, and never exceeds eleven. The *lumbar* vertebræ in animals vary still more in number, perhaps, than the cervical and dorsal; while in birds there are no lumbar vertebræ strictly so named. The coccygeal bones constitute the tail of the lower animals, and in many instances they are extremely numerous. In birds, the tail consists of only from seven to nine vertebræ.

The sternum and ribs exist in man and the lower animals; but their forms and the numbers of the ribs vary widely in different species. The clavicle is present in man and in the quadrumana, bats, the squirrel, beaver, &c., while it is wholly wanting in the three orders of ungulata,—pachydermata, the ruminants, and the solidungula, and in all the cetacea.

In man the *cranium* consists of eight bones. In the quadrumana the number is the same; but though, among them, "the cranium of the ourang-outang approaches that of man in shape, it differs, nevertheless, in the connections of the constituent bones." The bones of the cranium are modified in form in the different species. In the lower mammalia the basilar surface of the occipital bone, instead of being oblique or horizontal as in man, becomes vertical and posterior. There are modifications also of the other bones. "The *facial* bones of the lower mammalia differ from those of man; first, in the number of separate pieces; and, secondly, in the form and proportional horizontal extent." Two peculiarities of the animal face consist in the horizontal elongation of the two jaw-bones, and in the narrowness of the inter-orbital space.

The crania of birds appear to consist of a single continuous bone, there being only a few of them in which sutures can be recognised: But in young birds, the cranium consists of separate bones, corresponding in number and situation to those of quadrupeds. They are very early united, and in the adult bird the cranial sutures are invariably joined. Although, therefore, in the adult bird the analogy to the cranium in quadrupeds appears to fail, yet when we observe the young, it obviously exists.

The facial bones of birds differ widely from those of animals; yet many resemblances between them are conspicuous. In birds "both *maxillæ* are void of teeth; but the hard horny matter of the bill, covering the margins and extremities of each jaw, and constituting the mandibles, is manifestly constructed to perform for birds what teeth do for mammalia. But the most remarkable peculiarity of the facial bones of this class is, that the upper jaw admits of more or less motion."

Our limits prevent us from going on to notice the analogies and differences between particular bones in fishes, reptiles, and the mammalia; nor is this necessary, for the same rule pervades them all. As the species become more and more different from the human race in their conditions and habits, the analogies between them become fewer and less complete. We might institute a similar comparison in regard to the muscular systems of all these orders of creatures, and the results would still be the same.

Let us now advert briefly to the nervous system in man and animals. If analogies between them were entirely wanting, we should say that the ordinary rule observed by the Creator in the formation of animals had been departed from; while, on the other hand, if the analogies were complete in every nervous fibre, we should be equally surprised at the departure from the general rule: for that rule is resemblance to the extent to which the sphere of action and condition of the various animals correspond, and difference where these differ, but still with an adherence to the general plan, as far as this is practicable, even in the cases of difference.

The organ of smell presents analogous appearances in man and most of the inferior animals, but also great differences in the extent of the organ and intensity of the function. It has, however, been asserted that the cetacea have no olfactory nerve, and no sense of smell; but this point is by no means established. Farther, "though almost all the invertebrated animals give proofs of the existence of the sense of smell, in none of them do we find any organ in which this sensation appears with certainty to be exercised. That these animals possess

the faculty of smell, is inferred from the fact, that insects recognise their food at a distance; that male butterflies scent the female even when enclosed in cages; and that the ordinary flesh-fly deposits her eggs on tainted meat, and occasionally on fetid plants, in the belief that they are the proper *nidus*, though in the latter case the larvæ perish for want of the necessary sustenance."—"It was conjectured by Baster, that, in insects at least, the organ of smell is situate at the entrance of the tracheæ or air-tubes. This conjecture derives some probability from the fact, that the inner tracheal membrane in these animals is soft and moist, and that those in which it is expanded into convoluted *lacunæ* and tortuous vesicles, for instance beetles, flies, and bees, are remarkable for the nicety of their sense of smell."

"In the mollusca the whole cutaneous covering seems to combine the character of an organ of touch or tact, and of smell. Like an extensive pituitary membrane, it is soft, villous, moist, and liberally supplied with nerves. But on all these points information is rather conjectural than positive."

We cannot afford space for minute notices of the other senses; suffice it to say, that in the different classes of animals they are modified to suit habits and condition, as in the case of smell. The spinal cord is subject to the same rule.

In regard to the appearances of the *brain* in man and animals, we present the following extracts from the work already quoted.

"The convolutions, which are so numerous and so deep in man, diminish both in number and size in the quadrumana and carnivora, and are nearly obliterated in the rodentia. In the ungulated animals, however, and especially in the ruminants and the horse, the convolutions are numerous; and even in the dolphin among the cetacea, they are numerous and deep. In all the mammalia, the *cerebellum* is foliated.

"On the whole, the peculiar character of the brain of man and the ape family consists in the existence of the posterior lobe and digital cavity. The brain of the zoophoga is remarkable for the small size of the *nates* or anterior pair of the bigeminous eminences in proportion to the *testes* or posterior pair. In the rodentia the organ is distinguished for the large size of the *nates*, and the want or superficial nature of the convolutions. In the ungulated division of animals, *i. e.* pachydermata, ruminantia, and solidungula, the brain is remarkable for the large size of the *nates* combined with the number and depth of the convolutions; while that of the cetacea is remarkable for its height and breadth, and the want of olfactory nerves. It is farther to be observed as a general

distinction between the herbivorous and carnivorous or zoophagous animals, that in the former the *nates* are larger than the *testes*, whereas in the latter the *testes* are largest. Lastly, man and the quadrumana are the only animals which possess genuine olfactory nerves. In the other quadrupeds, they are represented by the mamillary processes of the ancients; and in the cetacea they have not yet been unequivocally demonstrated.

"The brain of birds is at once recognised by consisting of six distinct tubercles, two representing the cerebral hemispheres, two representing the optic eminences, one the cerebellum, and one the bulb of the chord. The hemispheres are void of convolutions, but the cerebellum is marked by transverse parallel striæ corresponding to the *laminæ* of the mammiferous brain."—"The reptile brain is smooth and unconvoluted."—"In the mollusca, the nervous system consists of a number of whitish cerebral masses distributed in different parts of the body, with one or two more conspicuous than the rest, and supposed, therefore, to represent the brain, placed transversely over the œsophagus, which it encompasses with a nervous collar. In the articulata, the nervous system consists of two long cords extending along the belly, and expanded at various intervals into gangliform knots or enlargements. The first of these, which is situate on the œsophagus, rarely exceeds the others in size. Among the zoophytes hitherto examined, the nervous system assumes either a radiated or an arborescent form."—P. 32.

We have presented these details to convey to our non-medical readers an idea of the extent to which analogies prevail between the leading systems of human and animal organization. The brain and nervous system appear to present, both in structure and in functions, neither more nor fewer analogies than the others. Indeed, if there be any difference, they are, by most physiologists, regarded as the more striking. As we ascend in the scale, we find animals continually increasing in intelligence, and "it is in the nervous system alone," says Dr Conolly (in the Edinburgh Review, No. 94), "that we can trace a gradual progress in the provision for the subordination of one to another, and of all to man; and are enabled to associate every faculty which gives superiority with some addition to the nervous mass, even from the smallest indications of sensation and will, up to the highest degree of sensibility, judgment, and expression." "The brain is observed progressively to be improved in its structure, and, with reference to the spinal marrow and nerves, augmented in volume more

and more, until we reach the human brain—each addition being marked by some addition to, or amplification of, the powers of the animal—until in man we behold it possessing some parts of which animals are destitute, and wanting none which theirs possess."—Pp. 442–3.

In forming animals, Nature seems to have proceeded with remarkable uniformity; so much so that man seems to pass through every gradation of animal existence. His heart is at first a mere pulsating vessel, like that of an insect; then a sac like that of a fish; then a regular double heart. So the human brain, at one period, presents appearances analogous to the brain in fishes; then to that of birds; then to that of the mammalia; and, finally, becomes a proper human brain, and is such at birth. According to Sœmmering, it has no convolutions till the sixth or seventh month of gestation, being in this respect like the brain of birds and fishes, in which, as we have already noticed, no convolutions are found. Convolutions then begin to appear, and gradually enlarge to adult age.*

Hitherto we have considered only the general analogies between the structure and functions of man, and those of the lower animals; none of them militate against any phrenological principle or fact. Let us now consider more minutely the Cyclopædist's objection, stated in the beginning of this article—"If phrenology were true, it might be expected that its applications would extend through the whole animal kingdom, and that, according to the degree in which each mental faculty is developed in each animal, *we should find a corresponding portion of its brain large or small when compared with that of man.*"

This is a groundless assumption, for which no authority can be produced. "If phrenology were true, it might be expected that its applications would extend through the whole animal kingdom;" and they certainly do. But in what manner is this found? By proceeding on the principles of phrenology itself. We rest our opinions on two kinds of evidence, the demonstrative and the analogical: The former is derived from observations on the human brain; the latter from observations on the brains of animals, and it is chiefly illustrative. But phrenology is not a system of analogies; it is a science of observation and induction. We observe and ascertain facts, and elicit fundamental principles from them by generalization. The phrenologist, for instance, studies, in each class of animals, the structure of the brain and the manifestations of the

* See Solly on the Brain.

mind. He selects, as subjects of observation, animals whose actions and brains he has the best opportunities of scrutinizing—individuals, also, in mature life and in full health. He compares in each the power of manifesting *particular faculties* with the size of *particular portions* of the brain; and it is only when he has found, that in all cases (disease being absent) a large development of a particular part is accompanied with great power of manifesting a particular faculty, and *vice versa*, that he draws the inference that the part observed is the organ of that special power.

In applying this principle in the case of the lower animals, the process of observation must be the same as in man. It will not suffice to take up the brain of a sheep, a tiger, a fish, and a snake, and *de plano* compare them with the human brain, and jump to the conclusion, that there are, or are not, relations between *their* powers of manifesting the *human faculties*, and the size of corresponding parts of their brains. Before analogies in regard to particular qualities can be decided on, the student must know *both of the things which he compares*, for then only can he be in a condition to judge whether analogies do or do not exist. The Cyclopædist overlooks this principle. He says,—"Yet this is so far from being the case, that phrenologists are compelled to rest their opinions almost exclusively on evidence derived from the comparison of the brains of different individuals of the same species, and *to suppose* that, though many faculties are the same in man and the lower animals, yet in each species *they are manifested in some peculiar form and structure* NOT ADMITTING OF COMPARISON *with those of man.*" The "supposition" here ascribed to phrenologists is not entertained by them; they do not maintain that "the form and structure" of the brains of animals "do not admit of comparison with those of man." They have not affirmed that every brain possesses the same number of parts or organs, nor that all brains are alike perfect in their organization; assumptions which the objection of the Cyclopædist (without a shadow of reason) implies that they have made, or at least are bound to make. What they do affirm is—that the organic formation, be it ever so simple, which supplies the powers of perception, comparison, feeling, willing, and moving, *is* a brain, whether it be situated in the animal's head, back, belly, or tail, and whether it be round or square. But before the analogies in structure and functions between it and the human brain can be logically predicated, we must know the structure and functions of *both*. The correct statement, therefore, of their doctrine is,—that they insist on the necessity of understanding *both* of the things com-

pared as an indispensable requisite to drawing sound inferences as to the existence or non-existence of analogies between them; of studying *each organ* in *each class* of animals by itself, and *then* comparing them, in order to decide on their analogies. They object to comparing the *known* with the *unknown*, which is what the Cyclopædist insists on doing. Dr Vimont, under the head of "Cranioscopy of animals," says, "We should never commence the application of the principles of phrenology on the crania of individuals belonging to different classes and orders of animals. They should always be on the crania of animals of the same species, and especially on animals the produce of the same parents. Every one who will take the trouble to repeat my experiments, by rearing before his own eyes, and during a long period, a large number of animals, and noting with care their most prominent faculties, will be qualified to make valuable cranioscopical observations on the chief vertebrated animals." After studying the faculties manifested by individuals of each class, and ascertaining the precise locality, appearance, and size, of the organ by means of which each faculty is manifested, and doing the same in man, the observer will be in a condition to judge of the analogies between them; *but not before.*

Dr Vimont has followed this course, and found numerous and striking analogies. The faculties, for instance, of Amativeness, Philoprogenitiveness, Combativeness, Destructiveness, Cautiousness, and others, not only are susceptible of comparison in man and the lower animals, but have been successfully observed in both; then they have been compared, and the analogies equally in the faculties and organs have been pointed out. Dr Kennedy, of Ashby-de-la-Zouch, communicated to us the following fact, of which he was a witness, and which may serve as one illustration of Dr Spurzheim's mode of studying the brains and faculties of the lower animals. "I spent a few days at Mr Strutt's of Belper in Derbyshire, when Dr and Mrs Spurzheim were there on a visit. We used to walk a good deal over the lawn and shrubbery, where we had frequent opportunities of making observations on Mrs Strutt's pet family of tame pigeons, which was numerous, and contained many varieties both British and foreign. Among them was a very beautiful one, to which our attention was always drawn by the extraordinary and elegant manifestation of an exorbitant Self-Esteem, the natural language of this organ being most prominently apparent. So much had this bird become an object of interest, that the conversation was often interrupted by the exclamation, 'Here comes Self-Esteem!' Well, by some accident poor Self-Esteem received an injury

which ended in his death, and thus afforded us the advantage of a necrotomical inspection. Dr Spurzheim made a careful dissection of the brain, and clearly exhibited the organ which he had previously ascertained to be that of Self-Esteem, in a state of enormous preponderance in size relatively to the other cerebral parts. The Doctor proposed making a preparation of this brain in alcohol, and if my recollections be correct, Mrs Spurzheim made a drawing of it." The Cyclopædist's objection is, that phrenologists do not maintain that, after studying man, they are prepared to demonstrate direct analogies running through the orders, genera, and species of all the inferior animals, *without studying each of them by itself.* He objects that we do not regard a horse, an ass, a haddock, a frog, and a flea, *as merely men made down;* that is to say, as manifesting precisely human faculties, by human organs, only omitting those which are unnecessary to their condition! In no other sense have his words any rational meaning.

After the sentence before quoted, he proceeds: "This is evidently contrary to the analogical mode of reasoning which they pursue in other instances: all eyes, all ears, and all organs of smell are formed on the same principles, and so we might presume are all organs of the mind; so that as by the size or extent of distribution of their nerves, we can determine in each animal the power of its sense of smell, or sight, or hearing, so by the size of a special part of the brain we might in each estimate the energy of some corresponding faculty." This certainly is different from the analogical mode of reasoning which the phrenologists pursue. They do not, like the Cyclopædist, assume *a priori* that in all classes of animals, however different, "all eyes, all ears, and all organs of smell, are formed on the same principles;" but they observe the organs of these senses in each species by itself, and then draw inferences concerning the principles on which they are formed. They are learned enough to know that "man and the quadrumana are the only animals which possess *genuine olfactory nerves;*" that in the other quadrupeds *they are represented* by the mamillary processes of the ancients; and that in the cetacea they have not yet been unequivocally demonstrated. They therefore do not assert that in *all* classes of animals the form, structure, locality, and expansion of the nerves of the senses are the same as in man. Farther, they have read that, "although almost all the invertebrated animals give proofs of the existence of the sense of smell, in none of them do we find any organ in which this sensation appears to be exercised;" while in the mollusca it has been supposed that the whole cutaneous covering "combines the character

of an organ of touch, or tact, and of smell." Will the Cyclopædist, from these facts, deny the existence and functions of the organ of smell in man? He is bound to do so, if he considers it a sufficient reason for denying in man the existence of organs of particular faculties, that phrenologists are not able to shew that the same faculties are manifested by the lower animals by organs of the same form, and lying in the same position, as those which manifest them in man.

"Between the vertebrate and the invertebrate animals," he continues, "there is an abrupt step in the condition of the nervous system; the brain and the spinal cord of the lowest of the former class differ widely from the supra-œsophageal ganglion and the gangliated cords of the latter; we might, therefore, expect to find an equally sudden deterioration of *mental* power. *Yet none such occurs.*" We answer that we do not compare "steps in the condition of the nervous system;" neither do we compare the absolute condition of the brain in the invertebrate animals with the absolute condition of the brain in the vertebrate; but, in all animals, of every class and kind, we compare the relative size, less or greater, of one part or organ with that of the other parts or organs in the brain of the same animal. We have never used the expression, nor can we pretend to understand what is meant by, "an abrupt step in the condition of the nervous system," until its nature and extent shall be intelligibly defined; neither are we able to conceive why "a *wide difference* in the brain and spinal marrow of one class of animals" should lead us to expect to find "an equally *sudden deterioration of mental power*" in another. But even assuming the fact to be as stated, we ask the Cyclopædist how he disposes of the following facts: "Between the vertebrate and the invertebrate animals, there is an abrupt step in the condition of the *organ of smell*, and we might therefore expect to find an equally sudden deterioration of *olfactory* power; yet none occurs." Male butterflies, "in whom no olfactory nerves exist," scent the female even when inclosed in cages; and other insects, in which no trace of an olfactory nerve can be discovered, present equally strong manifestations of the sense of smell. The Cyclopædist, to be consistent, should affirm that these facts tend to invalidate the evidence in favour of the existence and functions of olfactory nerves in man and quadrupeds. We, on the other hand, infer that, if the structure and functions of every organ in insects were as well ascertained by *direct observations on themselves*, as those of the olfactory nerves in man and quadrupeds, a nervous organ of smell *would be found* in insects, bearing an analogy to those

in the higher classes of animals, only modified to suit their condition; and that our ignorance alone gives rise to the present anomalous appearances.

The Cyclopædist, however, argues differently. After stating that no such deterioration of *mental* power "as we might expect," occurs in the invertebrate animals, he proceeds: "But although the supra-œsophageal ganglion (which may be regarded as the brain of insects) is only so much larger than the rest of their ganglia as is proportionate to the number of organs requiring to be supplied with the nerves from it, yet none will deny that many insects exhibit more exalted psychical powers than the majority of either fish or reptiles do." If we could see the Cyclopædist, with his microscope and dissecting instruments, successful in demonstrating the organ of Destructiveness in the brain or "supra-œsophageal ganglion" of, for instance, an Asilus, Libellula, or Myrmeleon; the organ of Combativeness in the brain of a Vespa, Staphylinus, or Formica; or the organ of Constructiveness in the brain of an Apis, Aranea, or Termes; then we should willingly concede to him a right to pronounce the fore-quoted sentence. In these insects, the faculties are distinctly manifested, and we therefore "expect" that there will be found an equal distinctness of size and perfection of structure in those parts of their "supra-œsophageal ganglion" or gangliated cords which, we also "expect," will be found to constitute their organs, whenever naturalists shall be able to establish a minute anatomy of the brain in invertebrate animals. The Cyclopædist says, "that none will deny that many insects exhibit more exalted psychical powers than the majority of either fish or reptiles do." This is a mere assertion, and we meet it with a similar reply, that not a few fishes and reptiles exhibit more exalted psychical powers than the majority of insects, in selecting and securing their prey, depositing their spawn, and other operations directed by the "psychical powers:" and we rest the accuracy of our assertion on the experience of all physiologists familiar with the economy and habits of fishes, reptiles, and insects. The Cyclopædist proceeds—

"But, taking the vertebrata alone, in all of which there is a certain general plan observed in the nervous system, *it is not found* that in each order or species, when compared with the rest, the parts of the brain are developed in proportion to the energy of the faculty ascribed to each of them." This is another assertion. We give it a reply of the same kind, and assert that, in "each order or species" of the vertebrata, "the parts of the brain are developed in proportion to the energy of the faculty ascribed to each of them. We affirm this cor-

respondence of energy and development to be universal *in all ascertained cases*, and call upon the Cyclopædist to specify one single authentic fact in support of his assertion. The phrenological mode of relative comparison appears to be very generally confounded with the absolute by this objector, as seems to be the fated predicament of most antiphrenologists: besides, he utterly neglects the often-defined qualification of *cæteris paribus* with reference to the influence of organic constitution or temperament. "The phrenological function of the cerebellum, for example," he continues, "is *almost equally powerful in all species;* yet the absolute and proportionate size of the cerebellum regularly lessens as one descends through the order of vertebrata; and in the batrachia, in which its supposed function is extremely energetic, it is a mere narrow cord passing across the fourth ventricle." On these statements we remark, first, that the assertion that Amativeness, the phrenological function of the cerebellum, is "almost equally powerful in all species," is utterly at variance with facts. The function of the cerebellum is not "equally powerful in all species," any more than it is in all individuals of the same species. On this head we again appeal to the observation of naturalists. The function of the cerebellum is not extremely energetic in the batrachia, unless the obstetrical assistance, dutifully rendered by the male to his mate, be considered a manifestation of the amative propensity. Dr Vimont observes, that as "in all vertebrated animals the cerebellum presents numerous varieties of volume and activity, we should expect to find innumerable shades of action and energy in the faculty. In some species its influence is little remarkable and its action of short duration, while in others its energy is such that it subjugates and absorbs all the other faculties." "Man, of all the animals, is the most favoured in regard to the duration and energy of this faculty. In the greater number of the inferior animals, there are long intervals between the periods of action of this propensity: Man, on the other hand, feels its influence at all seasons, and even to an advanced age." We leave the reader to judge which of these statements is most conformable to nature, and proceed to the second point maintained by the Cyclopædist, namely, that "the absolute and proportionate size of the cerebellum regularly lessens as one descends through the order of vertebratæ."

The real phrenological question is, Whether, in each species of animals, the size of each organ bears to that of the rest a proportion corresponding to the energy of each faculty in relation to the rest. No philosophical phrenologist compares

the *absolute* size of the organs in one species with their absolute size in another, because to do so would be to transgress a very obvious rule of philosophy. The same cause, *in the same circumstances*, produces the same effects. When we apply this rule to phrenology, we say that the same extent of size in an organ, *in the same circumstances,—i. e.* in individuals of the same species, age, health, and constitution,—will produce the same degree of energy of function. But the Cyclopædist (correcting our philosophy) seems to expect that the same extent of size in the cerebellum, *in different circumstances,—i. e.* in individuals of every order, genus, and species, from man down to reptiles,—should produce the *same* energy of manifestations. Unless we hold this to be a philosophical principle, the comparison of the *absolute size* of the cerebellum (the mere size without regard to other circumstances) in the different species of animals is a mere waste of labour, which can lead to no result. Such a principle of comparison is condemned by the rules acknowledged by all cultivators of inductive science.

He proceeds, however, to say that "the *proportionate* size of the cerebellum regularly lessens as one descends through the order of vertebrata." The Cyclopædist produces no evidence that the size of the cerebellum regularly lessens in proportion to that of the brain as one descends through the order of the vertebratæ, and that its "supposed function is extremely energetic," in proportion to the functions of the brain, "in the batrachia," in which "it is a mere narrow cord passing across the fourth ventricle." He merely asserts these facts. Let us hear Dr Vimont on the opposite side. "The following facts," says he, "I have personally observed. In all animals which procreate much, and which are subject to sexual influence several times in the year, the cerebellum is generally largely developed. This may be seen in the cerebellum of the cat, plate LXXV. fig. 4; of the hare, *id.* pl. fig. 8; of the squirrel, pl. LXXIV. fig. 4; of the Guinea pig, *id.* pl. fig. 1; of the mole, *id.* pl. fig. 9. Indeed, it may be affirmed, that in the Rodentia (the class of animals which procreate the most), the cerebellum bears the largest proportion, in point of development, to the brain. It will perhaps be objected that birds, in whom only the middle lobe of the cerebellum is found, manifest a great activity of the propensity. Considered in a general way, the assertion is far from being true. A considerable number of species of birds are influenced by the propensity to propagate only once or twice a-year. In our climates, only a few birds form an exception to this rule; and besides, they belong to the domestic species, which are well fed and pro-

tected from the inclemency of the weather. It is granted that a single cock in a court-yard suffices for several hens; but this fact, which at first sight appears to be in opposition to the general law of nature, which demonstrates that the energy of an organ coincides with its volume, is not of difficult explanation; and if the comparison between the size of the organs and the energy of function is made in individuals of the same species, nature bears out the influence of size as a general rule." "I have compared the brains of four cocks, two of which belonged to individuals excessively ardent in this propensity, and the other two to cocks which were very little so. In the first two, the cerebellum is very large: one of them is represented in fig. 1, pl. LXXI. In one of the other two, the cerebellum was more than a third less in volume than in the one here represented; while the cerebellum of the fourth was nearly as large as in one of the ardent cocks, but it was singularly soft, and the rest of its brain—the bigeminal tubercles excepted—was also very soft.

"The carnivorous animals, which present a large development of the cerebellum, such as dogs and cats, are very amorous. I have examined the contents of the skull in more than thirty of the two hundred crania of cats which compose part of my collection, and I have always found a large cerebellum in ardent females." (*Traité de Phrénologie*, tome ii. p. 236.)

We leave the reader to decide which of these authors, the Cyclopædist or Vimont, is entitled to the most weight as an authority, keeping in view their different principles of observation.

At the same time Dr Vimont remarks, "My numerous anatomical observations on the cerebellum of vertebrated animals lead me to believe that this is not a simple organ. Its size, its form, and composition, as I have shewn in my first volume, vary a good deal in different classes of animals. It is little developed in reptiles; in birds it is composed of two half rings, the largest of which occupies the middle portion; in quadrupeds, the quadrumana, and man, it is composed of two lateral portions, consisting of different plates, in the middle of which we perceive a corrugated portion, *processus vermicularis*. In studying the cerebellum, I have been struck with the size of this part in some species; in the cat, for example, pl. LXXV. fig. 4, and the squirrel, pl. LXXIV. fig. 4. In the first, this middle portion is composed of two distinct masses (pl. LXXIX. fig. 2), the one superior and the other inferior. I do not believe that this middle portion of the cerebellum performs the same functions with the two lateral masses. I have constantly found it large in animals which climb, such as the cat, squir-

rel, and marten, and in those which have the surest foot, such as the goat, the mule, the ass, the horse, the sheep. I shall not be surprised, therefore, if some relation shall be found to exist between the development of this portion of the nervous system and the agility and certainty of foot of those animals." (P. 242.)

We leave the reader again to decide which is the more philosophical procedure,—the wholesale comparisons of the Cyclopædist, or the minute observation of individual organs in individual animals and the cautious inferences of the Phrenologist.

The Cyclopædist proceeds: "The part of the brain, too, which is found decreasing as it is examined in the descending scale of vertebrate animals, is not the anterior, the seat of the intellectual faculties, but the posterior, in which are placed the organs of the animal propensities. A fair mode of comparison to determine this is to be found in the degree in which the hinder part of the cerebrum overlaps the cerebellum: in man alone does the former ever completely cover the latter; in diots, it often fails to do so; in monkeys, it covers a still less portion; and continuing to descend through mammalia, theposterior lobes of the cerebrum grow constantly smaller, and the cerebellum is proportionally more, and at last completely, exposed. From these facts, it might be assumed that the posterior lobes are the seat of some intellectual faculties; and such an assumption can be avoided only by believing that there is no analogy between the form of the posterior lobes of the cerebrum in man and mammalia."

We demur entirely to the proposition, that a "fair mode of comparison to determine this is to be found in the degree in which the hinder part of the cerebrum overlaps the cerebellum." Such a comparison is merely mechanical. The legitimate mode of proceeding, in order to discover the functions of the posterior lobe in man and animals, is to compare in each species the size of particular parts of it with the power of manifesting particular faculties. Dr Vimont has pursued this method, and has ascertained the position and functions of the organs situated in the posterior lobe, in the cat, plate XCIII. figs. 1 and 2; in the hooded crow, *id.* pl. fig. 3; and in each species, the size of every organ bears a relation to the energy of its function. On comparing the brains of these and of a variety of other animals, represented by Dr Vimont, with the brain of man, no countenance is given to the assertion that the anterior lobe does not decrease in the descending scale of the vertebrated animals. The source of the Cyclopædist's error appears to us to be still the same: he as-

sumes that animals are merely men made down, and that in them every organ must be found to possess the same form and lie in the same position, absolutely and relatively, in all species; otherwise, that there is a failure in the analogies between them. He does not consider, for example, that the lower animals want altogether some of the moral organs which lie, more or less transversely, in the coronal region of the middle lobe in man. If these convolutions were removed, and the longitudinal convolutions which manifest the animal propensities, and which compose the posterior lobe, were brought forward into contact with the anterior lobe—the seat of intellect, the effect would be to uncover the cerebellum, but not to annihilate, in the animals, the convolutions which cover it in man. The parts actually wanting in them are the moral organs, lying in the middle of the top of the brain. Figure 1 represents the upper surface of the human brain, and figure 2 the upper surface of the brain of a male cat given by Dr Vimont in plate LXXV. fig. 4. The scale of the latter is reduced to one-half; that of the former, of course, considerably more.

Fig. 1.

Fig. 2.

The Cyclopædist concludes—"It is not denied that these apparent anomalies may exist, and yet Phrenology may be true; but in balancing the probabilities of its truth or falsity, they must not be neglected." Certainly, the proper evidence of human phrenology is direct facts observed in man, and not analogies drawn from the inferior animals. We maintain, however, that these analogies as strongly support the phrenological views of the physiology of the brain, as they do the common doctrines of anatomists concerning the osseous or muscular systems; and that the alleged anomalies are, to a

vast extent, imaginary, and spring from the inaccurate observations and illogical inferences of opponents.

In our next number, we shall examine the other objections of the Cyclopædist.

IV. *Notes on the United States of North America, during a Phrenological Visit in* 1838–39–40. By GEORGE COMBE. 3 vols. post 8vo. Edinburgh: Maclachlan, Stewart & Co. London: Longman & Co.; Simpkin & Co.; and Orr & Co. 1841.

Mr Combe has here recorded his observations and reflections on all the prominent objects and institutions of America with which he had occasion to become acquainted during his late visit to the States. Though his mission was a phrenological one, and due prominence has been given in his "Notes" to matters connected with phrenology, he has not omitted to furnish ample details about the religious, political, social, educational, and domestic condition of the Americans, and the mental qualities by which, as a nation, they are characterized. Of their prisons, also, and public charitable institutions—such as asylums for the blind, the insane, paupers, and the deaf and dumb,—he says much; while banks, roads, railways, canals, courts of law, state and city debts, the slavery question, the prospects of the nation, the tyranny of public opinion, the rise, progress, and decline of the war-cry about the Maine boundary, the state of "American Civilization," and a variety of other topics, have likewise received a share of his attention. The concluding chapter contains "the application of phrenology to the present and prospective condition of the United States," in the form of an "Address to the American People." There are, moreover, many particulars concerning the cerebral development and mental qualities of the Negroes and American Indians, as well as of eminent public characters, such as Van Buren, Webster, Channing, General Harrison, &c. Some of these, with the more remarkable phrenological cases which fell under Mr Combe's observation, we propose to extract in our next number. The leading circumstances of his lectures have already appeared in this Journal, and need not be reverted to at present. The book, we may observe, is intended for American as well as British readers, and the author comments pretty freely on the faults not only of the institutions of America, but likewise on those of our own country; while his approbation is heartily bestowed wherever he conceives it to be due.

IV. INTELLIGENCE.

The Phrenological Association.—The following circular has been issued in reference to the London meeting, to be held in June 1841 :—

" *Committee.*—Edward Barlow, Esq. M.D.; Francis B. Beamish, Esq. M.P.; Richard Beamish, Esq. F.R.S.; James P. Browne, Esq. M.D.; George Combe, Esq.; John Conolly, Esq. M.D.; Abram Cox, Esq. M.D.; H. B. Churchill, Esq.; Richard Cull, Esq.; James Deville, Esq.; Bryan Donkin, Esq. F.R.S.; Frederick Dover, Esq.; John Elliotson, Esq. M.D., F.R.S.; Professor Evanson, M.D., M.R.I.A.; John I. Hawkins, Esq.; Lord Douglas G. Hallyburton, M.P.; William Hering, Esq.; J. D. Holm, Esq.; H. Haley Holm, Esq.; William Johnson, Esq.; Hudson Lowe, Esq.; Sir George Mackenzie, Bart., F.R.S.L.; Robert Maugham, Esq.; Joseph Moore, Esq. M.D.; M. B. Sampson, Esq.; James Sedgwick, Esq. J. B. Sedgwick, Esq.; J. S. Streeter, Esq.; Edmond S. Symes, Esq.; Thomas Tichborne, Esq.; W. C. Trevelyan, Esq. F.R.S.E.

" *Honorary Secretaries.*—Henry G. Atkinson, Esq., F.G.S., 18 Upper Gloucester Place; Thomas H. Bastard, Esq., 110 Great Titchfield Street.

" The Phrenological Association was established at Newcastle in 1838, and held its meetings concurrently with those of the British Association, in 1839 at Birmingham, and in 1840 at Glasgow, where it was resolved that the next meeting should be held in London, in the first week of June 1841.

" The objects of the Association are the advancement of the science of phrenology, and the promotion of intercourse amongst phrenologists, by means of annual meetings, for the reading of papers, the exhibitions of casts, crania, and other specimens, and discussions, calculated to illustrate facts, and lead to new discoveries, —to point out the importance of phrenology as the true philosophy of the mind, and its several applications in education, jurisprudence, and medicine,—to correct misrepresentations respecting the science,—and to awaken an extended interest in its cultivation. Several eminent phrenologists have promised papers and specimens for the ensuing session; and in order to enhance the importance and interest of the proceedings, the committee solicit communications from others; and with the view of facilitating the arrangements for the session, it is particularly requested that gentlemen will give early notice to one of the secretaries of the subjects of their intended contributions. Gentlemen who are members of any learned or scientific society, or who shall be recommended by two members of the Association, are eligible as members, on transmitting to one of the secretaries the following declaration in writing, viz :—' I, the undersigned
of recognise the general truths of phrenology, and engage to submit to the laws of the Association, so long as I shall continue a member of the same.' Upon receipt of the above form, duly signed, the secretaries may admit a candidate to the privileges of a member, subject, however, to the confirmation of the committee at their next meeting. (To avoid unnecessary correspondence, the secretaries request that all Gentlemen transmitting the required form will consider themselves admitted as members, unless they receive notice to the contrary.) The subscription of a member is ten shillings for each annual session he may attend, for which he will have the privilege of introducing one lady; and additional ladies' tickets for the session, at five shillings each, will be granted to the members. The session will commence on Wednesday, the 2d of June, and the meetings will be held alternately in the mornings and evenings.—*Committee Room, Royal Gallery of Practical Science, March* 1841."

We understand that the committee intend to simplify the laws of the Association, so as to substitute for the office-bearers hitherto appointed, a simple committee of management, and a president. A sub-committee, consisting of Messrs Sampson, Symes, Cull, Tichborne, and the secretaries, was appointed to prepare the foregoing circular, and frame a code of laws to be submitted to the meeting in June; and their powers have been somewhat extended, so that in future the management of the proceedings will rest a good deal with them. The success of the meeting will, of course, depend very much on the quality and number of communications to be brought forward by members. If these particulars shall prove satisfactory, as we trust they will, the inconvenience of going to London from a distance will be amply compensated.

The London Phrenological Society resumed their ordinary meetings for the season on Monday, November 2, at Exeter Hall, to be continued, as usual, on the first and third Mondays of each month, until the third Monday in May. The society has also determined upon holding extraordinary meetings on the second and fourth Mondays in each month from November to May inclusive, at which ladies should be admitted; a certain number of the members having undertaken each in turn to give a popular lecture upon the science on these evenings.

At the first ordinary meeting (the President, John Elliotson, M.D., F.R.S., in the chair), the following presents were announced:—A cast of the head of the Swiss valet Courvoisier, by Mr Donovan; and a cast of the same individual by Mr Deville. Dr Elliotson said he had considered that it would be superfluous to draw up a paper upon the character of Courvoisier, as both it and the development of the head were so well known to all the members. No phrenologist, after examining the cast of his head, could feel surprised either at the crime committed by him, or at the good character he had previously contrived to sustain. His *cunning* was so enormous, that, combined as it was with very large *cautiousness* and *firmness*, and a fair development of the *intellectual faculties*, it would enable him easily to conceal his real character, while the equally large development of *vanity* and *pride* would combine with his large *covetiveness* to make him desirous of obtaining the good opinion of others; and probably his large *instinct of generation* and *attachment* might contribute towards making him a favourite with his female fellow-servants. But, with the addition of *courage*, and the *propensity to destroy*, both immense, to *cunning*, *covetiveness*, *firmness*, and *pride*, and a wretched moral surface, it was not to be wondered at that he could be guilty of any violence or atrocity. Dr Elliotson next exhibited two ancient Roman skulls brought by him from the tomb of Augustus, recently discovered near the Colosseum at Rome, and pointed out that the first, a male skull, presented the form given by the ancient Roman sculptors to nearly all their busts; viz. a flat coronal surface, and an immense lateral development. This form, said Dr Elliotson, is seen not only in the busts of Nero, Caracalla, Caligula, Domitian, &c., but likewise in those of the numerous nameless busts in the museums of Naples and Rome, and is a fine specimen of the ancient Roman type. The second, a female skull, had the same characteristics, but, of course, in a minor degree, and with the addition of very large *love of offspring*. Dr Elliotson had obtained these skulls, the only perfect specimens in the tomb; but they were so extremely fragile, that one was broken to pieces in the carriage, and the female skull, which broke on the slightest touch, was much injured. Mr Donovan read some extracts from Lavater's Physiognomy, with remarks, and afterwards presented a cast of the head of Mr Richard Oastler. Dr Elliotson also exhibited a cast of the head of Admiral Sir Thomas M. Hardy, Bart., presenting a most marked contrast with that of Courvoisier as regards the moral and intellectual development, both which were particularly fine in this cast. The inferior, the lateral, and the posterior-superior regions were also very large,—the *Firmness* immense. Dr E. considered, therefore, that he would have been a man of determined character, but most conscientious and benevolent, but regretted that he did not know sufficient of the character to determine how far it corresponded with the development. The discussion was accordingly adjourned to the next meeting, before which Dr E. said he would endeavour to obtain some account of the character.

At the second ordinary meeting, Nov. 16, Dr E. read a short sketch of Sir Thomas Hardy's life from the United Service Journal, shewing that the character was just what any phrenologist would have predicted from the organization. The esteemed friend, the confidential companion, the receiver of the dying embrace and expiring words of the immortal Nelson, owed his promotion entirely to his eminent services and merits. He entered the naval service as a midshipman in 1781, when only twelve years of age, was promoted to be a lieutenant in 1793, and participated in the numerous and arduous services performed by Nelson's squadron. In 1797 two boats under the command of Lieut. Hardy and Lieut. (now Vice-Admiral) Gage, proceeded in broad daylight to the capture of a French sixteen-gun brig under the walls of Santa Cruz, where she was protected by guns and small arms from the shore, and by her crew, and succeeded in bringing her out without the loss of a man on the part of the captors, and only fifteen wounded, including Lieut. Hardy slightly. He was immediately promoted into the brig for his success in so desperate an enterprise. In 1801 he was appointed to the Isis, 50. In 1802 he commissioned the Amphion, and was employed in her on the Lisbon station. When Nelson, in 1803, was appointed to the command-in-chief of the Mediterranean fleet, the Amphion accompanied him, and for a time bore his flag; but on the 30th July Captain Hardy joined the Victory with Nelson, whom he never afterwards quitted until the death of the latter in 1805, soon after which he was created a baronet, and subsequently K.C.B. He was employed in various services until 1819, when he was appointed to the Superb as commodore of the South American squadron, which command he retained till 1824, evincing the greatest judgment and valour, as well as extreme love of justice and benevolence. He was trusted everywhere, and enjoyed the confidence and esteem of all parties. In 1832 he was appointed first sea Lord of the Admiralty under Sir James Graham, whose respect and friendship his sterling qualities speedily gained, and at whose requisition he was appointed in 1834 to the Governorship of Greenwich Hospital, where he constantly resided, dispensing happiness and cheerfulness around him, until his death on the 28th [illegible]ber 1839.

At the third ordinary meeting, a paper was expected from Mr Hawkins, but owing to some misconception on the part of that gentleman, he had not prepared any paper, and consequently there was no business before the society. It was announced that Mr Hudson Lowe would furnish a paper for the next ordinary meeting.

London Anthropological Society.—This society, consisting of persons believing in the fundamental principles of phrenology, was established in the year 1836, for the purpose of investigating the laws of the Creator in reference to the condition of man. The objects of this society being the application of the principles of phrenology in the elucidation of the laws of the Creator, as evidenced in the animal, intellectual, moral, and religious condition of man, the peculiarity of its constitution, as will be seen, was the extension of the science to *all* subjects relating to the human mind, with the view of exhibiting its practical utility in every condition of life and the formation of every institution, as well as of investigating the phenomena of the science. Although this extension has been acted upon during the whole period, from its first constitution to the present moment, no inconvenience has resulted, and the society has continued its existence undisturbed by any of those feelings which bigotry often excites, when the subjects relating to man as a religious being are brought under consideration. The society has another peculiarity in its constitution, namely, that it requires on admission a presentation of the cast of the head of the member, taken at the time, and requires also another cast at the end of each seven years, thus offering a practical means of illustrating, not only the truths of phrenology, but also the progress and decrease, whether animal, or moral, or intellectual, or all or several of these, in himself.

The society meets on the first and third Thursday in each month throughout the whole year; the first Thursday being invariably occupied, after the conclusion of any usual routine business, with the consideration and examination of a cast of a member, by all the members present, each member giving his opinion of the organization, which is recorded, and the member then stating his own character, his feelings and tendencies, which are recorded also, and compared. The third Thursdays are occupied by essays of the members, and by conversations on phrenological subjects.

As an illustration of the nature of the meetings, the following abstract of the meetings of the last three months of 1840 will give a tolerably fair idea:—Sept. 3. The cast of the head of a member was examined. Sept. 17. The subject of the temperaments was resumed from the last meeting in August; and several opinions were given. Some interesting facts connected with the organ of amativeness were related by a member. Oct. 1. The cast of the head of a member was examined. Oct. 15. A paper on the habits of the Entellus monkey was read by a member. As agreed on at the last meeting in September, the members presented their opinions of their own temperaments, which subject was again resumed, and on which a very interesting conversation took place. Nov. 5. An extract from the report of the proceedings of the British Phrenological Association which met at Glasgow, was read; after which the cast of the head of a member was examined. Nov. 19. A farther extract from the report of the proceedings of the British Phrenological Association which met at Glasgow was read. A letter from a person at Manchester, shewing an alteration of opinions in opposition to phrenology there, was read. A New System of Phrenology by J. Stanley Grimes of America, introducing several new organs, and altering the names of acknowledged ones, was commented upon. A letter upon criminal jurisprudence and discipline, in reference to mental organization and social responsibility, published in the Spectator newspaper of October 10th, was read. Dec. 3. The cast of the head of a member was examined.

Any of our readers who wish to know more of this society may obtain every information on the nights of meeting at Hart's Temperance Hotel in Aldersgate Street, at which place the society hold their meetings.

Phrenological Class, London Mechanics' Institute.—The annual retrospect of a Phrenological Society offers but few opportunities of conveying novel information, or for supplying any fresh comments upon its past proceedings,—the transactions of one year being generally but a type of those which previously elapsed, varied, indeed, by increased or diminished success. The Phrenological Class at the London Mechanics' Institute has now been established ten years; and since its formation it has been instrumental in teaching the rudiments of phrenology to about 300 persons, most of whom steadily adhere to its doctrines, and the names of some are not unknown in the phrenological circles as expounders of the science. The objects of the class are promoted by weekly lectures and discussions, and by the circulation of illustrative casts, and phrenological and physiological works. The

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London Anthropological Society.—This society, consisting of persons believing in the fundamental principles of phrenology, was established in the year 1836, for the purpose of investigating the laws of the Creator in reference to the condition of man. The objects of this society being the application of the principles of phrenology in the elucidation of the laws of the Creator, as evidenced in the animal, intellectual, moral, and religious condition of man, the peculiarity of its constitution, as will be seen, was the extension of the science to *all* subjects relating to the human mind, with the view of exhibiting its practical utility in every condition of life and the formation of every institution, as well as of investigating the phenomena of the science. Although this extension has been acted upon during the whole period, from its first constitution to the present moment, no inconvenience has resulted, and the society has continued its existence undisturbed by any of those feelings which bigotry often excites, when the subjects relating to man as a religious being are brought under consideration. The society has another peculiarity in its constitution, namely, that it requires on admission a presentation of the cast of the head of the member, taken at the time, and requires also another cast at the end of each seven years, thus offering a practical means of illustrating, not only the truths of phrenology, but also the progress and decrease, whether animal, or moral, or intellectual, or all or several of these, in himself.

The society meets on the first and third Thursday in each month throughout the whole year; the first Thursday being invariably occupied, after the conclusion of any usual routine business, with the consideration and examination of a cast of a member, by all the members present, each member giving his opinion of the organization, which is recorded, and the member then stating his own character, his feelings and tendencies, which are recorded also, and compared. The third Thursdays are occupied by essays of the members, and by conversations on phrenological subjects.

As an illustration of the nature of the meetings, the following abstract of the meetings of the last three months of 1840 will give a tolerably fair idea:—Sept. 3. The cast of the head of a member was examined. Sept. 17. The subject of the temperaments was resumed from the last meeting in August; and several opinions were given. Some interesting facts connected with the organ of amativeness were related by a member. Oct. 1. The cast of the head of a member was examined. Oct. 15. A paper on the habits of the Entellus monkey was read by a member. As agreed on at the last meeting in September, the members presented their opinions of their own temperaments, which subject was again resumed, and on which a very interesting conversation took place. Nov. 5. An extract from the report of the proceedings of the British Phrenological Association which met at Glasgow, was read; after which the cast of the head of a member was examined. Nov. 19. A farther extract from the report of the proceedings of the British Phrenological Association which met at Glasgow was read. A letter from a person at Manchester, shewing an alteration of opinions in opposition to phrenology there, was read. A New System of Phrenology by J. Stanley Grimes of America, introducing several new organs, and altering the names of acknowledged ones, was commented upon. A letter upon criminal jurisprudence and discipline, in reference to mental organization and social responsibility, published in the Spectator newspaper of October 10th, was read. Dec. 3. The cast of the head of a member was examined.

Any of our readers who wish to know more of this society may obtain every information on the nights of meeting at Hart's Temperance Hotel in Aldersgate Street, at which place the society hold their meetings.

Phrenological Class, London Mechanics' Institute.—The annual retrospect of a Phrenological Society offers but few opportunities of conveying novel information, or for supplying any fresh comments upon its past proceedings,—the transactions of one year being generally but a type of those which previously elapsed, varied, indeed, by increased or diminished success. The Phrenological Class at the London Mechanics' Institute has now been established ten years; and since its formation it has been instrumental in teaching the rudiments of phrenology to about 300 persons, most of whom steadily adhere to its doctrines, and the names of some are not unknown in the phrenological circles as expounders of the science. The objects of the class are promoted by weekly lectures and discussions, and by the circulation of illustrative casts, and phrenological and physiological works. The

library contains fifty volumes—including works by Gall, Spurzheim, the Combes, Solly, Lizars, and other writers. The class consists of forty members, and the average attendance is thirty-four. The library of the Institution also contains forty volumes of phrenological works. As the Institution classifies its books in the catalogue, the phrenologists, some time since, succeeded in getting the works treating on that subject classified under the head of "Phrenology." We would present this as a hint worthy of adoption by the phrenologists of other literary institutions; for not only would it give the science a tacit recognition, but, by being placed together, the works would excite more attention than they receive when scattered. The following are the titles of the principal papers which were read during the past year:—On the relation subsisting between the intellectual faculties and the moral sentiments. On the abuse of the propensities as exhibited in religious controversy. On the doctrine of utility phrenologically considered. Illustrations of the function of the organ of Weight. On the influence of knowledge. A phrenological analysis of patriotism. On the character of Hamlet as tested by phrenology. "A Challenge to Phrenologists" accepted (being an answer to a work so named). On the misapplication of words. On the effect of Hope and Wonder on the intellect. On the feelings evolved by looking over precipices. On the cerebral organization of thieves and murderers. On the choice of books, phrenologically considered. On the classification of prisoners. On the principles which should regulate marriage and divorce. On the physiological application of phrenology. On the principles of education. On the relative influence of organization and circumstances. On the moral influence of Temperance Societies. On the importance of phrenology as applied to self-knowledge and self-government. On the influence of Causality on the formation of opinion. On the structure of the brain. On the practicability of selecting legislators by the aid of phrenology.

E. J. HYTCHE.

6th January 1841.

Blackburn Phrenological and Geological Society,—Second Annual Report of the Council, dated October 1840.—"The Council of the 'Phrenological and Geological Society,' in resigning their office, beg to lay before the members an account of the Society's progress, and its present state.

"It is with no little gratification that your Council are enabled to report the increasing prosperity of the Society, in the accession of new members, as well as the more efficient organization of its proceedings. At the early part of the present year, an improvement was made in the arrangement of the meetings, by which, after the delivery of each lecture, a discussion upon the subject treated on ensued; and the Council beg to congratulate the members on the order and regularity with which these debates have been conducted, and also on the interest they excite, as well as the mutual improvement which must accrue to those who take part in them. During the year, lectures have been delivered by several gentlemen connected with the Society. Amongst those on geology, your Council feel compelled to notice the very able lectures of R. B. Barlow, Esq., on the laws and order of stratification. In the phrenological department, many very excellent lectures have been delivered, which invariably elicited discussions highly interesting to the members. Another indication of your Society's advancement, is the extended Museum of Geological Specimens, and of Phrenological Busts, &c. These, and the extension of the Library, towards which the funds have been almost exclusively devoted, must ensure to the Society an encouragement commensurate with its utility. Your Council have great pleasure in referring to the list of Honorary Members and Patrons: among the latter, they beg to notice the handsome donation of L.5 from W. Turner, Esq., M.P., and the kind assurance of support from Wm. Fielden, Esq., M.P. From the increasing interest which is now beginning to be felt by all classes on those subjects for the cultivation of which your Society has been formed, the Council feel confident that its existence will be neither useless nor ephemeral; but that, as the only scientific society in Blackburn, it is calculated to improve that taste for the higher pursuits which is so characteristic of the present age; and that this infant society is destined to extend its influence far beyond the circumscribed limits which as yet confine it."

Warrington Phrenological Society.—Third Annual Report of the Council, for Session 1839-40.—"In reviewing the history of the Society during the two previous years of its existence, your Council have reported a marked and steady progression, nor have we a less promising aspect at present; for not only is there an increasing interest within the pale of the Society itself, but, through the exertions of its members, a growing popularity of the science in the town and neighbourhood generally. During the past year the meetings have been well attended, and the following subjects have been produced for your consideration:—Hereditary trans-

mission of qualities (Essay); Mr S. H. Broadhurst.—Character and development of cast, No. 35 (a Swiss).—Structure of the skull in reference to phrenology (Essay); Mr Lane, surgeon.—Position and functions of the organ of Wonder.—Character and development of Dr R. (Essay); Mr Peter Rylands.—Character and development of Bellingham and Buchanan.—Anatomy of the brain in connection with phrenology (Essay); Mr Grierson.—Character and development of "J. G." (Edinburgh Phrenological Transactions.) The evident interest excited during the past session by the examination of the characters and developments of remarkable individuals, whose busts are in the society's museum, has been such, that the Council would strongly advise its continuance, and would urge upon the members, in connection with it, the immediate commencement of a *catalogue raisonné*. Since the last report, the Council have to acknowledge donations from Messrs Bally and T. M. Forrest of Manchester, and Messrs T. G. R. Rylands, S. M. Webster, and W. Simcock, amounting to seventeen specimens. A purchase of casts has also been made from Mr Bally. Among these additions to the museum, the Council would particularly call the attention of the members to the following:—The casts of Napoleon, Roscoe, Lacenaire, Rammohun Roy, Gottfried, and Eustache; together with several skulls of the aborigines of more or less civilized countries, which render the collection sufficiently perfect in that department, to warrant your early attention to the subject of *National Phrenology*. The formation of the British Phrenological Association will, there is little doubt, aid greatly the progress of the science in this kingdom, andthe Council have great pleasure in stating that a very fair proportion of the members of your society have their names recorded as Fellows. The treasurer's accounts up to this date shew a balance in favour of the society of L.2: 1: 0½d. The number of subscribers is at present twenty-five, and the museum now contains upwards of 200 specimens. The number of visitors has increased considerably during the last year.

Society's Room, Bank Street, December 9th, 1840. Signed on behalf of the council, JOHN MOLYNEUX, *President.*

Aberdeen Phrenological Society.—This society continues to meet regularly on alternate Tuesdays, during the six winter-months. Papers on the following subjects have been read and discussed during the current session:—On the influence of the feelings over the intellect, by Mr Stirling. On the means of extending phrenological knowledge, by Mr Linton. On criminal jurisprudence in relation to mental organization and social responsibility, by Mr Easdaile. On artificially deformed crania, by Dr Gregory. On objections to phrenology on the ground of human responsibility, by Dr Gregory. On materialism as an objection to phrenology, by Dr Gregory. On the physical, moral, and intellectual training of the pauper children in Aberdeen, by Mr Straton.—On the intermediate Tuesday evenings the secretary delivered a short course of lectures on the elementary principles of phrenology, to the junior members of the society and such of their friends as they chose to introduce. At the annual general meeting the following gentlemen were elected office-bearers for the ensuing year:—George Combe, Esq., Honorary President; George Melvin, Esq., and Professor Gregory, King's College, Presidents; Mr James Straton, Secretary; Mr Alexander Keith, Treasurer; Mr Thomas Kirby, Librarian; Messrs Stirling, Linton, M'Lean, Robson, and Waddell, Members of Committee.

Wolverhampton.—"The second meeting of the Literary and Philosophical Society for the present session was held in the Society's room, in Queen Street, on Tuesday last, when a paper was read by Mr W. R. Lowe, 'On Memory.' Upon a former occasion a very able paper had been read to the society, comparing the doctrines of the metaphysicians and the phrenologists: great stress was then laid upon the fact, that phrenologists had not given to any organ the faculty of memory. The paper of this evening was evidently intended to defend the views of the phrenologists upon this subject. After an elegant rhapsody on the pleasures of memory, Mr Lowe proceeded to examine what memory was; first he canvassed the opinions of the metaphysicians, taking Reid, Dugald Stewart, Watts, and Locke, none of whom seem to have clearly defined what was an original faculty, and in the instance of memory dwelt rather upon the mode of action than upon the faculty itself. As no definition of what was an original faculty was to be found in the writings of the metaphysicians, the several tests of Spurzheim were taken and applied to memory, for the purpose of shewing it was not an original faculty. Some phenomena of memory were then examined with a view to the same end, particularly partial memory, and where a person remembered one class of ideas but not others. Many instances were given, and it was argued that if memory was an original faculty, being diseased, it should be diseased for all purposes. No case of madness, it was stated, had ever occurred from morbid action of the memory. After arguing, from these and other points, that memory was not an ori-

ginal faculty, and going at some length into the negative proposition of what memory was not, Mr Lowe proceeded to quote writers on phrenology to prove what it was: they define memory to be a mode of action of the perceptive and reflective powers. An examination of the phenomena of memory was then taken to prove this proposition, such as defective memory where particular organs had been defective, partial loss of memory where particular organs had been injured, and the like. Mr Lowe next proceeded to consider Hewett Watson's classification of the different qualities of memory, and concluded an able paper by claiming for phrenologists the real philosophical explanation of the phenomena of memory.

"The paper led to an interesting discussion upon the relative merits of the doctrines of the metaphysicians and the phrenologists. The meeting was very numerously attended."—*Wolverhampton Chronicle, Nov.* 18. 1840.

Hereford.—At the third soirée of the Herefordshire Literary, Philosophical, and Antiquarian Society, held on the evening of Tuesday the 5th of January—the very Rev. the Dean of Hereford, President of the Society, in the chair,—a highly instructive lecture on phrenology was delivered by Dr Symonds Rootes, who, as we find from a copious report of the lecture in the *Hereford Times*, shewed himself excellently qualified by talent and information to do justice to his theme. After giving a general description of the brain, he stated and illustrated at considerable length the following principles:—"*First*, that the brain is the organ of the mind, and is concerned in every mental operation, whether of emotion or intellect; *secondly*, that it is not a single organ, and does not act as a unit, but is composed of a congeries or assemblage of many organs, each serving for the manifestation of a particular faculty of the mind; *thirdly*, that the size of an organ is, *cæteris paribus*, a measure of strength—in other words, that intensity of action in any one faculty is in direct proportion to the size of the organ; and, *fourthly*, it followed, these premises being admitted, that, the size of an organ being known, we have a direct clue to the discovery of its functions." He then obviated the objections to phrenology grounded on the varying thickness of the skull and the existence of the frontal sinus; and, continues the report, "in allusion to the practical application which might be made of these principles, he should only mention the fact of their importance being admitted by almost all of the most eminent of those physicians who have devoted themselves to the study of insanity, in the discrimination of that disease, and in the classification and treatment of the insane. Their utility and application to the subjects of education, legislation, and the treatment of criminals, it is almost impossible to over-estimate. He had not alluded to the objection urged against the study of these principles, on the score of their tendency to promote the spread of materialism, fatalism, &c. All he would say on this point was, that if they be true, then God is their author, and it requires something more than mere assertion to prove that he has connected with any one truth consequences necessarily hurtful to his creatures. If they be false, their consequences may and must be bad; but the way to get rid of them is to prove them false, when they will both fall alike into one common grave, and give trouble to no one. To him they seemed to leave these subjects where they found them, and to plant religion on the imperishable basis of adaptation to the constitution which God has given to the mind of man.—Dr Rootes, at the conclusion of his able discourse, was warmly applauded by the audience." The soirée "was most numerously and respectably attended by a fashionable assemblage of ladies and gentlemen, who appeared to take much interest in the proceedings of the evening."

Lectures on Phrenology.—The following courses of lectures have lately been delivered.

1. Twelve lectures at the Literary Institution, *Bath*, by Mr Jonathan Barber, concluding on 25th January. A letter of that date in the *Bath Herald*, written, as the editor mentions, by "a correspondent known to us as eminently scientific," laments that, owing to the severity of the weather and other causes, the audience had not been proportionate to the merits of the lecturer, though it continually increased till the end of the course; and announces a repetition of the lectures in the event of a sufficient number entering their names as auditors. "As this condition," adds the writer, "will certainly be fulfilled, an opportunity will be again afforded for hearing this most interesting and important of human sciences explained and illustrated by one of the most able and eloquent of its expositors. These terms are not lightly used; for such is the distinctness of demonstration, the force of argument, beauty of illustration, and eloquence of delivery, exhibited in these lectures, that the strongest expressions could alone characterize them. The concluding lecture this day occupied two hours; and so deeply interesting was it throughout, that, notwithstanding the mental strain of such long continued attention, a moment of weariness was not experienced by a single individual who heard it. All

who have heard Mr Barber will bear willing testimony to the truth of this representation. To those who have not, it would be impossible to convey any conception of the loss which they have sustained. Happily they may yet repair this loss." We are glad to learn that a sufficient number of heare. s subsequently came forward, and that a second course is now in progress.

2. Three lectures at the Mechanics' Institution, *Bridlington*, by Mr E. T. Craig, in November. At the close of the third lecture, as we learn from the *York Courant* of the 19th of that month, "a vote of thanks was proposed to the lecturer, by the Rev. Robert Harness, for the very great interest he had created by his lectures, and the talent he had evinced throughout the course. Mr J. F. Lamplugh, in seconding the resolution, said, as Mr Craig's lectures had excited so much interest, he begged to suggest, that the lecturer be requested to extend the course. The audience responded to that wish, and we believe that a second course will shortly be announced. No lectures at this institution have excited more interest and afforded more satisfaction, than these on phrenology and education by Mr Craig."

3. Two lectures at the Music-Room, Regent Street, *Cheltenham*, by Richard Beamish, Esq., C.E., F.R.S., on 17th and 19th December. Their subjects were "some of the valuable applications of the science of phrenology, and more particularly criminal legislation and education." We have perused with pleasure a pretty full report of them which appeared in the *Cheltenham Journal*.

4. A third course at *Exeter*, by Mr W. J. Vernon, in January. This was well attended, and has been followed by the formation of a Phrenological Society, of which Mr H. U. Janson is president, and Mr Hancock, solicitor, High Street, secretary. We have received a printed copy of the rules.

5. Nine lectures at the Anderston Popular Institution, *Glasgow*, by Dr William Weir, on alternate Monday evenings, commencing 9th November. The attendance was above a hundred, chiefly mechanics, and including about a dozen females. This course was conjoined with the following: Introductory lecture, by the Rev. Dr Mitchell; two lectures, on the advantages of scientific pursuits, &c., by the Rev. Mr Robson; two, on the natural history of man, by Mr Robb, surgeon; one, on the medical topography of Anderston, by Mr A. Jackson, surgeon; one, on Jewish customs and manners, by the Rev. Mr Struthers; two, on optics, by the Rev. Mr Robson; one, on the spontaneous combustion of the human body, by Dr John Jackson; two, on the physiology of vision, by Dr John A. Easton; two, on education, by Dr Hunter; one, on somnambulism, by Mr Wm. Hannah, surgeon; and one, on the genius and character of Burns, by Mr R. B. Hardy. Terms of admission: to the whole lectures, 4s.; to the course on phrenology alone, 2s. 6d.; to a single lecture, 6d.; including the use of the library, in the first case for a year, and in the second for six months.

6. Ten lectures at the Portland Street School of Medicine, *Glasgow*, by Dr Wm. Macdonald, M.A., lecturer on the institutes of medicine in that school. Of this course, which commenced on 8th February, we have received no account. The announcement is somewhat bizarre, and is headed by the proposition, that "Phrenology is now reconcilable with mental philosophy, in consequence of the discovery of the origin, nature, qualities, and seat of the human memory."

7. Courses of lectures, by Mr D. G. Goyder, since September last, at the Phrenological Society's Hall, *Glasgow*, to ninety-six ladies and gentlemen; at Rev. Mr Campbell's church, *Strathaven*, to fifty-six persons, chiefly operatives; at the Baptist Chapel, *Ayr*, to seventy-six persons, chiefly operatives; at the *Greenock* Mechanics' Institution, to two hundred persons; at *Vale of Leven* Mechanics' Institution, to one hundred and twenty persons; at the Calton Mechanics' Institution, *Glasgow*, to ninety persons; at *Paisley*, to forty persons; at the *Manchester* Athenæum, to one hundred and eighty ladies and gentlemen; and at the New Jerusalem Church, *Alloa*, to an audience of which we have not learned the precise number. These courses have been very well received.

8. Twelve lectures, at the Mechanics' Institution, *Liverpool*, by Mr W. B. Hodgson, in January, February, and March. They are thus noticed in the *Liverpool Albion* of 8th March:—"Mr W. B. Hodgson, the able secretary of this institution, has just concluded a course of twelve lectures on the subject of phrenology. Without entering into particulars, we may just say that in the first eight lectures he went over all the organs, exhibiting the appearances they present and the functions they perform, by means of a very extensive and complete collection of busts and drawings. In this department of the course he kept close to he recognised doctrines of the science, but so aptly was every point illustrated and confirmed by anecdote, reference to history, and allusions to the experience of daily life, that he succeeded in imparting to the subject an air of novelty even in the eyes of such as were not unacquainted with phrenology before, and to those who were only commencing the study he must have proved not only attractive, but also, we should think, convincing. In the last four lectures, Mr Hodgson proceeded with the ap-

plications of the science to mental philosophy—the analysis and discrimination of character—insanity and criminal legislation—female character and education. He concluded by giving a phrenological view of virtue and happiness; and in treating of this subject he became truly *pathetic*, and proved, more clearly than we had ever heard before, that virtue and happiness are but two different names for the same thing—that thing being the equable and just development of every power, principle, and faculty of the mind. The whole course has been characterized by clearness and acuteness of intellect; the latter part by originality and genius: and we cannot doubt, that, while he has established his own character as a first-rate lecturer, he has given phrenology an impulse which will be both lasting and beneficial. The lectures have been popular without being superficial, and philosophical without being abstruse; and, accordingly, they have been the best attended of any course delivered in the institution, at least, during the last eighteen months; and to those who know that the platform has been occupied by some of the ablest men of the country during that period, this fact will be proof enough, not only of the talent of the lecturer, but of the interest that is felt in the science of which he is a distinguished teacher."

9. A course at the Mechanics' Institute, *New Malton*, by Mr E. T. Craig, in December, to a pretty numerous audience.

10. Two lectures at *Nottingham*, by Mr James K. Dow, on 15th and 24th February; in which, at the request of the Committee of the Juvenile Mechanics' Exhibition, he described and commented on the cerebral developments and characters of persons of whose heads casts were there exhibited. The heads discussed were those of Greenacre, Burk, Hare, Eustache, Gottfried, Canova, Sir E. Parry, Joseph Hume, Courvoisier, Rev. Mr M., Pitt, Franklin, Burke, &c. These lectures are reported in the *Nottingham Mercury* of 19th February and 5th March, and must have been highly instructive to the crowded and attentive audiences that listened to them. At the close, Mr Dow announced that he would gladly assist any student of phrenology, as well as shew his large collection of casts to any who might choose to call; an announcement which was received with warm marks of approbation. "It is obvious," says the *Mercury*, "this science is meeting with many supporters in Nottingham."

11. One lecture at *Prescot*, by Mr W. B. Hodgson, on 26th December. The audience was respectable, though not numerous. At the conclusion of the lecture Mr H. presented copies of Combe's Moral Philosophy, and Simpson's Philosophy of Education, to the library of the Prescot Mechanics' Institution, at the request of whose Directors the lecture was gratuitously delivered.

12. A lecture by Mr C. Donovan at the Mechanics' Institution, *Richmond*, Surrey, on 9th December; and one by him at the Literary and Scientific Institution of the same town on 9th February.

13. A lecture at the Mechanics' Institution, *Southampton*, by Mr J. R. Stebbing, on 27th January. "The lecturer," says the *Hampshire Advertiser* of 30th January, "throughout received the most marked attention from a crowded and highly respectable audience, whose large attendance appeared to shew that the subject had not lost its former interest with them, and whose applause at the conclusion testified the satisfaction they received from the able and lucid manner in which the subject was treated."

14. A course at *Torquay*, by Mr W. J. Vernon, in February and March. On 25th February Mr V. writes: "I am now delivering a course of lectures here; the two first have been numerously and fashionably attended, and much interest is beginning to be excited. Several of the medical gentlemen here, with their friends, have formed a class for studying the subject during my stay."

15. A lecture at the Mechanics' Institute, *Westminster*, by Mr C. Donovan, on 18th February. A well-informed correspondent who heard this lecture has sent us a very unfavourable account of it, which, however, we have neither room nor inclination to publish. Mr D. lectured also at the Brentford Mechanics' Institution on 23d March, and at the Marylebone Literary and Scientific Institution on the 29th.

16. Four lectures at the *York* Institute of Popular Science and Literature, by Mr E. T. Craig, on 12th, 14th, 19th, and 21st January. At a monthly meeting of the members of the Institute on the 26th, a previously announced conversation on phrenology took place. It is thus noticed in the *Yorkshireman* of 30th January: "Mr William Tomlinson opened the discussion with a calm, temperate, and strongly argumentative speech against phrenology. Mr Craig (whose lectures on phrenology had recently excited such great interest, and had caused the present discussion), replied in a masterly and spirited address. Mr Newmarch defended Mr W. Tomlinson's view of the subject, and Mr Husband ably supported Mr Craig; but our limits will not allow us to give even a brief summary of the several talented addresses of the different speakers."

17. A lecture at the Mechanics' Institute, *South Shields*, on 23d February, by Mr W. J. Dodd of Monkwearmouth, "On the Form and Functions of the Human Brain, with a popular View of the Leading Doctrines of Phrenology."

18. A lecture at the Literary and Scientific Institution, *Kingston*, Surrey, by Mr F. Gould, on 19th March.

19. A private lecture at *Prague*, by R. R. Noel, Esq. on 28th February, in the palace of Count Thun. The audience exceeded sixty persons, most of them learned men and distinguished physicians. Scarcely a medical man in the town was absent. The lecture is favourably noticed in a Prague journal, which has been obligingly sent to us.

Discussions on Phrenology.—In November and December, the question, "Is Phrenology entitled to special attention on account of its practical utility?" was debated by the members of the Literary, Scientific, and Commercial Institution, Liverpool, and, after a protracted discussion, in which, with a few exceptions, the speakers on both sides shewed a plentiful lack of knowledge of the subject, was decided in the negative by five-eighths of the members present. One gentleman expressed his fear that should phrenology be generally received in this country, "we might write on the tombstone of Religion, 'Oh, England, England! thy glory is departed!'" The ideas, and even the language, of Lord Jeffrey's article in the 88th number of the Edinburgh Review were abundantly serviceable to the opponents on this occasion; the measurements of Mr Stone being another of their strongholds. The effect of their arguments was, however, not always that intended; for we have heard that at least one gentleman, previously inclined to reject phrenology, was convinced of the truth of some of its principles by a hostile speech.

A discussion, chiefly on the organology, lately took place at the Medical Society of the London University, and after some adjournments terminated on 26th February. At the third meeting, Mr C. Donovan, who was present as a visitor, was requested, and undertook, to examine, and report on the mental qualities indicated by, the heads of three members, to be chosen by him from six who should be selected by a committee of the Society. A fortnight afterwards, each of these three gentlemen gave in a sealed paper, containing a statement of his dispositions and talents to the best of his own knowledge, and Mr Donovan at the same time produced three phrenological inferences. When read to the meeting, the agreement, we are told, was so remarkable, and the discrepancies so few and unimportant, that the leader of the antiphrenologists in the Society rose up and avowed a change of his views in consequence of the discussion and the inferences from the heads. At the meeting on 26th February, however, the antiphrenological party renewed the attack, and took exceptions to the accuracy of some of the inferences; adding the groundless charge that Gall and Spurzheim always avoided bringing their doctrines before medical bodies, and sought to convert only the non-medical public, who were far less able to detect fallacy. Mr Donovan, in reply, questioned the competency of those who objected to his inferences to form a correct opinion on any phrenological topic, and denied their disinterestedness as judges of the correspondence between his statements and the mental qualities of the gentlemen whose heads were examined. We do not see, however, that ignorance of phrenology is a material disqualification for judging of the accuracy of such inferences. The thanks of the Society were voted to Mr D. "for the kind manner in which he consented to examine the phrenological developments of three members of the Society, in order to test the merits of the science of phrenology."

At the Louth Mechanics' Institution, phrenology was discussed some months ago; on which occasion Mr E. T. Craig was among its defenders. From a report in the *Lincoln Gazette*, the opponents seem to have employed more wit than enlightened argument. The same newspaper announces that Mr Craig had recently given two courses of lectures at Grantham, and one at Louth, and that he was about to deliver three lectures in the Mechanics' Institution at Market Rasen.

At a public meeting of the members of the Aborigines Protection Society, held in the Egyptian Hall, London, on 2d December, "the conversation during part of the evening took a phrenological turn; and the question whether these savage tribes were, from their alleged inferiority of organization, capable of much improvement, was entertained by Dr Madden, Dr Costello, Mr Donovan, and other gentlemen." (*Morning Chronicle*, Dec. 2.)

Novel Lawsuit.—A most singular cause is about to be tried before one of the French law courts. When the celebrated Pinel died in 1826, his pupils MM. Esquirol, Alibert, Recamier, Rostan, &c., thought it right to examine his body, and M. Esquirol prepared the defunct professor's skull with the greatest care, and preserved it as a *souvenir* of his master. But on the death of M. Esquirol, M. Scipio Pinel comes forward, and is about to institute a lawsuit for the recovery of his father's skull, asserting that he is legally entitled to it.—*Provincial Medical and*

Surgical Journal.—[Would not a public museum be a better destination for such a relic?]

Mr G. Combe will leave his present residence at Gorgie Cottage, near Edinburgh, in the beginning of May for Germany, where he will remain for some time. We are requested to mention, that no letters addressed to him in Scotland after 1st May will reach him.

With reference to an announcement in our last number, that a new edition of Dr A. Combe's work on Mental Derangement was in preparation by Dr Browne of the Crichton Institution, Dumfries, we regret to say that he has found the calls of imperative duties upon his time so heavy as to compel him to abandon his intention.

Twenty-four copies of the second edition of Dr Boardman's report of George Combe's Lectures on Phrenology in America are on sale by Messrs Simpkin, Marshall & Co. Price 6s. boards.

Ten copies of George Combe's Address on the Anniversary of Dr Spurzheim's Birthday, delivered before the Phrenological Society at Boston, U. S. on 31st December 1839, are on sale by Messrs Simpkin, Marshall & Co. Price 1s. 6d.

Corrigendum.—The sentence at the top of p. 146 in this Number, commencing "It would be difficult," should go before the preceding portion of the paragraph.

Books received.—The Edinburgh Monthly Journal of Medical Science, January, February, and March 1841.—The British and Foreign Medical Review, January 1841.—The Medico-Chirurgical Review, January 1841.—The Edinburgh Medical and Surgical Journal, January 1841.—Proceedings at the Annual Distribution of Prizes to the Pupils attending the Glasgow High School, September 1840.—Catalogue of Skulls of Man and the Inferior Animals in the collection of Samuel George Morton, M.D., &c. Philadelphia, 1840. 8vo.—Society Organized: an Allegory. By William Augustus Gordon Hake, Esq. London: Sherwood & Co. 1840. 18mo.—On the Study of Natural History, as a Branch of General Education. By Robert Patterson. Belfast: Phillips & Co. 8vo.—Annual Report of the Directors of the Glasgow Royal Lunatic Asylum, for 1841.—The American Phrenological Journal, Nos. for October, November, and December 1840.—Report of the Director of the Wakefield Lunatic Asylum, 31st December 1840.—Mehemet Ali, Lord Palmerston, Russia, and France. By William Cargill, Esq. London: John Reid & Co., 1840. 8vo. pp. 96.—Address of William Cargill, Esq. to the South Shields Chamber of Commerce, May 4. 1840, on the Foreign Policy of England. London, 1840. 8vo, pp. 31.—An Examination of the Origin, Progress, and Tendency of the Commercial and Political Confederation against England and France, called "The Prussian League." By William Cargill. Newcastle, 1840. 8vo, pp. 50.—The Austrian Treaty analyzed, and its baneful tendency exposed. By William Cargill, Esq. London: John Reid & Co., 1841. 8vo, pp. 48.

Newspapers received.—Dumfriesshire Herald, Dec. 10. 1840.—Cork Southern Reporter, Dec. 12.—Sheffield Independent, Jan. 9.—Exeter Gazette, Jan. 16.—Hereford Times, Jan. 16.—Sunday Times, Jan. 17.—Liverpool Albion, Jan. 18.—Bell's Life in London, Jan. 24.—The Gardener's Gazette, Jan. 30.—The Yorkshireman, Jan. 30.—Hampshire Advertiser, Jan. 30.—Bath Herald, Jan. 30. and Feb. 13.—Midland Counties Herald, Feb. 11.—Nottingham Mercury, Feb. 19, and March 5.—Western Luminary, March 9.

Several articles intended for this number are unavoidably deferred. We shall make a point of inserting in our next a variety of notices of books, and short communications and extracts, which ought to have appeared now. The first set of engravings of heads by Mr Beamish will be given at the same time, his professional and other engagements not having allowed him yet to finish them.

Communications for the Editor (prepaid) may be addressed to "Mr Robert Cox, Edinburgh." Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall and Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor six weeks before the day of publication. Communications for the section of "INTELLIGENCE," and also advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent either to the Editor or to the publishers in Edinburgh or London.

1*st April* 1841.

THE

PHRENOLOGICAL JOURNAL.

No. LXVIII.

NEW SERIES.—No. XV.

I. MISCELLANEOUS PAPERS.

I. *Thoughts on the Reasonableness of Phrenology, and its Claim to the Attention of Scientific Men.* By BENJAMIN SILLIMAN, M. D., LL. D., Professor of Chemistry, &c., in Yale College, New Haven, Connecticut.*

I HAVE no claim to be called a phrenologist, for I have not studied the subject sufficiently to form an opinion of the science *as a whole*, and it is not probable that my engagements will ever permit me to give it a thorough investigation. All I know of it is derived from the courses of lectures which I have heard, and of which this is the fourth; from observation of such facts as have come in my way; from credible attestations of its practical applications published in various works, and from personal communications with some of its cultivators.

* A course of lectures on Phrenology was delivered by Mr Combe at New Haven, in the spring of 1840, and at the conclusion, certain complimentary resolutions were passed by the audience. These were moved by Governor Edwards, and seconded by Professor Silliman, who has published an expanded report of his observations in support of them in the American Journal of Science and Arts, vol. xxxix. p. 67, a work of which he is universally known as the able and learned editor. With the exception of a few preliminary paragraphs, giving some account of the lectures of the late Dr Barclay of Edinburgh on the skulls of men and animals, for which we cannot afford room, Dr Silliman's observations are here reprinted entire. The above title is prefixed by ourselves. The Professor says in a note,—"It is proper to observe, that these remarks were uttered *on the excitement of the moment*, without reference to any other object than the carrying of the resolutions. But a wish having been expressed in various quarters, that an account of the whole proceedings might appear before the public, this report was first prepared with reference to the newspapers; it was thought, however, to be too much extended for that channel of communication, and that justice to Mr Combe demanded a more permanent form of publication, especially as his European friends might be gratified by adding this to the proofs already given in other places of his very favourable reception in this country. It may be perceived by those who heard the substance of the following remarks, that they are now carried out more fully than in the delivery, as the time was then limited."—EDITOR.

Among these. our late respected lecturer is. after Dr Spurzheim. the most distinguished whom it has been my good fortune to know; for that eminent man. soon after his arrival in this country in 1832. spent many hours in my family. on which occasions. however (such was his modesty), he never of his own accord introduced phrenology into conversation, and spoke of it only when invited; then. indeed. he was frank respecting it, as he was always instructive on every subject; for his great knowledge. rendered attractive by his perspicuity, simplicity, and benevolence, was sure to delight his hearers.

It certainly does not become one who has not made phrenology a particular study to say much of his own impressions, nor to claim for them great consideration. Without presuming to dictate, I beg leave, however, to inquire for a few moments, whether there is anything in its claims and pursuits which is absurd, unphilosophical, or of irreligious tendency?

We have, each for ourselves, no better means of judging, than by the effects which the evidence and the discussions produce on our own minds; nor can we understand why some persons of great intelligence and worth treat phrenology as if it were, on its very front, ridiculous and absurd, and therefore to be dismissed with contempt and ridicule as the dream of an enthusiast, or to be spurned as the invention of an impostor; while some disciplined minds regard the investigation as unphilosophical, and still greater numbers shrink from it with dread, as tending to impair moral responsibility, or to bind us in the fatal folds of materialism.

It appears to me that phrenology involves no absurdity, nor any antecedent improbability. The very word means the science or knowledge of the mind, which all admit to be a pursuit of the highest dignity and importance, both for this life and the life to come; and the appropriate inquiry of the phrenologist is, whether the mind, with its peculiar powers, affections, and propensities, is manifested by particular organs corresponding with the conformation of the cranium, that defensive armour by which the brain is protected from external injury?

In what way [illegible] is the mind manifested by any visible appearance?

A [illegible] divine. [illegible] the mind [illegible] by [illegible] will [illegible] stand [illegible] by

the form and movements of the muscles of the face, and especially by the effulgence of the eye.

But whence comes the intellectual and moral light that beams forth from the eye and from the features?

Surely not from the eye itself, although it is the most perfect and beautiful of optical instruments; not from the fibres of the facial muscles; not from the bony skeleton of the face; not from the air-cells and bloodvessels of the lungs; still less from the viscera and limbs: and with equal certainty not from the cavities, the valves, and the strong muscular fabric of the heart itself, which is only the grand hydraulic organ for receiving and propelling the blood, in its double circulation, both through the entire body to recruit its waste, and through the lungs, to receive the beneficent influence of the oxygen of the air, without which, in its next circulation through the body, the altered blood would prove a poison.

Most persons are startled when told that the physical heart has nothing to do with our mental or moral manifestations. What! does not its quick pulsation, its tumultuous and irregular throb, when fear, or love, or joy, or anger animates our faculties—does not this bounding movement, shooting a thrill through the bosom, nor the attendant blush, or death-like paleness of the features, prove that the heart is a mental or moral organ? Certainly not: these phenomena only evince that, by means of our nerves, the divine principle within electrifies, as it were, our muscles, and thus accelerates or retards the current of the blood through the arteries, as well as the movement of the muscles themselves, and especially of the heart, which, in relation to the circulation of the blood, is the most important of them all. The physical heart is no more to the mind and the affections, than the hose of a fire-engine is to the intelligence that works the machine, whose successive strokes impel the hurrying fluid along, in a manner not unlike that which attends the circulation of the blood in the arteries.

Where, then, shall we look for the seat of the mind? We are seriously assured that some persons have believed the stomach to be the favoured region. The stomach, with its various coats, its innumerable nerves and bloodvessels, its muscular tissues, and its gastric secretions, is a mere cavity for the reception of aliment; it is alternately distended with food and fluids, or partially collapsed by inanition, and although exquisitely sensible, by its nervous apparatus, both to external and internal injury, all that belongs to it is obviously required for the discharge of its appropriate functions in the reception and and digestion of aliment; no office by it performed, no sensation there experienced, indicates it to be anything else than

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In what part of our frames is the mind manifested by any visible appearance?

All will answer, in the features, in the human face divine, through whose beautiful and impressive lineaments the mind shines forth, as through windows placed there on purpose by the Creator. In this all are agreed; we read there, in language which is often quite intelligible, the decisions of the will and the judgment, and the fluctuations of the affections. Even the inferior animals both manifest to us, and understand from us, this visible language, figured and shadowed forth by

the form and movements of the muscles of the face, and especially by the effulgence of the eye.

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an organ, indispensable indeed to the physical support and nourishment of the body, but in no degree the residence of the mind.

On this position we cannot consent to argue further, and if there be any persons who seriously believe that the mind and affections reside in the stomach, we can only say, that in this case we have no perceptions in common, and that the proof which convinces us would probably be lost upon them.

We are, then, at last, compelled to return to the head, from which intellectual citadel we should never for a moment have departed, did not some individuals affirm, that they are not sure where their minds reside.

Such a doubt fills me with amazement, for I am as distinctly conscious that my mental operations are in my head, as I am of my existence, or that my eyes present to me the images of external things; nay more, I am equally certain that no merely intellectual or moral operation has its seat below the bottom of the orbital cavities; that all the wonderful and beautiful structure beneath the base of the brain quite to the soles of the feet, is composed merely of corporeal members, of ministering servants that obey the will and execute the mandates of the heavenly principle, the representative of the Creator, residing within the beautiful dome that crowns our frames, and which, like the lofty rotunda of a holy and magnificent temple, covers the inhabitant beneath, while it looks upward to heaven, with aspirations towards its divine author and architect.

Are we then expected seriously to assert that which appears self-evident, that the seat of our mental operations, and of our affections and propensities, is in the brain? My consciousness informs me so, and this is the highest possible evidence to me, although *my* consciousness cannot be evidence to another person. Were it possible for life to exist with the body detached from the head, the latter, perhaps, might be even capable of thinking for a short time, without the appendage of trunk and limbs. Indeed, we are sure that dislocation of the neck, while it has paralyzed and rendered insensible all the parts below, so that the individual ceases to be conscious that he possesses a body, has often left the mind in full operation. Provided the luxation or other severe injury has taken place below the vertebræ from which proceed the nerves that supply the lungs, the sufferer continues to breathe and to converse, manifesting a rational mind as before the accident. Death must of course soon follow, and as to perception, the body is already dead; but the continued activity and soundness of the mind prove that its residence is in the brain. This fact appears to me decisive, as no one would imagine that the lungs, a mere light

tissue of air-cells and bloodvessels, separated by thin membranes, and destined only for circulation and respiration, can contain the mind—especially as this noble power is not subverted in chronic diseases of the lungs, not even when their substance is almost removed by a wasting consumption.*

The residence of the mind being in the brain, it is not absurd or irrational to inquire whether it can be read in the form of the cranium, as well as in the expression of the features.

It would appear from the observations of Dr Barclay, that there is at least a general conformation that indicates intellectual and moral powers; and we are thus led to ask, whether the research for more particular manifestations is unphilosophical? On this point, we ought not to depart from the received rules of sound philosophy. We are accustomed, in all other cases of scientific inquiry, to examine and weigh the evidence of phenomena, and to apply to them the severe canons of induction; nor can we discern, in the present case, any reason for a different course.

If, as has been ascertained by physiologists and anatomists, the bony matter of the cranium is deposited upon and around the membranous envelopes of the brain, which is formed before the skull, then the latter, adapting itself in its soft and yielding state, must, of necessity, take the shape of the former; if the different faculties, affections, and propensities of the mind are distributed in different organs contained in the convolutions of the brain, and if the energy of the faculties is in proportion to the size and development of the organs, then the external form and size of the cranium will indicate the powers and affections within, due allowance being made for the varying depth of the frontal sinus, and for some other peculiarities of idiosyncrasy or of disease, affecting the thickness and development of the bone in different individuals.

This, then, is the vexed question—is there such a correspondence—are the views of phrenologists sustained by facts, and do the prevailing powers, affections, and propensities of indivi-

* Dropsy in the brain does not form an objection, because its appropriate seat is in the ventricles or cavities, and by the very postulates of phrenology, a particular organ, or particular organs, of the brain may be diseased, or even destroyed, without subverting the action of the mind, except in the part affected.

The case of Sir Robert Liston, mentioned by Mr Combe, is very remarkable on this point, as his intellectual powers remained unimpaired, while the organs of Wonder, Combativeness, and Language were affected on one side. I had the pleasure of knowing him at his beautiful cottage near Edinburgh, when all his faculties were perfect, and nothing was at that time more removed from his conduct and character than the frantic anger which he afterwards manifested in a state of the brain, ascertained by post-mortem examination to be diseased in the three animal organs.

duals correspond with the cranial developments, modified by the temperaments, by health and other circumstances? It is obvious that these questions can be answered only by persons of large observation, of great mental acumen and extensive and accurate knowledge of the structure, physiology, and history of man. The investigation includes, in the widest sense, all that belongs to him, and therefore few persons are qualified to make such responsible decisions. They have been made, however, in so many instances, with success, as to command confidence and to conciliate favour.

It was seriously proposed to the British government in 1836, and the application was sustained by many professional men of high authority, that the numerous convicts who are annually transported to Australasia and Van Diemen's Land should be examined phrenologically, that the dangerous criminals may be separated from the rest, allotted to a more rigorous supervision, and controlled by military force, both on the passage and in the colonies; that, on landing, they should be stationed at labour under guard, on the roads and other public works, while the milder individuals, being placed out as servants, might become safe and useful inmates in families, or labourers on the farms, and thus there might be a better prospect of their acquiring the confidence of their employers, and of recovering their own self-respect.

In New Holland, this course is very important, as appears particularly from the able report on the exploration of a large portion of that immense country by Major T. L. Mitchell,* who, under the authority of government, and as surveyor-general, made three arduous and perilous tours into the interior of Eastern Australasia, Australia Felix, and New South Wales. The remote situation of the farms and establishments for raising cattle and sheep, renders it particularly important that they should not be exposed to the depredations and plots of abandoned and desperate villains.

It is also obvious, that in prison discipline, those who have only begun in the career of villany should not be exposed to contamination from individuals who are not only great criminals in fact, but constitutionally propense to crime. We certainly know, independently of phrenology, that such propensities and predispositions exist, and it is obviously important to avail ourselves of all possible sources of light on this subject, so important to the community. It becomes, therefore, an inquiry of deep interest, whether, in the power to make these discriminations, we may not repose full confidence in

* His report was published in London in 1838, in two beautiful 8vos, with numerous illustrations by plates and maps; a very valuable work, which we have read with great interest.

such men as Dr Gall, Dr Spurzheim, Mr George Combe, and other individuals of similar experience and ability.

Perhaps we may not be able to follow them in all their detailed divisions of the position of the faculties, affections, and propensities; but after making all reasonable allowance for some possible errors in discrimination, and for some suggestions of the imagination, may we not still rely on their ability to indicate decidedly, the prevailing faculties and the ruling affections and propensities of far the greater number of individuals, in any assembly, either of pupils or convicts, or of people brought together by accident?

In yielding to our convictions on this subject, we should, however, exclude smatterers and pretenders, who, having only a superficial acquaintance with the subject, and perhaps no uncommon acumen in any case, examine heads to flatter self-esteem, and gratify cupidity.

The subject is liable to abuse, and not all who claim to be phrenologists can be deserving of entire confidence; but is not the same true of many other subjects, and especially of surgery? How large a proportion of surgeons should we be willing to employ in passing a knife among the nerves and arteries of our own bodies, or those of our dear friends?

We are persuaded, then, that phrenology has its foundations laid in truth, and that its first principles, as regards the great regions of the head, are established upon the same ground as that which sustains all the physical sciences, namely, induction, indicating the correspondence of the phenomena with the theory.

Those who have not profoundly studied the science cannot judge of the details; it certainly appears very extraordinary that numerous organs should be included within a mass no larger than the brain, and that so many faculties should be found in particular regions, especially in that of observation along the front and lower portion of the brain, contiguous to the eyes and the arches of their orbits. It appears the more strange, inasmuch as dissection does not enable us perfectly to separate the different organs, although the convolutions of the brain are distinct, and may indeed be dissected apart; but there are no visible boundaries between the organs, so that they can be removed, one by one. There is, however, an apparatus by which communication is made to them and through them by the medium of nervous fibres; many groups of these fibres are visible in the brain, pervading different organs, and therefore we may presume that where we cannot see them they may still exist, and perform their office of communicating their appropriate impressions.

Strong analogies favour this view. For example, in addi-

in the tongue nor smell in the nostrils; but sugar placed on the tongue, or a rose at the nostrils, produces the appropriate pleasurable sensation, while pain would be excited at the same instant in each of these organs by the point of a pin or a needle. Here, then, are appropriate nerves of infinite minuteness spread over the organs of sense; other nerves also of common sensation, and in most cases, still others of voluntary motion, while these complicated tissues of nervous network, not only do exist together, but they perform their functions simultaneously, although in perfect independence, and without the smallest degree of confusion. It is admitted by anatomists that a similar delicacy of nervous structure exists in the brain, whose very object is to receive and convey nervous influence; and since we can observe nervous fibres in all parts of the body and also in the brain, until our eyes and our glasses fail to detect such minute ramifications, we have therefore the same evidence for all the minuteness of division among the nerves of the brain which the phrenologist may desire to prove, equally with that which the mere anatomist finds or presumes to exist in all the other organs.

The cases being perfectly parallel, no objection can be urged against the one that does not apply also to the other, and the arguments in support of both are quite in common.

It thus appears that the existence of many organs of the brain, with their appropriate nervous apparatus, is in no way inconsistent with the general analogies of structure in the body.

Other analogies might be found in the lacteals and absorbents, systems of vessels having, again, inconceivable minuteness as well as great extent, and still operating without interference with any of the other systems in the body, while they perform their own appropriate and most important functions. It is then not only possible that there may be different organs in the brain adapted to different manifestations, but there appears a strong antecedent probability in favour of such a structure.

We may now assume that the mind is local to the brain, and that there are no indications of intellectual operations or moral affections in any other parts of the system; and notwithstanding the vague remarks which sometimes fall even from people of understanding, implying that they are uncertain where their minds reside, we must conclude that this indistinctness of conception arises simply from their neglect to think accurately at all on the question, or from a fear that if this first step is admitted, phrenology will claim much more, and demand the admission of all the organs, each with its appropriate location.

Plainly, then, if there be so much locality in the mind that

it resides in the brain, there may be a distribution of faculties still more definite, and different manifestations may belong to different parts of this organ. Let us observe, also, that locality is predicable of every portion of the body. The bones are appropriate to the different members and to the various parts of the trunk and head. The proper muscles are spread over the frame for voluntary or involuntary motion; the mouth receives the food, the teeth masticate it, the saliva, discharged from appropriate local glands, dilutes it, so that it can pass down the œsophagus to the stomach, where it is digested; it is mingled with the bile secreted by the liver and stored in the gall-bladder; the intestines receive it in the state of chyme to be subjected to the action of the lacteals, which are ready with their myriads of mouths to take up the chyle or nutritious portion, which is conveyed, as a milky fluid, through appropriate vessels to the left subclavian vein, by means of which it is poured into the mass of the blood to recruit its waste.

All our senses, except feeling, are local, and most of our organs are double; the eye and the ear, each in pairs, corresponding to the double brain, are placed close to that intellectual organ, and communicate directly with it; they are the most elevated and dignified of the senses, and are worthy of their honourable neighbourhood. The nostrils are also double, while the tongue is single, although composed of two perfectly similar halves. These organs of sense are in the descending scale of honour, and their communications with the brain are less direct than those of the eye and ear; the pleasures we enjoy from them have their seat also in the organs themselves, while those of sight and hearing are in the mind, and the organ itself is not sensible of the pleasure. Thus the pleasures of sight and hearing are almost intellectual. Lastly, the sense of feeling is perceived over all the surfaces; it has no particular locality, but varies in intensity with the number and delicacy of the nerves belonging to this sense in particular parts.

The numerous glands existing in many parts of the body for the secretion of saliva, of mucus, of milk, of bile, and other things, are instances of local organs. The lungs are a very remarkable example of an organ for a specific purpose; and they, like the heart, are required to be in constant action while life continues. We have already cited the arteries and veins which are local in their respective courses, while the blood which passes through them is thus compelled to move in its appointed channels. The nerves also have been named with the same intention, and in many instances they are sent forth in pairs to supply correspondent double portions of the body. It is not necessary to cite other instances of local organs des-

tined for particular, and some of them most important, purposes, as they will occur on the slightest reflection, and it is thus proved that locality is almost universally characteristic of the structure of the body.

It would then be strange indeed if there were no organ devoted to the mind. What organ can be the residence of the mental faculties if the brain is not? Every other has its uses, in general well ascertained; but without mental manifestations there is no use for the brain; for even the nerves that proceed from it would be nugatory without the mind to issue its orders through them to the members, and to receive, in turn, communications from them, and the circulation of the blood through a useless organ would be quite superfluous.

Many persons are alarmed lest phrenology should produce an influence hostile to religion, by favouring materialism. It is supposed that our organization may be pleaded in bar against our moral responsibility, since, if we have strong dispositions to do wrong and no power to do right, we are like machines and not responsible. When there is no intellectual power, as in the case of an idiot, or a subversion of reason, as in the instance of a maniac, it is agreed by all that the individual is not amenable to human laws. This opinion has no reference to phrenology, and is embraced by all mankind.

If we have rightly understood Mr Combe, he holds that the individuals in whose heads the intellectual and moral sentiments predominate are highly responsible; those in whom the three classes of organs are in equilibrio, are considered as still responsible, but entitled to much mercy combined with justice, on account of their strong temptations; while those who are sadly deficient in the moral and intellectual organs, are regarded as moral patients.

From the latter class we slide down insensibly to intellectual idiots, whom all regard as not responsible. Where shall we draw the line? The common sense of mankind is agreed upon the principle, but some difficulty is found in the application to particular cases on account of the infinitely varying degree of intellectual and moral power.

There are also peculiar cases, as those of monomania, which are treated with indulgence, and exempted, to a certain extent, from responsibility, while there are also other cases still, of a doubtful character, which must be judged under their peculiar circumstances, and cannot easily be brought under any general rules. As regards organization, it is obvious that our condition in this world is dependent upon it, and that it influences all our actions and arrangements. Organization is the foundation of human society; upon it depend our dearest re-

tion to the nerves and bloodvessels that may be traced in every part of the body, there are certainly others that exist in inconceivable numbers, and with an infinitesimal minuteness, baffling equally our powers of vision and dissection, and even of conception; for, whatever part of the system we puncture with a needle or other sharp instrument, we both draw blood and excite pain, thus proving that not only bloodvessels, but nerves of vanishing minuteness, pervade the entire structure, and every one of these bloodvessels receives its stores of blood from the circulation that is sustained by the contractions of the heart, faithfully returning the vital fluid again to that organ; in the same manner, the infinitely divided nervous fibres all communicate ultimately with the brain, and thus, when they are wounded, impart the information from the remotest extremities to the grand head-quarters of the mind, and that quicker than an electric movement in our machines, or in the atmosphere, or in the wide external world.

But this is not the ultimate term of infinitesimal minuteness. While every part of the system is thus furnished with nerves of common sensation, so that we suffer by a wound inflicted in any place, and the mind is instantly informed of the injury; there are, in addition to these, nerves of voluntary motion, by means of which those parts of our bodies that are obedient to our will (the voluntary muscles) receive the orders we give them—as in the limbs, to walk, to run, to leap, to skate, or dance; or in the arms to fence or fight, and the members promptly move in accordance; the features, by the action of the voluntary muscles of the face, report our mental or moral movements, or our animal feelings; the eyes roll in their orbits "with a fine frenzy," or shine with intellectual beam; the tongue, the glottis, the muscles of respiration, and all the parts that are concerned in speech or in producing the tones of vocal music, give the voice its utterance, its compass, its various cadence and intonations; the fingers move the pen or sweep the lyre, or strike the keys of the pianoforte or of the organ, or stop and open the apertures of the flute and clarionet. All this, and much more that need not be named, is done in obedience to our will, but with a celerity and precision too great even for thought to frame distinctly the conception, before it is executed.

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in the tongue nor smell in the nostrils; but sugar placed on the tongue, or a rose at the nostrils, produces the appropriate pleasurable sensation, while pain would be excited at the same instant in each of these organs by the point of a pin or a needle. Here, then, are appropriate nerves of infinite minuteness spread over the organs of sense; other nerves also of common sensation, and in most cases, still others of voluntary motion, while these complicated tissues of nervous network, not only do exist together, but they perform their functions simultaneously, although in perfect independence, and without the smallest degree of confusion. It is admitted by anatomists that a similar delicacy of nervous structure exists in the brain, whose very object is to receive and convey nervous influence; and since we can observe nervous fibres in all parts of the body and also in the brain, until our eyes and our glasses fail to detect such minute ramifications, we have therefore the same evidence for all the minuteness of division among the nerves of the brain which the phrenologist may desire to prove, equally with that which the mere anatomist finds or presumes to exist in all the other organs.

The cases being perfectly parallel, no objection can be urged against the one that does not apply also to the other, and the arguments in support of both are quite in common.

It thus appears that the existence of many organs of the brain, with their appropriate nervous apparatus, is in no way inconsistent with the general analogies of structure in the body.

Other analogies might be found in the lacteals and absorbents, systems of vessels having, again, inconceivable minuteness as well as great extent, and still operating without interference with any of the other systems in the body, while they perform their own appropriate and most important functions. It is then not only possible that there may be different organs in the brain adapted to different manifestations, but there appears a strong antecedent probability in favour of such a structure.

We may now assume that the mind is local to the brain, and that there are no indications of intellectual operations or moral affections in any other parts of the system; and notwithstanding the vague remarks which sometimes fall even from people of understanding, implying that they are uncertain where their minds reside, we must conclude that this indistinctness of conception arises simply from their neglect to think accurately at all on the question, or from a fear that if this first step is admitted, phrenology will claim much more, and demand the admission of all the organs, each with its appropriate location.

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lations in life, many of our highest enjoyments, all our intellectual efforts,* and our most exalted virtues; from its abuse, on the contrary, spring some of the most flagitious crimes and most poignant sufferings. Still, no court permits a criminal to plead against his condemnation, the strength of his evil propensities which have led him to the commission of crime. The temptations of cupidity will not excuse the felon from transportation; nor the fierceness of anger or the delusions of inebriety avert the sentence of death from a murderer. Phrenology does not, in the least, alter the case; for, independently of this science or of any other relating to our frames —as, for instance, anatomy and physiology—we are quite sure of the existence of our faculties, our affections, and our propensities, and we know that we are responsible for their proper use and for their abuse. Their manifestation through the brain does not affect our moral responsibility, any more than if they were associated with any other part of our frame, or diffused through the whole of it, without any particular locality.

It is our duty to regulate and control all our powers, affections, and propensities; and nothing but the impotency or subversion of our reason can excuse us from moral responsibility. We will suppose, for instance, that, according to the language of phrenology, a man may have small intellectual powers, little Conscientiousness and Benevolence, and large Acquisitiveness, Destructiveness, and Combativeness. Will he therefore stand excused for theft or murder? Certainly not. It was his duty to obey his conscience, and to resist his animal propensities when they would lead him to evil. Feeble faculties and dispositions may become strong by cultivation and encouragement, and strong propensities may be controlled and subjected by vigilant discipline. We see in life many examples of self-government producing, by the force of a voluntary discipline, fine characters, formed as it may be out of very imperfect or bad materials, while brilliant intellectual powers and elevated moral feelings are, unhappily, too often subdued by the lower propensities,—the animal powers; in these cases, the latter were not governed, and thus the intellect, which should have been the master, became a miserable and ruined slave to the propensities. If the case of the feebler powers and stronger propensities admits of no justification, the opposite case presents no palliation; for, with a strong intellect and a conscience quick to distinguish right from wrong, the propensities ought to be subjected to the most perfect control. Phrenology,

* Since we have no knowledge of a human mind unconnected with a brain.

therefore, stands not in the way of moral and religious influence; but, on the contrary, if the science be true, it indicates in a manner most important, where and how to exert the discipline of self-control as well as the right and power of controlling others. This discovery will, indeed, without phrenology, be made in the progress of the experience of the individual, but it may be at too late a day. Health, conscience, fortune, and honour may have been sacrificed, when, had the point of danger been early made known, and the course of safety seasonably indicated, the peril might have been shunned or averted, and peace and security ensured.

But, the Christian will anxiously inquire, Is our safety then to depend on our own imperfect knowledge and resolution in performing our duty? We answer, that, however ignorant and weak we may be, there can be no doubt that our Creator has placed us here in a state of discipline, and that we are under bonds to him to perform our duty, despite of evil influences from within, and of temptations from without. If, however, phrenology will enable the anxious parent to understand the powers and capacities, with the prevailing affections and propensities, it cannot but influence the destination and pursuits of the child, while it will also indicate the course of discipline and treatment.

But all this will not avail, without superior influence flowing from the Creator himself, through his divine revelation, which is the charter of our hopes, and our supreme moral guide in life. If there be in any instance an unhappy cranial formation, surely it does not diminish, but, on the contrary, it enhances the necessity of a prevailing heavenly influence to illuminate that which is dark, to strengthen the weak faculties, subdue the wild animal propensities, and purify, by a holy efficiency, the moral sentiments and affections.

Religion can therefore do what phrenology cannot alone effect. Phrenology undertakes to accomplish for man, what philosophy performs for the external world; it claims to disclose the real state of things, and to present nature unveiled and in her true features.

As science and art build upon the laws of nature, and borrowing materials from her, proceed to construct all the machines and edifices and various physical furniture of refined civilization; so phrenology, if successful in developing the real powers, affections, and propensities of man, furnishes to revealed religion, in the best possible state, the subject upon which, through the spirit of God, the holiest and happiest influences of piety may be exerted and made effectual.

Phrenology, then, is not a substitute for revealed religion—

it does not present itself as a rival or an enemy, but as an ally or ministering servant. It is obvious that if all which is claimed for it be true, it is capable of exerting a most important influence on the faculties and moral powers of our race, and with experience for its interpreter, it must form the basis of intellectual philosophy.

The development which it makes of the faculties as connected with the organization of the brain, illustrates the wisdom of the Creator in common with the wonderful structure of the rest of the frame; and indeed it has still higher claims to our admiration, inasmuch as the faculties of the mind are more elevated in dignity than those of the inferior members. If it should be objected, that we ought not to attribute to God a structure in which evil propensities are included; we answer that they cease to be evil if they are controlled by the superior powers, and after all, the introduction of moral and physical evil into this world must be referred to the will of God; nor does it at all change the conditions of the problem, whether our moral errors arise from our organization or from external influences, or from both. In either case, we are responsible, because power, either inherent in our constitution, or imparted through the influence of religion, is given to us, sufficient to resist moral evil and to perform our duty. It appears, then, that phrenology is neither an unreasonable, an unphilosophical, nor an immoral or irreligious pursuit.

The connection which it proves between the brain and the mind is founded upon our personal experience and daily observation. There is nothing in the nature of the brain which can enable us to understand how it is made the residence or instrument of the mind, nor can we in the least comprehend in what way the mind will subsist after the death of the body, or in what the intellectual essence consists. We are indeed instructed, from the highest authority (and the thought, with its illustration, is equally beautiful and sublime, in a philosophical as in a moral view), that "the seed which we sow* is not quickened unless it die; that we do not sow the body that shall be, but that God giveth it a body, as it hath pleased him, and to every seed his own body; so also in the resurrection of the dead, it is sown in corruption, it is raised in incorruption; it is sown in dishonour, it is raised in glory; it is sown in weakness, it is raised in power; it is sown a natural body, it is raised a spiritual body; there is a natural body, and there is a spiritual body." (St Paul.)

Of the future association of our minds with that new and spiritual body, we can no more form a distinct conception,

* "Bare grain, it may chance of wheat or of some other grain."

than we now do of the existing connection with our living acting frames. They obey the mandates of God's vicegerent,—the immortal mind,—which is truly and locally enthroned in the superior region of the head, to rule the inferior body, employing its members as servants to fulfil its commands, and in that manner to accomplish the will of the infinite Creator. Great dignity is thus imparted to our reason and to its temporary residence in the head, its truly regal palace. But the human mind soon finds the limits of its power in every department of nature. It comprehends, indeed, the celestial mechanism, and demonstrates the existence and the ratio of gravitation and projection, but understands not their nature and origin; it penetrates the chemical constitution of bodies, and ascertains the laws by which the heterogeneous atoms rush into union, while it cannot fathom the essence of the particles, nor even prove the reality of matter. The mind commands the hand to move, and it instantly obeys, to perform its behests of anger or of love while the mind itself perceives not the nature of the influence, nor the manner of its movement, and thus phrenology forms a perfect parallel with all we know of nature and of nature's God. With us rests the knowledge of the effects; with him the cause and the manner of the connection. Philosophy, then, equally with religion, bows before the throne of the Supreme, and while it renders grateful homage for the glorious illumination which he has poured into our minds, it acknowledges with profound humility that our light at last ends in darkness; that none by searching can fully find out God, nor comprehend the Almighty unto perfection, for it is higher than heaven what canst thou do, and deeper than hell what canst thou know!

Phrenology then stands, exactly like the other sciences of observation, upon the basis of phenomena, and their observed correspondence with a theory which is deduced from them. The mental energy of Gall, of Spurzheim, of Combe, and of many other philosophers of high intellectual powers and wide observation, has been, through many years, directed to the investigation, and they have declared, that they find a prevailing correspondence between the size and conformation of the brain and of the cranium, and the energy of the intellectual faculties, moral sentiments, and animal propensities of man.

As it is a fair pursuit—a legitimate branch of physical, mental, and moral philosophy—let it then have free scope, until additional observations through a wider range of time, and made by many other men, equally or even better qualified for the investigation, shall either establish or overthrow its claims.

This apologetic plea for phrenology has been thrown in, not because we have made up our minds *to go for the whole*, but because we would strenuously maintain the liberty of free investigation. Philosophical is as sacred as civil and religious liberty, and all three are indispensable to the perfection of man's faculties, to the improvement of his condition, and to the just comprehension of his duties. In suggesting the considerations that have been presented, we do not assume or deny that the minute divisions of the mental, moral, and animal faculties indicated by phrenology, as the science is now taught, are all fully made out. On this question we would not hazard an opinion, for here phrenology would demand a trial by its peers; by a jury of superior minds, qualified to decide by their acumen, their general knowledge, their large observation on this subject, and their strict logical discipline; but all intelligent and candid persons can judge of the general correspondence of the theory with the phenomena; they can observe that there is an intellectual, a moral, and an animal conformation of the head, which, as the one region or the other prevails, greatly influences the character and conduct.

This general development, this characteristic conformation, we think is clearly discernible when we examine many individuals; it is therefore this leading revelation of mental power, of moral affections, and of animal propensities, which we believe that Gall, Spurzheim, and Combe, and other able and enlightened phrenologists, have it in their power to indicate, with a prevailing certainty, sufficient to justify particular courses of treatment with the insane, with felons, and (with great care and prudence) even with pupils and children.

If, then, we are right in this conclusion, phrenology does not deserve the sneers, the ridicule, and contempt of which it is still made the theme; nothing is easier than to cherish our own self-esteem by indulging in such cheap effusions of self-complacency; and to guard against any possible verdict of credulity, by an early vindication of our superior sagacity in foreseeing the *reductio ad absurdum*, which those who predict such a result will be very prone not only to expect but to desire. Many excellent people, with the best moral and religious feelings, are often alarmed by the discoveries of science, we do not speak of science "*falsely so called*," but of real science, which is only another name for truth. Truth is the noblest attribute of the Creator himself; we are too apt to forget that it is as distinctly recorded in his works as in his word, and if we would know what he has revealed for our instruction, we must faithfully read and understand the volume of creation as well as that of revelation; both are his work; both are true, and both are worthy

of our most assiduous study. We fail, therefore, in moral courage, if we fear to advance in the ways of Truth, and to follow where she leads, whether in nature or in revelation.

Every important science has at first been received with scepticism, if not with obloquy, contempt, or hostility.

Astronomy, assailed by ignorance and bigotry, long maintained a defensive attitude against the civil and ecclesiastical powers of that age which boasts a Galileo, a Kepler, and a Newton; but for almost two centuries this, the noblest of the physical sciences, has been fully victorious.

Geology has sustained a warfare of many years, but having vindicated her cause, begins to feel assured of permanent peace.

Phrenology is still marching in an enemy's country, and the issue may appear more doubtful; but we are assured by her learned professors, that she is gaining efficient allies, and every year increasing in power.

We have appeared in the field as mediators, not as belligerents on either side, but hoping to recommend a suspension of hostilities preliminary to an amicable and fair discussion of the points at issue, in the confident hope that a permanent and honourable pacification may be the result, and that all the parties in the controversy, having defined the boundaries of their respective dominions by more exact limits and more durable landmarks, may find in the end, that the independence of each is more fully established, while all the members of the alliance are bound more firmly together than ever by a consistent and harmonious efficiency, as beneficent in its influence as it will be delightful to every truly enlightened and philanthropic mind.

New Haven, *March* 31. 1840.

II. *Remarkable Discovery of Skulls near Jerusalem.*

In a recently published "Narrative of a voyage to Madeira, Teneriffe, and along the shores of the Mediterranean, by W. R. Wilde, M.R.I.A., Licentiate of the Royal College of Surgeons in Ireland," &c. (Dublin 1840), vol. ii. p. 337 *et seq.* 489–91, we find some curious particulars about a collection of skulls discovered by the author in an apparently ancient tomb near Jerusalem. On the south side of Mount Sion is the valley of Hinnom, bounded on the south by another hill, the western of the two summits of which is usually designated the Mount of Offence. At the foot of this hill is an enclosure

named by all classes of the inhabitants of Jerusalem the Aceldama, or Field of Blood, and hence concluded to be the field purchased by the Jewish priests "to bury strangers in," with the thirty pieces of silver received by Judas for betraying his Master (see Matthew, xxvii. 3–8). Having heard that, under the rubbish on the slope of the hill in this vicinity, a tomb containing human bones had recently been discovered and opened by the Arabs, Mr Wilde and two of his friends went out to visit it. On entering, he found himself in a tolerably large oblong hall, cut out of the rock, and having on each side, and at the inner end, a number of doors leading to interior apartments or crypts, each containing two troughs or sarcophagi, all white-washed (illustrating Matthew, xxiii. 27), and furnished with confused heaps of well-preserved human bones. On examining the three sets of crypts, Mr Wilde was struck by the remarkable fact, that each set "contained the remains of distinct races of mankind, as shewn by the skulls found in the trough of each." Thus, all the crypts upon the right-hand side contained crania of the characters, shape, and appearance, which he has exemplified in his 1st Plate, fig. 1 (representing a long narrow skull, with a narrow retreating forehead, prominent superciliary ridge, upper jaw, and cheekbones, and considerable elevation in the region of Firmness, Love of Approbation, and Self-Esteem); whereas all those upon the left-hand side were of a very different shape, as seen in his 2d Plate, fig. 4 (exhibiting a much more globular, broad, and lofty skull, with a better forehead, and little prominence of the occipital region); and in the end or central compartments he found skulls totally different from either, and partaking more or less of the form represented in his 1st Plate, fig. 3, exhibiting a small skull, of an intermediate form, and with little development of the frontal region. On this side of the apartment, however, the crania were more mixed and not so decided as those in the two other sets of crypts. But after a pretty careful search, he could not find a single instance of the skulls of one side being mixed up with those of the other. "Now," he adds, "none of these curious heads belonged to the Jewish race, for not one single European or well-marked Caucasian head could I find among the numbers scattered in the chambers; and as all who did not belong to that family must have been strangers in Jerusalem—and as these heads belonged to races of mankind that we know did not inhabit Judea for the last 2000 years—they must have been foreigners; and this has led me to conjecture, that this tomb, which is situate in the acknowledged field of blood, may be one of those sepulchres of the *actual Aceldama* that

was purchased by the priests 'to bury strangers in.'" Of four skulls which Mr Wilde succeeded in carrying off, three are excellently represented in his plates. After remarking that "it is now universally admitted by the first authorities in the physical history of the human race, that to the form and character of the head can we alone refer in order to determine the varieties of man, either existing or extinct," he proceeds to inquire to what races these three different sets of crania belonged. Frequent communications respecting them have taken place between him and Dr Prichard, whose opinions very nearly coincide with those which he himself had previously stated in writing to Professor Graves; and to shew that Dr P.'s judgment could not be biassed by a knowledge of the locality whence the skulls were brought, he adds that casts of them were forwarded to that naturalist, with a note from Professor Graves requesting his opinion upon them, but giving no clue whatever as to how or where they had been obtained. In answer to the question, Who were the "strangers," or foreigners, for whose interment the field was purchased? Mr W. refers to the enumeration in Acts ii. 9–11; adding—"We know that Jerusalem was at this time one of the great marts, as well as one of the greatest thoroughfares, of the world; and, besides, many of other nations came up to worship at the Temple, and to fill the *courts of the Gentiles*, who were not purely Israelites." Of the long skull first mentioned, Dr Prichard writes to Mr Wilde—"I think, with you, that this skull is that of an African." It is heavy and dense, and belonged to a person about the middle age. The more globular skull, secondly mentioned, "although it differs," says Mr W., "in some respects from the true Mongolian, yet under that variety it must be classed. Its most striking characters are its very remarkable narrowness in its longitudinal diameter, not only in contradistinction to the Ethiopian, which is characterized by extreme length, but in comparison with all other known crania. It has an uncommon breadth and flatness of the occipital or posterior region; and the very remarkable protuberance at the top of the head [where the organs of Benevolence and Veneration meet],* gives this skull a place among those termed pyramidal." In Dr Prichard's opinion, the skulls of this class are of Turkish

* Mr Wilde says in the appendix, "I know not whether the remark be original, but it has struck me as being extraordinary, that the knob at the top of this skull, which is so characteristic of the pyramidal heads to which this belongs, and which might be adduced as one of the characteristic distinctions of particular races, is chiefly found among those nations who shave the scalp, except a long tuft of hair left at the top, growing from this part of the crown of the head. Such is the practice, and such the heads, among the Chinese,

origin; and, on the whole, he thinks with Mr W. that although not true Mongolian, they approach nearer to that race than to any other. Mr W. considers it probable that they may have belonged to some of the Turcoman tribes which still wander in hordes over the countries anciently named Parthia, Mesopotamia, Cappadocia, and Pamphylia. Lastly, of the third skull, found in one of the central crypts, Mr Wilde says,—"This is one of the most remarkable that I have ever seen, and if it were the peculiar form of any race, as I see no reason to doubt, for there were numbers of the same kind in these cryptæ, that race is now either extinct, or is unknown to physiologists. This head, which was that of a very old person, appears to have belonged to a mixed variety, and inclines more to the Ethiopian or Caucasian. Perhaps it may be classed among the Medes and Elamites, who resided in a country beyond the Tigris, and were the same, in all probability, as the modern Persians. This skull is remarkably light, and so thin as to be almost semitransparent; and it is curious to find that Herodotus mentions the extreme thinness of the Persian skulls, in contradistinction to the Egyptian, which were particularly dense and thick. (Herod. *Thalia*, xii.)" "The want of frontal development, and extremely small size of this head, give it some of the characters of that of an idiot; but there were many such in the same chamber." Mr Wilde adds, that the climate of Judea, and the peculiar construction of this tomb, would prevent the decay of human bones for a much longer period than 1800 years; and concludes, from all the foregoing circumstances, taken in connexion with the appearance of the external architecture of the sepulchre (represented in a woodcut), particularly its door, which differs from the doors of all other known sepulchres, except one at Petra, "that there is a strong probability, almost amounting to presumptive proof, that this sepulchre was one of those tombs, if not the actual one, purchased with the thirty pieces of silver, to bury strangers in, and from that circumstance receiving the name of ACELDAMA, or FIELD OF BLOOD."

In his 1st Plate, fig. 2, Mr Wilde gives a view of the skull of a modern Egyptian, who was killed before the walls of Acre,

Kalmucs, and Turks, who are descendants of the Turcomans, a true Mongol race. Homer menti ns, that the Thracians, another Turanian people, wore the hair only on the crown of the head. I have frequently observed in the barbers' shops in the east, that the heads of young boys did not possess this knob, even comparatively with the men; and, from this circumstance, I am inclined to suppose that their wearing this tuft on the top of their heads is partly the cause of the protuberance, especially as, when uncovered, they are constantly pulling and twisting it in their fingers." Judging from the Mongolian skulls in the Phrenological Society's collection, we suspect that the existence of this "knob" is far from universal.

in the late attack on that place by Ibrahim Pasha. "It is a well-marked instance," says he, "of the generality of that people, who are characterized by extreme narrowness of breadth as compared with the height of their foreheads; this skull barely measures three inches across the forehead above the external angular processes of the frontal bone. This is evidently a mixed variety, and exhibits, in a very remarkable manner, the blending of the anatomical characters of the two races from which the greater part of the modern Egyptians are sprung; that is, the Arab and the Negro. But many of the Negresses who are sold in the Egyptian slave-markets are natives of Mozambique, and these, it is well known, have higher foreheads than any of the other Negro races." In the skull figured, the middle of the forehead projects much; Veneration is largely developed; Benevolence also is good; but there is a rapid slope from Veneration towards Conscientiousness and Firmness.

III. *Some Notes upon the Hereditary Tendency to Mental Disease.* Read before the Dumfries Phrenological Society by W. A. F. Browne, M.D., Superintendent of the Crichton Institution for the Insane.

"Whoever has brought himself to consider a disease of the brain as differing only in degree from a disease of the lungs, has robbed it of that mysterious horror which forms its chief malignity."—*Sir James Mackintosh's Letter to the Rev. Robert Hall on his recovery from Insanity*;—Mem. vol. i. p. 369.

The purposes of the following observations are to divest the subject of predisposition of all that mystery with which it has been invested; to give a fixed and definite meaning and value to the vague and fluctuating explanations which have been offered; and to shew that it depends upon the physical structure of the brain and nervous system, and may, like other diseased states, whether of excess or deficiency, be met and ameliorated by treatment and training, and education founded upon correct physiological principles. It is not suspected that in the term hereditary taint or tendency to mental disease, is contained the tacit but unequivocal acknowledgment of an important phrenological truth. The transmission of this predisposition from parent to child, and from generation to generation, can depend only upon the transmission of certain forms and peculiarities of organization, upon the descent of some defect or deformity of the nervous structure, or of some condition incompatible with the preservation of mental health under certain circumstances and at certain ages; a proposi-

tion which amounts to this—that parents possessing heads below the ordinary standard, or of the idiotic type, communicate to their offspring an organization of a similar character; that parents, either with brains of vicious conformation, or with brains so excitable by states of the body, or impressions from without, as to be liable to, or actually labouring under, disease of the brain, are followed by descendants endowed with similar constitutional peculiarities. The recognition of such a law is not confined to men of science. It is universal—it is part of the traditionary knowledge of the vulgar, and is one of those truths developed by the experience of ages, and gathered from those family histories and domestic tragedies, which are preserved better, and furnish more ample materials for thought among the uneducated, than the histories or calamities of nations. The ideas and opinions associated with this general belief are, as might be expected, vague, exaggerated, and superstitious. The taint, supposed to originate in the direct vengeance of an offended Deity, is conjectured to run in the blood, or it is held to amount to demoniac possession; and upon such premises are founded theories which it would be difficult, and might be dangerous, to discuss. But the errors of the simple are often exceeded by those of the wise, and many of those wild conjectures may be traced to the threshold, or even within the walls, of the temples of some of the systems of most pretension and sway. Sometimes they reappear in a more monstrous form: of this there is illustration in the fact that some pathologists suppose that insanity is transmitted as a disease—that there exists not merely a tendency or increased liability in the progeny of the insane to mental disease, but that the disease itself is propagated, is actually incorporated with the system, lurks in every thought, and throbs in every pulse. This doctrine will not bear investigation. There is no evidence whatever that nervous disease is, as a disease, transmitted or transmissible. The truth appears to be, that certain forms of body expose individuals to attacks of apoplexy, and certain forms of head and conditions of brain expose other individuals to attacks of mental derangement. But peculiar circumstances are necessary in both cases to subject those so predisposed to actual disease, or, in other words, to develope the taint. They may live for many years in perfect sanity, in the exercise of useful talents, and in the discharge of important duties; and should no exigency or difficulty arise, should no combination of unfortunate events occur, or should education, or moral or medical precautions, afford protection, they may escape these dangers, and retain reason unclouded and unimpaired. This

involves the great truth that hereditary taint may be cured, or rather, that it may be counteracted and nullified.

Hereditary predisposition is erroneously set down as a cause of insanity. It would be as legitimate to declare small ill-developed muscles the cause of fatigue. When it is asserted, then, that so many hundred cases of madness originate in hereditary taint, the meaning is, or ought to be, that under the pressure of various circumstances which would not have affected injuriously a well-constituted system, such a number of ill-formed, ill-proportioned, and ill-conditioned brains have become affected with disease. This weakness, or vitiation, depending upon a permanent structure, greatly augments the proclivity to relapse when an attack of derangement has been followed by recovery. Persons so framed go unarmed and unprotected into the conflict for sustenance, or station, or dignity, sink under every successive shock of misfortune or disappointment, and pass one-half of their lives in the cell of a madhouse. Every powerful emotion, every irregularity of diet, every act which interferes with the natural discharge of the functions of the brain, or compromises the tone and vigour of the general system, places them in jeopardy, if it do not deprive them of reason.

We deny, however, most emphatically, that mental derangement upon any occasion arises spontaneously, and independently of extraneous provocations or proximate causes; that it can, in fact, proceed directly from hereditary taint. Such predisposition may be designated a latent poison; but it is a poison with this singular property, that its deleterious influence is never experienced until the foundations of health have been sapped by some other agent. The tendency to gout is developed by a carousal, the tendency to rheumatism by the east wind; in other words, the wind and temperature act upon enfeebled or diseased, or rather, upon predisposed organs. In the same way, the tendency to mental derangement is brought into activity by excitement or misfortune, or other powerful impressions. An apparent exception exists when the tendency to derangement is produced by a want of balance between different parts of the brain;—by the great predominance, for instance, of the organs of Self-Esteem, Firmness, Acquisitiveness, and Ideality, over those of intellect, and when there is a manifestation of a character of indomitable and insufferable pride, with delusions as to the riches or titles upon which these pretensions are founded. But the truth is, that this exaggeration of the natural character, and the extravagance which consigns the individual to the charge of the physician, can invariably be referred, if care be taken, to some unusual source

of uneasiness, some extraordinary mental exertion, some tax upon the energies or sympathies, some mark of disrespect or loss of property, or some bodily ailment, which irritates and exalts the original bias into a state of unhealthy excitement.

In treating of the subject, we shall separately consider what appear to be the principal physical causes of hereditary predisposition.

I. There may be hereditary tendency from the unhealthy condition or quality of the cerebral organs, which is roused into activity by the slightest causes, and bursts forth into disease from acceleration of the circulation in fever or passion, or from the influence of internal emotions or external events.

The cretins of the Alps and cagots of the Pyrenees are examples of this, and upon a grand scale. A whole tribe of mankind participate in a congenital imperfection of structure, and are by descent imbeciles, or grope their way through the ordinary concerns of a simple and almost savage mode of life by the light and aid of some partially-developed power, some half-awakened instinct. The heads of these beings are generally of enormous dimensions, the bones distorted and deformed, the brain itself the seat of disease, and every lineament grotesque and hideous; and these characteristics are preserved age after age, accompanied by the same degradation of mind, the same stationary position in the scale of being, while the tide of civilization is surrounding and sweeping past them. These features are necessarily perpetuated, as, for obvious reasons, there is a repugnance in healthy individuals to form alliances with cretin families, as in some districts such intermarriages are strictly prohibited by law, and as the infected display a preference for each other; but that, even under such unfortunate circumstances, the limitation of the malformation or vitiation of the cranium or brain, and the effects of external circumstances, exert their ordinary influence, may be concluded from the occasional appearance of expert workmen and even artists among this benighted race, whose healthier brains, or more favoured lot, has brought them more closely into connection with the position and destiny of the enlightened portion of mankind. The history of these tribes has been traced into remote antiquity; and one of the branches has been identified as the descendants of the Visigoths or Alans, who were defeated, dispersed, and lost sight of, in the fourth century—a lineage which would in some circumstances confer nobility, and in this indicates how long and uninterrupted the course of the hereditary predisposition may be.

The same unhealthy condition of brain is frequently trans-

mitted through various generations of the same family, originating generally, however, in some of the ordinary causes of insanity. The original development of the taint is occasionally obscure, but its appearance is sometimes regulated and determined by obvious laws. The offspring of those who have exhausted their moral and physical powers by excess are born tainted. Even the offspring of those in whom these energies are naturally and legitimately exhausted, and the children of individuals whose constitutions have been destroyed by disease, or climate, or age, often share the same fate. Those who have lived in and upon excitement and passion, and vivid impressions, transmit their activity without their strength. The drunkard and debauchee, the speculator, the gambler, the votary of strong desire or appetite in every shape, impart to their progeny that feverish sensibility, that craving for stimulants, or that enfeeblement of the powers, which result from scuh habits. Whatever, in fact, tends to exalt, or depress, or disturb the functions of the nervous system in the parent, tends to create a predisposition to mental imperfection, or irregularity or vitiation, in the child. Even momentary affections of the parent, if intense or sudden, engender disease in the descendants. When a mother is exposed to terror, or grief, or misfortune, the mind of the child is injured by the shock; but in this case, idiocy is almost always the result. When the state of the brain is unhealthy from temporary causes, such as intense application, the effects of fevers, or derangement of the greater viscera, a proneness to mental disease is communicated to the children born at that period; and from the same cause it happens, that a greater tendency to disease exists in the children born after the parents have laboured under insanity than in those born previously to the attack. This is a well-ascertained fact, and shews, that, even when reason is restored, the natural tone and vigour of the brain may be only partially recovered, a condition upon which necessarily depends the instability of the long convalescence which succeeds an attack of derangement, and the tendency to relapse. Whatever gives an undue activity to the brain, or even to a part of it, acts detrimentally upon the nervous system of offspring. The organization transmitted is either absolutely enfeebled, and incapable of performing its functions, or it displays the same tendency to general or local activity. This, in the case of genius, may be a boon and a blessing; but the *exclusive* activity of any organ is morbid, whether it be developed in the blaze of imagination or in fervour of sentiment, proving pernicious to the possessor, and valueless to the community. The law, however, that activity and the tendency to diseased action even of parts of the brain are transmissible, is important,

and of vast range. It must influence the capabilities and happiness of every successive generation, and impress a character upon remote portions of our race. But not only is an inclination to activity of particular regions, or limited portions of the brain imparted to offspring; many circumstances lead to the conclusion, that a *special* tendency to *particular kinds* of activity may be inherited. It is well known that the young of well-trained dogs are more educable to the chase than the young of untrained dogs; the children of Indians who have been separated from their parents in infancy, with the view to prevent the contraction of the tastes of savage life, instinctively and spontaneously prefer the pursuits of the forest and prairie, and excel their civilized companions of the same age in hunting and tracking wild animals, and in that perfection of the external senses for which their race is famous.* These children generally abandon their protectors and the advantages of society, to enjoy a mode of life of which they can know nothing from memory or experience, or from any other source but the promptings of an *inherited instinct.* The children of individuals who have cultivated languages, and spoken them correctly, are said to be easily taught this branch of education. Many examples of the reappearance in the progeny, of the very faculty for which the parents were distinguished, and which they had exercised, and cherished, and delighted in, might be quoted; but a recent number of this Journal (No. lxvi. pp. 24, 30) contained so many instances of the hereditary activity of the organ of music in two successive generations, that it is not necessary to prosecute the inquiry. If these observations contain any truth, the influence of the state of the parent upon the offspring, and especially in communicating not only a tendency to unhealthy activity of mind, but to insanity of a particular kind, as exemplified in the monomania of intoxication, will be better understood. If the basilar region of the brain be large, and constantly and inordinately excited, we know from repeated observation that insanity, when it occurs, will present all the brutality and violence of the natural character; and we can readily believe that similar qualities, and a similar tendency to excitement and disease of that particular region, will be transmitted and reappear in the succeeding generation. If the head be small, especially in the anterior and posterior parts, and if the coronal region predominate,—where hereditary predisposition exists, we may not only predicate that the individual will fail to struggle against the obstacles which occur in every course of conduct, and fall a victim to an ill-balanced brain, but we may anticipate the

* Walker on Intermarriage.

amiable imbecility, the reverie or mysticism or sentimentalism, which will mark his disease, according to the relative size of the different organs. Practical men know that a large number of the inmates of asylums have variously formed and proportioned heads, and that these are types of the organization of the families to which the individuals belong; but it has not yet been propounded as a principle, that such deviation from the natural form and proportion is the cause of the hereditary predisposition. The grotesque forms of head which are sometimes met with in chronic mania, are nowhere better seen than in the museum of Monsieur Esquirol.

The drunkard injures and enfeebles his own nervous system, and entails mental disease upon his family. His daughters are nervous and hysterical; his sons are weak, wayward, eccentric, and sink insane under the pressure of excitement, of some unforeseen exigency, or of the ordinary calls of duty. This heritage may be the result of a ruined and diseased constitution, but is much more likely to proceed from that long-continued nervous excitement, in which pleasure was sought in the alternate exaltation of sentiment and oblivion, which exhausted and wore out the mental powers, and ultimately produced imbecility and paralysis, both attributable to disease of the substance of the brain. How far the monomania of inebriety is itself a disease, and may be more the development, the consummation, than the commencement, of a hereditary tendency to derangement, this is not the place to point out; but there is every reason to believe that it not only acts upon and renders more deleterious whatever latent taint may exist, but vitiates or impairs the sources of health for several generations. That the effects of drunkenness are highly inimical to a permanent healthy state of the brain is often proved at a great distance of time from the course of intemperance, and long after the adoption of regular habits. Cases of this kind are highly useful in illustrating the matter under discussion. An individual constitutionally healthy, and, so far as is known, free from predisposition, became insane after long indulgence in intoxicating liquors. He recovered under treatment, and lived for many years exempt from disease, and in a regular abstemious manner; but a change of residence appeared to act injuriously by developing the tendency created by his own irregularities, as he again became deranged, and committed suicide by drowning.

Some time since, I was called upon to treat a remarkably fine boy about sixteen years old, among whose relations no case of derangement could be pointed out, and for whose sudden malady no cause could be assigned except puberty and a single glass of spirits. His father, however, had been a con-

firmed drunkard, was subject to the delirium and depression following inebriety, and died of delirium tremens. The boy recovered. His case presented many points of interest. His head increased rapidly, and the two hemispheres were of unequal size. The disease was intermittent; the patient passing a week in furious incoherent madness, and the succeeding week in perfect tranquillity and consciousness. These states were separated or connected by a short and profound sleep or lethargy, differing altogether from the patient's ordinary sleep, and recognised by him as the culminating point of his disorder. At present I have two patients who appear to inherit a tendency to unhealthy action of the brain from mothers addicted to drinking; and another, an idiot, whose father was a drunkard.

There exists in many families a tendency to premature decay of the mental powers. This, in many cases, seems to depend upon a hereditary vitiated condition of the brain. Such decay often happens when youth and manhood have been devoted to animal enjoyment, and when the head is small; but it does occur where neither the pleasures of the table, nor the excitement of the turf, or chase, or billiard-table, have been indulged in—where no blame is attachable to the individual—when, in fact, the career has been distinguished by brilliant talents and by great mental acquirements and achievements. Dr Holland seems to entertain a similar opinion: he says, "Hereditary malady or incidental disorders often bring on premature decay in *one* organ, while others are comparatively untouched by time."* Forgetfulness of words, generally of proper names of persons and places, and the contemporaneous forgetfulness of recent, and the vivid reminiscence of remote events, are likewise observed to take place much earlier in some families than in others, and to be inexplicable by the disease or debility of the general system. Examples of extreme longevity occur, in which the intelligence remains unaffected by years, flourishing, and fertile, and strong. The acuteness of Parr shone forth immediately before death, and the genius of Fontenelle remained unclouded at the very close of his long life. In whole families, likewise, there occurs no dotage previous to death. In others, the intelligence wears out sooner, resists less successfully the influence of care, and labour, and sorrow; and imbecility appears before the energies of manhood are exhausted, or the purposes of our being fulfilled. Nor does this imbecility consist in that loss of memory and impairment of perception, or that gradual extinction of the noblest attributes of our spiritual nature,

* Medical Notes, p. 283.

which accompany age, which are symptoms of senile dementia, which depend upon the hardening of the substance of the brain, and which are but the forerunners of dissolution. The decay to which allusion is made, appears under various forms, but all of these bearing the true characteristics of insanity. These may be perversion of the sentiments with or without delusion, depraved appetites, furious mania, or fatuity. A remarkable example of this has fallen under my own observation. A member of a learned profession, of high birth and very moderate abilities, their mediocrity having been screened by fortunate circumstances, gave indications of mental senility between fifty and sixty. There was no obvious cause, moral or physical, for this sudden and premature decay. It was not accompanied by bodily infirmity, nor by the external signs of old age. The gentleman continued to discharge important functions, aided by the suggestions of friends, and guided by the rigid routine by which he had been moulded and moved all his lifetime, but with the feebleness, and childishness, and caprice of dotage. His brother became epileptic at fifty, and passed the succeeding eleven years of his life in imbecility. His son, at precisely the same period of life, and surrounded by circumstances which promised to foster and preserve the most limited and weakest intelligence, sank into lethargy, and perverted tastes and appetites; the ruin being in his case greater and more irretrievable.

Careful examination has convinced me that there is in some races a special hereditary tendency to mental disease, which becomes developed in various forms and modifications of lunacy, but always in *lunacy;* and that there is in other races a general hereditary tendency to nervous disease, but which may appear as apoplexy, epilepsy, eccentricity, or madness, the particular form being determined by the circumstances or habits of each individual. There may be observed in a single family, the immediate progenitor of which was insane or paralytic, one member affected in early life with convulsions or hysteria, another at mature age giving indications of extravagance and folly or oddity, and a third living longer exempt from ailment, but at length dying suddenly apoplectic; a train of misfortunes which cannot fail to suggest a proclivity to a whole class of diseases. Such affections of the nervous system as apoplexy and epilepsy implicating alteration of structure, are known to be transmissible, and it is probable with greater regularity and intensity than insanity; but the tendency of which we have spoken includes not only these, but all or many others of the same description.

How very slight are the deviations from healthy structure and function which are perpetuated in families, may be ga-

thered from the cases of inability to perceive colour or certain colours. Dr Holland mentions one family in which the father and two children were unable to distinguish a red colour, and another, in which three brothers and two or three children of their families were unable to distinguish between blue and pink.* In a family called Le Comptes, the history of which is given by Dr Adams, blindness has come on at the age of eighteen in three generations.† That numbers of the same family are born deaf or dumb, is deducible from the records of many public institutions, and several facts appear to prove that such defects are transmissible. I have observed, in the same family, lunatics, and individuals labouring under blindness from affection of the optic nerve. In another family I have met with mute idiots and lunatics; and in a third, three blind and one eccentric person ultimately committing suicide, in the first generation,—one mad in the second,—and one labouring under hydrocephalus and infantile convulsions, followed by great precocity, in the third.

The examples of the appearance of apoplexy, epilepsy, and insanity in the same family, are exceedingly numerous. This liability to all or the greater part of the morbid actions of the nervous system, might have been predicated from what takes place in the lungs, glands, &c.; but it is somewhat difficult to perceive the means by which such a tendency is in any case confined to one affection, unless we adopt the opinion that where madness alone is transmitted, the encephalon proper, or some part of it, such as the grey matter, is the seat of the imperfection; and that when madness, epilepsy, and apoplexy are transmitted, the whole of the nervous system participates in the diseased condition, as well as the organs of circulation, motion, &c. The influence of education, pursuits, and pleasures, in determining the particular aspect which nervous maladies shall assume, is generally well known: but if to the ordinary predisposing causes there be superadded a tendency to a long series of diseases, it need not surprise us to find the same individual affected according to the development of his body, his age, his occupations; labouring in infancy under fits which are referred, and in one sense correctly referred, to the irritation of dentition; in youth threatened with hydrocephalus; and if not struck down by apoplexy in manhood, left to linger for years as a drivel or a dotard. That there are protecting circumstances is equally clear; for the brother or sister of the person whose history has been traced, may enjoy throughout a long life uninterrupted bodily and mental health and vigour—either in virtue of a more robust original

* Medical Notes. † Adams on Hereditary Peculiarities.

constitution, or in consequence of the adoption of more prudent precautionary measures, and of less exposure to the excitements, physical or moral, which lead to the explosion of the disease.

(To be concluded in next Number.)

IV. Mr W. B. Hodgson *on the Nature and Scope of Mechanics' Institutions.*

We extract from the *Liverpool Albion* the following vigorous address, delivered a few months ago by Mr W. B. Hodgson, Secretary of the Mechanics' Institution of that town, as chairman of a dinner of the teachers in the schools of the Institution. In proposing "The Mechanics' Institution" as a toast, he observed :—

Little need be said to recommend this toast to you; still, something I would say, and I would beg briefly to call your attention to two views of the nature and scope of the institution, which, besides being suitable to our present meeting, give the institution a claim not merely on *our* regard, but on the sympathy and support of all who pretend to philanthropy or generous feeling. The first relates to the aim which education ought to take, and the objects which it ought to embrace. We are often told, that the days in which we live are the days of mechanical invention and improvement; that poetry has given place to political economy; that the steam-engine has supplanted literature; and that all lofty or inward thought has been superseded by those useful arts whose aim (as generally believed) may be summed up in this,—that they teach us "to raise two blades of grass where only one grew before." Of this spirit of rigid and frigid utility, which refuses to recognise any *use* in what does not immediately minister to our physical necessities, Mechanics' Institutions are regarded as the symbol and embodiment, and, doubtless, not without apparent reason. Established originally for that class of society whose first want is *bread*, and the means of procuring bread, their first and chief aim was to give the working-man precisely that amount and sort of knowledge which might enable him to hew out for himself a way in this hard world: and this was much; this was a great boon to the working-man, and, through him, to the great mass of society, whose main prop the working-man must ever be. But is this enough? Will it be denied that man has a mind, a soul, as well as a body; imaginings as well as appetites; hopes as well

as hunger; ideas, and longings, and visions, and glimpses, which do not find their object in the matter which he handles in his daily work, and fashions into food or clothing for himself and others? The meanest man has

> "feelings to him given,
> With less of earth in them than heaven;"

feelings which, though taking their rise in earth, and dwelling in a child of earth, do yet "wander through eternity." These wants may be less clamorous, but they are not less real, than the wants of the body. The true friend of the working-man, then, as of all men, is he who would supply, or rather enable him for himself to supply, all those wants, and who, even where long disuse has blunted the desire, would awaken him anew to a consciousness of the happiness which he has lost, and for whose enjoyment he was formed. It is on this broad principle that our institution seems to have been founded; or, if not founded on this principle, it has gradually adopted it more and more in practice, and, with your good help, every passing year shall witness its fuller and fuller realization. It is true we cannot force men to learn more than they wish, or than they think they require; but we can throw the doors open, we can invite them to enter, we can welcome those who come, we can make those wiser and better, and send them forth as messengers of good tidings to others, who may, in time, be induced to come and do likewise. It is with such views as these that I rejoice to see around me now, and beside me in the institution, day after day, and night after night, not merely the teachers of modelling, or of chemistry, or of architecture, or of ship-building, or of engineering, but also the teachers of foreign languages, which, if dead, do yet speak, and which, whether living or dead, bring us acquainted with the thoughts of distant lands and distant times,—teachers whose aim is to discipline and refine the intellectual taste; teachers of the art of design, who do not regard time as wasted in painting a flower or a landscape; teachers even (despised as they may be by the unthinking) who would develope what has been well called "the poetry of motion;" or who communicate that delightful and useful, I say most useful, art of shaping the air we breathe into sweet sounds, not merely as an amusement for our idle hours, but as a mode of at once expressing and enhancing what it strangely images, a profound, and mysterious, and everlasting harmony within. Let me not, however, be misunderstood. Do not suppose that I undervalue the arts more strictly and commonly called useful, because I contend that, *alone*, they do not constitute the fit education of the mechanic: far from it. If we have made great and rapid strides

in civilization, if we have painters, and poets, and philosophers, and musicians, and sculptors; if we have a rapid interchange of thought all over the world; if we have prepared the way for the perpetuation of freedom, and sympathy, and good feeling through all regions of the earth, it is because we have closely and successfully cultivated those very arts of life: it is because we have had architects, ship-builders, and engineers: it is because we have had comfortable houses, and ships that defied the storms, and brought home the produce of every clime; and, above all, the steam-engine, which, in the scarcely exaggerated language of an American speaker, has already annihilated time and space, brought all nations into close communication, and realized the fabled wonders of Aladdin and his lamp. It is these things, and such as these things, which have pioneered the march of knowledge and refinement; without these we could not have, with these we have and shall never lose, a guarantee for mental cultivation. My creed on this subject, gentlemen, is very simple: all sciences are but branches of *one* great science,—as it were, links in one chain, limbs of one body, apartments in one house. Call the sciences by what names you will, physical or metaphysical, useful or ornamental, moral or mechanical, all are comprehended under *the study of nature and obedience to her laws.* I think it is Isaac Taylor who says, in one of his works, that the ideas of many men resemble monks of the order of La Trappe, who, though dwelling under one roof, lived in separate cells, hearing and seeing nothing of each other, careless and ignorant of each other's existence. Is it not too often thus with the sciences? Do they not often mope each in its own narrow cell, as if its partition-walls were the boundaries of the universe, beyond which nothing was or could be? But neither sciences nor men should dwell apart from their fellows, for without their fellows neither can attain a full and healthy growth: they must both come forth into the free air of Heaven, and see each other, and shake hands, and hold communion with each other, interchanging ideas, giving and receiving new light. Who is there, I would ask, who has studied geology deeply, without finding himself suddenly in the domain of chemistry on the one hand, or botany on the other? Who has studied mechanics deeply without a knowledge of mathematics?—or the human mind deeply without a knowledge of languages, which are but various embodiments of universal mind? Has political economy no connexion with moral philosophy? Are there, in short, any two subjects of human thought between which a mysterious analogy, at least, does not exist, nay, which, when thoroughly considered, do

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not reflect mutual light? If these things be so, ought we not all to hail each other as brethren, and unite in a devoted adherence to that establishment which recognises and welcomes us all, each in his own sphere, rejoicing to behold in every one of us a labourer in the cause of human improvement. The division of labour is a natural result of civilization; so it is in mechanics, so it is in teaching; but he who points the pin needs not despise him who puts on the head, or him who draws out the wire. So let it be with us; for, if you will pardon a poetical illustration, it is from the labours of a thousand silkworms that the garment of beauty is fashioned; and we are all spinning each of us his own little thread of thought; none of which, however, shall be lost, but all of which shall be caught up and woven into the wide web of human intelligence and knowledge.

So much for the objects of education, or the views on which, as it seems to me, education ought to be based. The second point to which I would wish to direct your attention relates to the subjects of education, or the class of persons to whom its blessings should be granted. Hitherto there have been, generally speaking, an educated class and an uneducated class; or, I would rather say, were it not for the fear of anticipating my argument, there have been an uneducated class and a badly or imperfectly educated class. But, be this as it may, true it is that, till of late years, education, whatever its quality, has been confined almost wholly to the upper classes, while the instruction of the lower classes has been almost wholly neglected. To remedy this evil, Mechanics' Institutions have been projected and established all over the country: their object has been to raise up those only who, hitherto, had lain sunk in total ignorance. More than this they did not at first contemplate; more than this the greater number of them do not even yet contemplate; and, on a first view, the elevation of the lower and more numerous classes seems a sufficiently extensive aim for one institution or one set of institutions. And, further, when men began to have a glimmering notion of the value of knowledge, and to regard it as something of which they had been unjustly deprived, it was but natural that they should have no very friendly feeling towards those who seemed to have monopolized that knowledge; that they should cry out against them for having so long allowed their brethren to remain in darkness; and that they should be jealous of allowing them any share in the management or even in the advantages of the new institutions having the name "Mechanics." Two very important discoveries, however, seem to have been made on this subject, which have

materially affected our condition in Liverpool, and which will, I hope, ere long, have a powerful and beneficial influence on all similar institutions. It is now generally known that the monopoly of knowledge has been much more apparent than real; that, while the lower classes have been starved, the upper classes have been badly fed; that, while the lower classes have pined without food, the higher classes have grown lean and sickly by living on the husks of learning; that, in plain language, both classes were ignorant, and both required to be taught anew. This having been ascertained, the second discovery followed close upon the first,—that, possibly, the education of both classes might be carried on simultaneously in the same place and by the same general machinery. It was seen that, in this way, a great benefit would be conferred on both. The rich and the poor, whom a common ignorance or a common acquirement of knowledge placed on the same level, irrespectively, for the time at least, of their worldly station, would, it was thought, learn to lay aside their pride of position (for the *poor* have their pride not less, perhaps even more, than the *rich*), and begin to respect, love, and sympathize with each other. While much would be thus done to pave the way for freer and happier intercourse in after life, the poor might also receive many indirect but valuable advantages from the funds, influence, and machinery, which, without the co-operation of the rich, in some form or other, they could not possibly obtain. This seems to me to have been the view of the benevolent, and I may add illustrious, founders of this institution, in proposing the addition of a High School to its other departments; and it is in this light that I regard the co-existence and co-operation of the several schools. I need not go into detail and shew to you, who know the working of the institution as well as I do, in what way this end is attained, or how one department gives stability to another, each to all and all to each. That they do give stability to each other cannot, I think, be doubted; and that they may be never separated, I for one do most earnesly pray. But, even supposing that this mutual advantage did not exist, still, I would ask, is there not room for all? Is the poor man's son *worse* taught than he was before, because even the rich man's son is *better* taught than he was before? Knowledge is not like food or money, of which one cannot have a greater portion without another having a less: knowledge is even more universal than the air; it is improved, not contaminated, by use; and it is multiplied by division. It surely will not be denied that a man's claim to education does not consist in his having been born in humble or in affluent circumstances, but in his being born with wants

spirits towards the temple of truth, which, though it may appear to recede as we advance, and though in this life we may never reach it, does yet gladden the eyes of all who are permitted to behold it, and beacon our march through regions of ever-increasing fertility and beauty. But I have said enough, if not to express all that I would wish to say, at least to enable you, I trust, to see my meaning. The whole may be summed up thus: education in its *objects*, comprehends everything capable of being learned; in its *subjects* it comprehends every being capable of learning. It is in the spirit of these views that I would wish now and at all times to act as well as to speak. If you approve of them, may I not rely on your assistance in my humble endeavours to carry them more fully and efficiently into practice? The institution to which we all belong I regard as a glorious field for their development.

II. NOTICES OF BOOKS.

I. *Studj Frenologici di* Pietro Molossi. (*Parte Polemica*). Milano: Guglielmini e Redaelli. 1840. 8vo, pp. 214.

Phrenological Studies by Peter Molossi. (Controversial Part). Milan: 1840.

Such is the title of a very able volume already referred to in our last number, for which we are indebted to that zealous and learned phrenologist Signor Molossi of Milan. It constitutes the first part of a much more extensive work which the author proposed some time ago to publish by subscription; but the requisite arrangements not having been completed, and phrenology having in the mean time become the object of repeated attacks by learned professors and other men of influence in Italy, Signor Molossi has most judiciously decided to bring out first that part of his treatise which discusses the objections to phrenology, and to leave the remainder to make its appearance afterwards. In following this course, he states that he is quite aware that, under ordinary circumstances, the best way to put down opposition is to tell the public what phrenology really is; because, when a knowledge of it is once possessed, the fallacy of the objections usually brought against it becomes almost self-evident. But as, in the present instance, the opponents have already raised up a prejudice which indisposes the public to make the necessary inquiries into the merits of the question, he thinks it advisable at once to meet their facts and arguments, such as they are,

that require to be supplied, intellect that must be taught and guided, passions that must be well directed. Rich and poor are alike born ignorant, alike born for instruction, and instruction both must have. Will it still be maintained, that the poor are not interested in the education of the rich? Why, I would ask, is the poor man oppressed but because the rich are too often selfish? and why are the rich so often selfish but because they are uneducated, in the sense of the word education before explained, which comprehends not merely the storing of the memory with words or even things, but the cultivation of all the faculties of thought and feeling with which God has gifted us, just that they might be unfolded by cultivation? Is not the poor man often made vicious, or at least more vicious, by the example of the rich, to whom he naturally looks up, and in whose estimation an offence is venal, which in the poor is guilt, nay, held to be characteristic of a genius too strong for vulgar morality? Would drunkenness be so common among the poor, if other classes treated it among themselves as it deserves? But why multiply examples? As good produces good, so does evil everywhere produce evil: influences descend much more readily than they ascend, and that man must be indeed shortsighted who can for a moment doubt, that the education of the higher and middle classes must be in a thousand ways beneficial to what are called the humbler orders of society. As applied to the individual, education in one branch is imperfect unless it comprehend every other; and so, as applied to the race, education in the individual must be imperfect unless it be made universal. Men must live in society, not in solitude, and our moral as well as physical condition must greatly depend upon that of our fellow-men. Thus, when education was confined to a few, it was dry, and barren, and technical in its nature: let it be diffused more widely, and its character will be improved: it will become, at once, more practical and more liberal, more comprehensive and more minute: the pride of learning and the insensibility of ignorance will equally give way before the love of truth, which regards all attainments, even the greatest, as but steps to greater: the barriers which now divide ranks will be broken down by a common consciousness of dependence, and the desire of greater light which all wise men feel, in proportion as they are wise, and which places all men on the same spiritual level: instead of sects in philosophy arranged in hostility against each other, or encamped, and entrenched, and fortified, each within its own narrow ramparts, as if it had taken up its eternal rest, we should have all sallying forth and joining in one glorious pilgrimage, one long procession of inquiring

spirits towards the temple of truth, which, though it may appear to recede as we advance, and though in this life we may never reach it, does yet gladden the eyes of all who are permitted to behold it, and beacon our march through regions of ever-increasing fertility and beauty. But I have said enough, if not to express all that I would wish to say, at least to enable you, I trust, to see my meaning. The whole may be summed up thus: education in its *objects*, comprehends everything capable of being learned; in its *subjects* it comprehends every being capable of learning. It is in the spirit of these views that I would wish now and at all times to act as well as to speak. If you approve of them, may I not rely on your assistance in my humble endeavours to carry them more fully and efficiently into practice? The institution to which we all belong I regard as a glorious field for their development.

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rather than allow them to do mischief by remaining unanswered. In general we dislike controversy, but we have much sympathy with Molossi in the midst of his numerous assailants, and we could not desire to see the defence of phrenology in better hands. We have rarely seen knowledge, sound reasoning, and philosophic temper, more happily combined in any controversy than in the *Parte Polemica* of our author.

Considering that almost every possible objection to the truth of phrenology has been already noticed and answered in this Journal, it will not be expected that we should give any lengthened account of the facts and arguments adduced by Signor Molossi in answer to his Italian opponents. Clear, cogent, and temperate as they are, most of them are familiar to our readers, and many of them indeed are derived from our own pages. We shall, therefore, only state generally who the opponents are, and give a few specimens of their modes of attack; and from these our readers will be able to judge of the interest now excited on the subject in Italy.

Signor Molossi's first chapter consists of "Observations in reply to a letter against Craniology by Professor Speranza," which appeared in the *Effemeridi Mediche* of May 1837. The spirit in which Speranza's objections are written, may be judged of from his preliminary declaration, in which he says, that "to have recourse to anatomy with a view to explaining the moral actions of man is an absurd proceeding, which has served only to desolate the empire of sound philosophy;" and from his commentary, that "it is a rash assertion, and even a species of romance, to place thought, perception, and intelligence, in a little nervous pulp." The merits of these declarations are easily settled. Professor Speranza either knew, or did *not* know, when he made them, that by their incompleteness and inaccuracy, they grossly misrepresented the phrenological views. If he knew, then his want of honesty and candour becomes so glaring, as entirely to destroy the weight of any hostile opinion he could utter. If, on the other hand, he did *not* know, his ignorance of phrenology must be so complete, as to render ridiculous any objections which he could bring against it. It is a gross perversion of the truth to say that the phrenologists have recourse to anatomy for the purpose of explaining the moral actions of man, and to represent them, without qualification, as placing thought and intelligence in a little nervous pulp. They take the aid of anatomy to confirm or refute the observations upon which their inferences of the connexion between different faculties of the mind and different parts of the brain are founded; but this is a very different proceeding from simply employing anatomy to un-

fold the moral actions of man—an object which every body knows to be entirely foreign to the domain of anatomical investigation.

It is a curious and instructive circumstance that an opponent is rarely met with who founds his hostility on facts observed by himself. In almost every instance he pins his faith to the facts and dicta of others with an unquestioning predilection and obstinacy strangely at variance, not only with his scrupulous suspicion of the phrenological facts and dicta, but with his own loud professions of candour and impartiality. In this respect Professor Speranza is no exception to the general rule. *He says* he comes to the question "*with an impartial mind, uninfluenced by the seductions of authority or names;*" and yet most of his hostile facts are the thrice-told tales of opponents, some of whom have themselves long since forgotten them. The first which he notices, for example, is the mistake about Raphael's skull. From it he passes on to the observations of Magendie and Desmoulins on the cerebellum being the regulator of muscular motion, and not the organ of Amativeness. He next brings in the "*fact*" that Dupuytren and Napoleon Buonaparte had both small brains!!! In farther proof of phrenological error, he mentions that the skull of La Place is so wretchedly developed, that when placed by Magendie alongside of those of two idiots, it is often mistaken for one of the latter! He then dwells upon the beautiful intellectual and moral development of the brain in Lacenaire and Avril, whose skulls *we* are accustomed to consider as indicating dispositions of an inferior kind, and as presenting a glaring deficiency of the moral organs. But passing over all these, and two or three other anti-phrenological "facts," with which our readers are already familiar, we shall now select a few from the learned Professor's own experience and reading, as fair samples of the whole article.

The most formidable looking "fact" with which Professor Speranza favours his countrymen, is derived from the case of a brutal Piedmontese murderer, named Orsolano, who was executed at Turin for having violated and murdered a young girl, and afterwards hiding her body; and in whom, according to Speranza, "*not the least trace*" of the corresponding organization was to be found. The "impartiality" of this account may be judged of from the following statement published by Dr De Rolandis of Turin:—"On examining the head of Orsolano in presence of all the professors of medicine and surgery, and of many of the medical men of Turin, the spectators remarked, with much surprise, that the temporal and parietal eminences where the organs of Destructiveness,

Secretiveness, and Cautiousness have their seat, were largely developed, and that, on the contrary, the regions corresponding to the organs of Veneration, Benevolence, Eventuality, and Comparison, *were almost obliterated* (pressoche obliterati.) The same was the case with the organs of Philoprogenitiveness, Inhabitiveness, Music, and Poetry. *The forehead was depressed, and almost flattened;* and while the convolutions of the anterior, middle, and superior parts of the hemispheres were in comparison about one-half narrower (più strette), the convolutions of the central mass situate in the prominent temporal region were *large, well nourished, and greatly developed.* The cerebellum was of average size, but not so large as some might expect."

We can scarcely sufficiently express our surprise, we had almost said our disgust, that any man of character and intelligence, professing, as Professor Speranza does, a regard for "impartiality" and pure "love of truth," should say of such a skull, that it presents "not the least trace of the organ of that imperious tendency to which his abominable crime is to be imputed." When "in the presence of all the medical professors, and of many of the professional men of Turin," the organs and convolutions of Destructiveness, Secretiveness, and Cautiousness, are described as large, prominent, and well nourished; and the organs of Benevolence, Veneration, and Intellect, on the other hand, are expressly stated to be depressed and flattened to such a degree as to cause them to be spoken of as "*almost obliterated,*" it really requires no little effrontery to cite the case as opposed to phrenology. It is true that the cerebellum is described as of only an average size, although, from Orsolano having first violated, and then murdered his victim, it had been inferred that the organ of Amativeness ought to be large. But even taking this alleged discrepancy in its strongest possible shape, a cerebellum "of average size" is surely a very different thing from "not the smallest trace" of any such organ. There seems to have been strong reason to suspect that the crime for which Orsolano was executed, was not the first of which he had been guilty; and even on his way to the gallows he boasted that if other girls were within his reach, he would do with them as he had done to his victim. Signor Molossi does not enter sufficiently into the details of the case to enable us to judge to what extent Amativeness was really a predominant feeling in Orsolano's mind. It seems to us that, taking into account the natural activity of Amativeness in youth, an average organ acting in conjunction with a brutal and barbarous nature, and unrestrained by any one intellectual or moral motive,

would be quite sufficient to account for the rape as preliminary to the murder. In the case of a person of fair intellect, and not excessive animal passions generally, the cerebellum might be expected to exceed an average size; but in such an instance as the present, the whole phenomena would be in exact accordance with the almost idiotic brutality which the development indicated. We have seen cases of this latter kind in asylums for the insane, where, in proportion as the mind became weakened, an habitual salacity was displayed, less from natural intensity of the feeling than from the absence of any active sentiment of a higher kind to guide or restrain it; and we wish that, in recording such cases, the distinction between the two states were more accurately observed by phrenologists. In the mean time let it be remarked, that in the large Destructiveness, and almost obliterated Benevolence, Speranza can find no indications of Orsolano's brutal cruelty; and in his flattened forehead, and large Secretiveness and Cautiousness, he can detect no traces of his idiotic intellect and animal cunning! Speranza's impartial and diligent attention, in short, was so vigilantly exercised, as to render him wholly incapable of perceiving even "a trace" of a coincidence between development and dispositions, which was at once perceived and acknowledged with surprise by all the medical professors, and most of the medical men of Turin!

Professor Speranza's next anti-phrenological fact is, that the Chevalier Bruni of the Lunatic Asylum at Florence, "after the most careful and attentive examination" of the heads of many lunatics confined there, had scarcely ever met with a fact which served to confirm Gall's principles. Signor Molossi very justly observes, that this may be all very true, and yet be no proof of phrenology being untrue; because Professor Speranza affords no sort of evidence that Bruni is himself sufficiently acquainted with phrenology to be able to observe with accuracy; and consequently, in the face of the opposite testimony of many able men at the head of our best regulated asylums, Bruni's *ipse dixit* is not worth two straws. Esquirol, said precisely the same thing of his experience at the Salpétrière, and yet it is well known to phrenologists, that every skull which he produced in opposition to Gall, served only to demonstrate the lamentable extent to which his own judgment was perverted and blinded to the truth by his long cherished prejudices.

Another of Speranza's facts has reference to the skull of a criminal executed for assassination and homici , nevertheless, "after the greatest diligence a

the learned Professor could not discover those convex prominences, described by Gall as indications of "large organs of assassination and manslaughter." We are very sorry for the disappointment which Speranza must have felt at the want of success with which his impartial diligence was in this instance rewarded; but our readers will scarcely be surprised at it when we add, that he knew nothing whatever of the man's history or character, except his being a homicide, and that when he examined the skull so attentively, he saw it only in passing through a village about four years before, when it stood shut up in a little iron cage nailed to a tree!! This at least is all the information which Speranza communicates regarding it, and certainly he shews no aversion to details when he has any to offer.

Another edifying case which Speranza adduces is that of a lady with a large family, in whom a *small* organ of Philoprogenitiveness was accompanied by a *strong* love of offspring. To this Signor Molossi logically and amusingly replies, 1*st*, That "no phrenologist will ever pretend to affirm that a woman ought to have a large organ of Philoprogenitiveness *merely because she has given birth to many children;* and 2*dly*, That to produce the conviction of the *warmest maternal affection*, simple and distinct facts must be produced, and not facts confused with other things. If the Professor will condescend to enter a little into particulars, and shew by her history that the lady really possesses the feeling in the highest degree with a small organ," Molossi will at once give up the point; but he wisely shakes his head when a large family is offered as *the only proof* of intense maternal love.

Our readers, perhaps, are already satisfied that the hostile opinion of a foreign professor who is unacquainted with the nature and evidences of phrenology, is not worth much more than that of one of native growth in a similar state of ignorance; but there is one other objection which we cannot resist quoting as an example of the readiness of Speranza to reject every thing adduced by the phrenologists, and to adopt every statement which *seems* hostile to their principles, whether consistent or inconsistent with his own previous averments. The worthy Professor says, "The accurate researches of Magendie and Desmoulins shew that the intelligence of animals becomes more perfect in proportion as the cerebral hemispheres become more complicated; or, to speak with greater exactness, the more extensive the intellectual faculties of animals, the more complicated does the surface of the brain appear." Blinded by prejudice, Speranza quotes this statement with a view to use it *against* phrenology, and therefore

adopts it without hesitation. Floundering on a little farther, he adds that, in the anatomy of the nervous system brought to light by these physiologists, "the external signs of the intellectual faculties are placed in a totally different situation from that assigned to them by the craniologist of Wurtemberg."

Passing over the error of designating Gall as "the craniologist of Wurtemberg," with which place he had nothing to do, let us here note and admire the impartial consistency of Speranza. In the outset of his warfare, we find him denouncing it "as a species of romance to place in a little nervous pulp thought, perception, and intelligence," and "as a desolation of the empire of sound philosophy" to have recourse to anatomy to explain the moral nature of man. Once heated in the strife against phrenology, however, Speranza forgets both the "romance" and the "desolation;" and the wind having changed which impelled him, he unconsciously veers round with it, and starts on an opposite course in full sail, and, following in the wake of Magendie, deliberately connects the extension of the intellectual faculties of animals with the complication of their cerebral hemispheres; or, in other words, connects *increase of intelligence with increased complication of "a little nervous pulp;"* and while he denounces Gall's indications of the organs, he offers no objection to "the external signs of the intellectual faculties" as given out by Magendie. Yet such are the men whose opinions are appealed to by a confiding public, and who exert their influence to turn aside inquiring youth from the examination of the claims of phrenology!

Following out the approved method of refuting phrenology by the observations of others, in preference to observing for himself, Speranza next quotes Buffon and Daubenton to shew that "the brain of some monkeys is *more voluminous than that of man*, and that some of these large-brained monkeys, so far from excelling in intelligence their smaller-brained brethren, are much inferior to them in intelligence." Happy fellows the first description of monkeys must be to have brains *larger than that of man* (this is no mistake; Speranza's words are—"*il cervello di parecchie scimmie è più voluminoso di quello dell' uomo*")! If Speranza is correct in this statement, it is time society were preparing for a war of extermination. We and the large-brained monkeys cannot both rule as joint lords of the creation. By many, man's superiority is ascribed solely to his having a good brain and *two hands;* but when the Professor produces his new friends, with a *better brain*, *four hands*, and a tail to boot, we greatly fear that man must go to

the wall. We cannot see what chance he will have against antagonists so formidably equipped. In the mean time, for the benefit of those of our readers who have not the good fortune to be on terms of intimate intercourse with these hairy and big-brained worthies, we may mention that Tiedemann of Heidelberg, as strong a disliker of phrenology as Speranza himself, in his work on the brains of monkeys, "has accurately delineated and described the progressive diminution and final disappearance of the convolutions of the brain, as we descend in the scale from the monkeys to the rodentia, and shewn their gradual diminution to correspond exactly with the diminution of intelligence." Signor Molossi adds, that on comparing American monkeys with those of the old world, the brain is found to be more voluminous in the former, although they are less intelligent than the latter; but, "with regard to both the number and the depth of the convolutions, the brain of our monkeys is comparatively *superior* to that of the American." In some species of the *sapajous*, which have a brain *relatively* larger than that of man, "their respective convolutions are either null or almost wanting." It did not suit Speranza's purpose to refer to Tiedemann on this subject, or to allude in any way to the influence of convolutions on the manifestation of mental power.

Professor Speranza sums up with the notable discovery that if phrenology be true, "there will no longer be any need of either logic or the study of the human heart." If he himself is to be considered as a type of the amount of both which can be attained without phrenology, we cannot help thinking that he has demonstrated the "need" to be of the most urgent and distressing sort; and considering how severely the patience of Molossi must have been tried in meeting objections proceeding from ignorance and prejudice alone, we cannot but admire the candid and philosophic spirit in which he takes leave of his professorial opponent. "All this (shall I say it for the consolation of those who dislike seeing the principles of the science more extensively applied?) all this shews that phrenology, though certain in its principles, presents difficulties in its practical applications, which can be overcome only by much study and perseverance; but the necessity of these studies and that perseverance, also proves indubitably that without the good guidance of logic and a profound knowledge of the human heart, no physician, no educator, no criminal legislator, can be truly a craniologist, and that to be in reality a craniologist, in the true and strict sense, implies necessarily being a philosopher. From this and the preceding considerations, I conclude that phrenology is a science, the perfection

and exactness of which depend entirely on the perfection and exactness of human judgments, and that the wish to have it generally diffused among nations is equivalent to a wish that the practical and reflecting faculties of these nations should be generally cultivated. I conclude, farther, that the non-perception of the importance of its applications in those countries where it is still little appreciated, or where the important bearing of anatomical and physiological studies upon the moral and intellectual nature of man is not yet seen, is no sufficient reason for deciding that it is either untrue or incapable of being used. The objections brought forward by the Professor against craniology seem to me to derive their origin from that common prejudice which considers it 'absurd' to take the aid of anatomy in investigating the moral nature of man; and hence, in answering these objections, I have wished to answer all the prejudices with which philosophical doctrines, founded upon physiology and anatomy, are commonly received, and especially that doctrine which has a special reference to the structure and functions of the brain and nerves." (p. 45.)

We shall not weaken the force of these remarks, by any comment of our own. Their spirit forms a beautiful contrast to that under which Speranza has conducted his attack.

Signor Molossi's second chapter contains answers to "the recent objections of the Signor Councillor Chevalier Guiseppe Frank against Phrenology," which appeared in the *Biblioteca Italiana* of October 1839, and which were also answered in the *Politechnico*. Again, the observation forces itself upon one's notice, how impossible it is to find an opponent who is bold enough to rely upon *his own* experience as subversive of phrenology, or to bring forward a distinct and *complete* statement of the facts which he assumes to be hostile to phrenology. Following the traces of his predecessors, Dr Frank cites the case of a criminal, in whose head "none of the cerebral organs were in accordance with the conduct of the individual," who was executed for murder and robbery, and yet in whom "the organs of Destructiveness and Acquisitiveness were scarcely at all developed." Dr Perrot, however, states in the very same letter from which this account is alleged to be taken, that the organ of Destructiveness is "*très prononcé, pointu et allongé*," very large, pointed, and elongated. If Dr Frank had taken the slightest pains to inform himself of the facts, he would never have copied blindly from the *Gazette Medicale* such a blunder as this, especially, after the notable figure which the same Gazette made in the case of the murderer Soufflard, and which also is worth alluding to

here. The Gazette inserted a most incorrect account of Soufflard's development, as given by M. James, Member of the Royal Academy of Medicine, and physician of the Hotel Dieu, who represented it as quite at variance with phrenology. Upon this, the Phrenological Society of Paris, with its president and secretary at its head, formally denied his accuracy, and publicly defied him to present himself at a public meeting of the society with the skull in his hand, when they would undertake to satisfy every one present, that, contrary to James's assertion, "the organs of Combativeness, Destructiveness, Acquisitiveness, and Amativeness were extraordinarily large, and the organs of the moral and intellectual faculties weak." Of course, the challenge was not accepted; James felt that the result would be too mortifying. And yet such is the description of facts on which he and Frank demand the rejection of a great discovery!

Another of Dr Frank's "facts" is "the great depression precisely in the situation of the organ of Number" in the Sicilian calculating boy Mangiamele; this being the identical boy mentioned in our last number (p. 133), by Dr Zarlenga of Naples, as constituting "a triumph of phrenology!"

One significant proof of the weakness of the opponents of phrenology is the rapidity with which every new objector is elevated to the throne from which his predecessor has tumbled, either at the touch of the phrenological wand, or from his own inherent want of equilibrium. Hence the American, European, and Chinese celebrity of Dr Sewall of Philadelphia, whose refutation of phrenology is already as well known at Berlin, Milan, and Pekin, as at New York or Boston. But thanks to Molossi, the blow from the cudgel of Caldwell which dethroned Sewall in the United States has already, by its reverberation, deprived him of all authority in Italy; and to the phrenologists of the latter country the name of "Signor Carlo Caldwell" will henceforth be almost as familiar as to his friends in Kentucky. There is great and untranslateable zest, we think, in Molossi's denunciation in italics of Sewall's objections as "*un impasto di plagiarismo, di raffazzonamenti letterari, di pervertite citazione, di mal fondate e ingiuriose accuse contro i frenologici e la frenologia, e di altre grossolane falsità expressamente inventate coll' intenzione d' ingannare.*" The original sentiment is Dr Caldwell's, but it has lost nothing of its terseness and vigour in Molossi's translation.

In Signor Molossi's second section, a comparison is made between the relative values of Reid and Stewart's philosophy and that of the phrenologists; and a translation is given of

the whole correspondence which appeared in Vol. X., p. 301, of this Journal, between a councillor and an academician, on the occasion of Mr Combe becoming a candidate for the Edinburgh Logic Chair; and it is gratifying to find that the principles there brought out are felt to have a general interest even in a foreign country. Several other authors and objectors, such as Lelut, Berard, Montegre, and Flourens, are next examined, and their philosophical merits and deficiencies shewn up in a candid and effective manner.

The last article in the volume before us consists of a reply to the objections of Laffargue, drawn from comparative anatomy. The principal aim of M. Laffargue is to shew that "the different forms of the skull correspond invariably to the different attitudes or postures belonging to man and other animals, without any regular correspondence to the moral and intellectual dispositions indicated by phrenology." Here, however, M. Laffargue gratuitously assumes the attitude to be the *sole cause* of the form of the skull, and consequently his argument as against phrenology goes for nothing. That the attitude and shape of the skull are always in harmony, we may safely infer from the whole of creation. We nowhere meet with inconsistencies or contradiction in the structure of animals; but it is a strange assumption to affirm on that account that the existing harmony is the first and chief object of peculiarities of organization. According to all rational philosophical principles, the first requisite in the construction of the animal organization is to fit its possessor for the mode of life and position which the Creator intended it to occupy; and the harmony between its different parts is a secondary, we had almost said a consequent, result. But as the subject of comparative anatomy and its relations to phrenology has recently been discussed in our pages, we need not pursue it here. We shall be glad to meet Signor Molossi on the appearance of the second part of his work, and trust that it will be not less effective than the one just noticed.

A. C.

II.—*The Interdict.* A Novel, in three volumes. London: T. and W. Boone, New Bond Street. 1840.

It is a long time since this Journal has noticed any thing in the shape of a novel. In the stirring time of Sir Walter Scott's rapid succession of "fictions true to nature," we had a pleasing and useful exercise in shewing, by phrenological analysis, *why* these are true to nature;—*how* the descriptive

and characteristic painting in which they abound, is a portrait of the working and counter-working of the same faculties which our science has established to be primitive in the human mind. In our second volume (page 55), we reviewed a novel called "The Inheritance," which was quite as able to stand a severe phrenological test as any of the Scottish Wizard's. Both he and the author of that work, like Shakspeare himself, painted what their own powerful faculties enabled them to *observe* of human conduct, and infer of human motive; but, not being phrenologists, they painted the characters and their actions without knowing that their various manifestations sprung from certain faculties, working by means of ascertained material organs in the brain; and as, at the time they wrote, the philosophy of phrenology had not *leavened* literature nearly to the extent it has now done, so as to have led them unconsciously to steer by its guidance, theirs was the triumph of intuitive sagacity. We can trace the aid alluded to, taken unconsciously, at least unavowedly, by some more recent writers of fiction; but the author of the work before us—known to be Mrs Steward of Yarmouth, an Irish lady—is the first, and it is a proud distinction, to have announced to the world that she *has* been guided by the new or phrenological philosophy of mind and man; and we are delighted to say that she has succeeded in vindicating the title, and demonstrating the power, of that instrument when employed in a field where its character was doubted, nay, denied by some of its own disciples,—the field of imagination. Why should truth spoil imaginative fiction, whose chief boast is that it possesses *vraisemblance*, or likeness to truth itself? What is poetry in its loftiest range but "image," fitted to delight Ideality,—"sentiment," exciting often to rapture Benevolence, Hope, Wonder, and Veneration,—and deathless "thought," the glory of intellectual man? The field of the supernatural, it is true, may be circumscribed by more philosophical views of the natural; Oberons and Ariels may disappear; but if song be, as the poet well says, "the eloquence of truth," what a scope for it will there not remain in the workings of the higher faculties—of those noble faculties which we have named; how much to cheer, to melt, to thrill, to astonish; and how much increased the power of the poet to work these ends, when he is philosophically acquainted with the mighty engine he wields in the means. This is Mrs Steward's great advantage in her present work. A sound mental philosophy has been to her, instead of an impediment, a powerful ally in her picturing of characters; all of which manifest faculties which she discriminates and controls; while their action and reaction produce

incidents so exciting as deeply to interest even the ordinary novel-reader, who sees not the springs she moves. In her hands the moral sentiments must ascend by their native *upwardness*, and the animal propensities sink by their downward tendency; the first ennobling the lowly, the second debasing the really ignoble and vulgar, in spite even of coronets with which a blind and misplaced veneration may have encircled their brows.

Without analysing minutely the story, or bringing into view the subordinate characters, all of which are fitted into their places, according to their predominant faculties, with phrenological precision, as will not fail to be apparent to any phrenologist who reads the work itself,—stating, however, in general, that the narrative is enlivened by humour, wit, and drollery,—Irish drollery, as abundant and rich as ever flowed from Irish pen,—we have space only to notice the main object of the author, namely, the impressive contrast in which she has placed obedience and disobedience to the natural laws, as conferring or marring human happiness.* Her leading characters are ranged on two distinct sides, namely, those who obey and those who defy these divine institutions. Helen and Marion are sisters, and, with their brother Walter, are the care of an affectionate and excellent uncle and aunt, Mr and Mrs Fitzgerald, residing in a romantic retirement in Ireland, in rural simplicity, adorned by genuine taste, and mental and moral culture. The whole family live in that harmony and pure affection which is the result of well-balanced faculties; the activity and predominance of the higher producing the greatest possible amount of human happiness. They are accidentally visited by two young men on a picturesque tour, who, after some incognition, turn out to be a Lord Sanford and a Mr Fielding, both accustomed to the highest society, but widely differing in their characters. The first is one of the worst specimens of that vulgar class of the nobility, who are lapped in luxury and self-indulgence, and *educated* to hold all the other grades of mankind as forming the mere base and shaft of a column solely intended to support themselves, the Corinthian capital; while they have no more knowledge of Nature's institutions and their own place in Creation, than the Hottentots or New Hollanders. To them all plans or projects for social improvement are as unwelcome as they are misapprehended; and are obstructed by them from an undefined fear that they are calculated to raise the other grades of so-

* The author gratefully alludes to the writings of the Messrs Combe, which, based on phrenology, have done much to elucidate the philosophy of the natural laws, and the moral government of the world.

ciety, and lower or destroy their own. To talk to such a man as Lord Sanford of obeying the natural institutions, instead of following his own selfish inclinations, were to speak to him in an unknown tongue. The other, who turns out to be the heir of Sir William Fielding, Baronet, is a young man of elegant person and manners, and highly cultivated mind. Phrenologically speaking, he has a choice endowment of the moral sentiments, which have led him to love the new science and its moral applications, demonstrated to his clear intellect to be true. That such an individual should have wasted his time, and hazarded his feelings, by intimacy with a fashionable sybarite like Lord Sanford, unless with the hope of turning his mind to the truth, is certainly not perfectly *vraisemblable*. Our readers may suppose, that, while Fielding obeys the natural laws as divine commands, Sanford lives in ridicule and defiance of them.

The author has so constructed her story, that these young men shall both be put to trial. The hereditary taint of insanity is the melancholy portion of the beautiful Marion; and as Helen is held to be her full sister, till it is declared otherwise in the *denouement* of the story, she too, for the time, has the same mark upon her. Such was Fielding's belief. Sanford becomes deeply enamoured of Marion. This excitement oversets the balance of her brain, and she evinces unequivocal symptoms of insanity. In the face of this distressing revealment, and in spite of the determined opposition of Marion's guardians, he contrives an elopement with a creature who knows not what she does, and marries the beautiful maniac. The *interdict*, on the other hand, is respected by Fielding and by Helen, to whom he is devotedly attached, although she has shewn no symptoms of that malady which was too plainly manifested by Marion when Sanford selfishly and criminally married her. Of course, the sacrifice by Fielding and Helen of inclination to duty is made the most of by the author's command of pathetic narrative, and exquisite sentiment. After a short and delusive recovery produced by change of scene, travelling, and introduction to high and dissipated society, and after having given birth to an idiot child; Marion relapses into her disease in its most aggravated form. She is destined by her unfeeling husband and a Dr Oldstyle,—a man naturally of a low and vulgar mind, and in whom the ignorance of insanity and its treatment till very lately so general in the medical world, is therefore appropriately enough satirised—to the severe and cruel restraint of the old style, in one of those horrible places called "mad-houses," which, as they were, the

author graphically and too truly describes.* "Do they think," asks the author, "that loss of reason involves loss of feeling? Is wretchedness a mark for outrage? The finest nerves are shattered soonest. To me there is a sanctity about these blighted creatures. I would not approach a paragon of gifted intellect with half the reverence, the cautious delicacy, that I would Lady Sanford." Helen and her brother, who takes a leading part in the incidents, and is throughout the narrator, make a voyage from Cork to London, where their sister Lady Sanford is; and obtaining entrance into the lordly mansion, in the inferior part of which she is yet a cruelly restrained prisoner, succeed in assuaging, by gentle and kind treatment, her terrors, and gradually consigning her to repose. There is much of effect in the description given of Marion's violence and unmanageableness under the now happily-exploded system of harshness, force, and constraint, as contrasted with her subdued and touching gentleness when addressed in accents of kindness and affection. "'Mrs Brice will inform you of our arrangements,' said Miss Berrington, the kind coadjutor of Helen and Walter, in dismissing the former attendants: 'you may go; these persons take your watch to-night.' 'They should have stout arms, then,' muttered the woman with a shrug; 'better put her where a chain will save their labour.' I looked after the inhuman wretch, wishing that she were not woman. Helen had fallen on her knees, and buried her head between her hands. Miss B., with her finger held up, seemed to mark the retreating footsteps of the guard; the sound died away; the beating of our hearts was audible.—Marion's aspect remained frightfully changeless. At length the bloodless lips began to move; an effort was made to disengage the arms; there was a rapid quivering of the eyelids; Marion spoke in an underbreath, but with palpitating earnestness. 'Take it, Grace—hide it—'tis *my* child—they hold me—they won't let me touch it—take it to the sheeling—where's Slauveen? give him the child—Walter won't come—Helen won't come—Look, Granny, they force my wedding-ring upon my arms. Oh! that was a weary bodement! 'Tis crying; hush it, Grace; the Marchioness will hear.' She began a low wailing lullaby, interrupted by disjointed soothings. 'Hush, child! the Marchioness will kill you; she killed me; she killed me in my sleep-life years ago. Hush! Grace will nurse you; Grace will speak of your

* See the Parliamentary Reports of 1815 and 1816. The extreme horrors there attested are too startling even for fiction. Of late years these horrors have ceased, and the condition of the insane, both as to moral and physical treatment, has undergone vast melioration.

dead mother; no one else will. Dear Aunt! Uncle! I love you all even in my grave. Oh! babe, will you come with me to heaven?'" There is a continuance of the same kind of raving, which all who have seen the insane will recognise as resembling their extravagant imaginings; for Lady Sanford believes that she is dead, exclaiming, "'I will not be chained! I am dead—I *am* dead—look, there's the coffin—feel—dead, quite dead—cold. Ye are mad! chain me! can you chain a spirit? Dear child! don't strangle it. Ah! save me.'" The change of treatment commences with a question from Helen; "'Will you be gentle if I remove these ligatures?' 'Very—very gentle, indeed, madam,' said Marion, crouching before her sister like a frightened child. Helen removed the bands, and made a signal that I should keep upon the watch; but Marion was perfectly docile. To my inexperienced judgment a miracle seemed operated."* The process of soothing and encouragement proceeds with an affectionate sweetness that could not fail in a real case. The patient is long incredulous; for, says she with bitter satire on the *old-style* treatment of the insane, "nobody tells truth here." In a room without barred windows, "we laid the blameless sufferer upon a bed—she seemed absorbed in passive wonder. Helen lay down beside her, and softly patted the wasted hand; the familiar touch acted as an opiate; gradually the troubled spirit was becalmed; she slept profoundly." The indefatigable brother and sister succeed, by an appeal as powerful as that of Jeanie Deans to Queen Caroline, in softening even a Marchioness Dellival, whose heart has been hardened by rank and fashion into cast-iron, yet to whom, as his step-mother, Lord Sanford has assigned the charge of his unhappy wife; and, instead of the madhouse destined by the Marchioness, take the suffering and injured Marion back to Ireland, where, in the loved scenes of her childhood, her alienation assumes a milder and a happier character, till the over-excited brain loses its nervous influence, and she breathes her last. We wish we could give specimens of the powerfully pathetic writing in which this touching narrative is told. But as our object is less to display the literature than the philosophy of the work, we must deny ourselves. The idiot child is also touchingly described.

By an unravelment with which, in a novel, we find no fault, it comes out in the conclusion that Helen is not full sister to Marion, and therefore, as the daughter of a healthy mother,—

* This miracle is of daily occurrence now in asylums conducted on the kind and benevolent principle. In the Hanwell, Glasgow, Dumfries, Montrose, and other asylums, restraint is almost entirely disused.

a fact which, for reasons given, could not be sooner revealed, —not being under the fatal interdict, is united to the happy Fielding.

We trust that this successful experiment will induce future moral fictionists to steer their course by the same lights which have so well piloted the author before us; who, had she written nothing else,* would be entitled to take a high place among novelists. While philosophers are observing facts in nature, and establishing principles, they ought to hail as powerful allies the writers of ideal narrative, who are willing to shew how these principles *look*, when invested with the circumstance of real life, and who impress with all the power of eloquence lessons of vast importance to mankind. He or she would be reckless indeed, who, after reading "The Interdict," could contract a matrimonial alliance with hereditary insanity.

III. *The Anatomy of Suicide.*—By Forbes Winslow, M.R.C.S. London: Henshaw, 1840. Pp. 339.

This is an interesting work. If the collection of the most extraordinary and harrowing cases of self-destruction which have been recorded, from that of Samson to the last victim of the Serpentine,—if a fair representation of the opinions and experience of others, and a brief exposition of the relations of the subject to mental derangement, have been the objects of the author,—he has succeeded. The title of the book is a misnomer; it is a history of suicides, and as such will prove a most valuable and inexhaustible source to those who require references and illustrations in treating the suicidal tendency analytically. But the philosophy of suicide is still unwritten; and when this is accomplished, it will be found that this diseased state,—as distinctly a disease, indeed, as homicidal mania,—has been investigated in reference to the cerebral organization, in fact, upon phrenological principles. It is not insinuated that Dr Winslow has written as an opponent to these principles. In many places he has obviously availed himself of the views which phrenologists hold; he has borrowed largely from their writings, and once or twice he seems to have been tempted to adopt the elucidation which these views afford; but, lacking courage, he evades the diffi-

* Mrs Steward is author of the "Mascarennas" and the "Prediction," both popular novels.

culty, or touches, without crossing, the confines of truth. Throughout, however, there is wanting a distinct leading acknowledgment of the dependence of the propensity to self-destruction upon vicious conformation of the brain, disease of its structure, or irritation acting indirectly upon it. The author has displayed great industry in collecting the observations of pathologists, as to the morbid changes in the brains of *suicides*. He has classified the results of his inquiries in a table, which, when analyzed, shews that of 1333 dissections, 870 exhibited extensive disease of the brain proper, its membranes, or the skull; in 100 no structural change could be detected; and in 363 other organs were affected. That more than three-fourths should have presented cerebral disorganization is worthy of notice, as proving, either that the cases of which the table consists, must have occurred in lunatics recognised as such, or that suicide is an advanced, or the *last* stage of chronic insanity, rather than the result of a temporary and transient condition. In whatever light viewed, these calculations shew that the tendency to self-destruction does depend upon the same causes as insanity. No organic change characteristic of suicide has been discovered, says Dr W.; and to expect that it should ever be discovered is Utopian and unphilosophical. Suicide is a symptom, a sequence, of many modifications of mental derangement and disturbance, which may and do arise from various alterations in the intimate structure or conditions of the nervous tissue: which changes may be as palpable as those recorded above, or evanescent and passing away at the close of life; or, resident in the proximate constituents of the tissue, may elude all but microscopical discovery; or, consisting of chemical changes of the fluids, may for ages defy the knife and eye of the most careful and unprejudiced anatomist. To pathology, at all events the pathology of the nervous system, neither the microscope nor chemistry has yet extended its aid. Two chemists have indeed declared that they found a greater quantity of phosphorus in the brains of lunatics than in those of sane individuals, but the suggestion has never been followed up. It is the duty of the present coroner for Middlesex, who is reported to be a phrenologist, to ordain, and of others, who are possessed of less power, to solicit, opportunities for prosecuting such researches. Connected with this part of the topic, are the opinions of Dr G. Mantell, quoted by Dr Winslow, we believe from the *Lancet;* which, as the results of observation by a practical man, and as hints to those who have means of extending the investigation, deserve circulation. "During the last twenty-five years," says Dr Mantell,

"many cases of suicide have come under my notice, in which the mental hallucination which led to self-destruction has depended on lesions of the brain, occasioned by slight or neglected injuries of the head, to which neither the patient nor his friends attached any importance. In several instances of self-destruction without any assignable moral cause, and in which no previous signs of fatuity or insanity were manifested, I have found, upon a post-mortem examination, either circumscribed induration or softening of the brain, or thickening and adhesions of some portions of its membranes. The conviction was forced upon my mind, that very many of the so-called nervous or hypochondriacal affections, which are generally considered as imaginary, and dependent on mental emotions, are ascribable to physical causes, and frequently originate from slight lesions of the brain."

IV. *On the Study of Natural History, as a Branch of General Education in Schools and Colleges.* Being a paper read before the Natural History Society of Belfast, on 26th November 1840. By Robert Patterson, Vice-President. Belfast: Philips and Co., 1840. 8vo., pp. 29.

In this pleasing essay Mr Patterson very successfully vindicates the claim of natural history to be adopted into the ordinary curriculum of education. Not only is there a natural appetite in the young for knowledge concerning the objects of natural history; but the possession of that knowledge when attained is permanently conducive to happiness through life, and, what is of perhaps still greater moment in an educational point of view, the exercise which the perceptive faculties receive during its acquisition, *invigorates them for all other pursuits* in which they may contemporaneously or subsequently be engaged, besides tending not a little to create habits of attention, method, discrimination, and accuracy. "By thus directing the attention to various external objects which are regarded with interest, we learn the very useful habit of 'having our eyes about us.' We have all read in our schoolboy days the story of 'eyes and no eyes;' and we all know the difference which exists among educated people, as to the power of observing what is actually before their view. One sees a part only, and that imperfectly; another, at a glance, takes in everything peculiar to the scene, almost by intuition. That prompt perceptive powers are desirable, and that they, to a great extent, are dependent on cultivation, every one will admit. The objects which Natural History embraces are well

adapted to call these powers into action, and train them to promptitude and vigour. Hence, I rank among its intellectual effects, the *beneficial influence it exerts on the observant faculties.*" Among other good results of this study, Mr Patterson enumerates its aptitude to check that undue self-sufficiency which is so characteristic of the young and inexperienced. "If such an emotion should be produced by contemplating, from the first slight elevation of his course, the ground he has gone over, it is instantly checked, when he turns his eyes to that which lies before. Here 'Alps above Alps arise;' and by him who has climbed the highest will the greater altitude of the untrodden summits be best appreciated. The more we do, the more we feel that much remains undone; that mightier tasks are yet to be accomplished; and that our utmost knowledge in this state is but 'the palpable obscure' of ignorance. Those whose faculties are the most transcendent, and whose knowledge is the most ample, are ever the most willing to admit the restricted capability of the one, and the limited domain of the other; as Newton, after all his splendid discoveries, said, that he was like a child, who had been playing with pebbles on the shore, while the great ocean of truth lay untraversed before him. I place, therefore, among the mental effects of this study, *a true and fitting sense of the imperfection of human faculties, and the limited amount of human knowledge.*" Another lesson to human pride is found in the perception which a student of natural history cannot long escape—that man is but the sharer, in common with innumerable other species of sentient beings, of the bounty, superintendence, and creative skill of the Deity.

After noticing the liberation of the mind from idle hopes and superstitious fears connected with the actions of the inferior animals, as an additional good result of the study which he advocates, Mr Patterson observes, that it produces also "one effect on both the head and heart, which many will deem not less important. By keeping alive the desire to observe and to know,—to search out the TRUE, to appreciate the BEAUTIFUL,—it prevents the springs, which, in early life, well out within our hearts their pure and nursing waters, from being utterly choked up by the cares, the struggles, and too oft the engrossing worldliness, of manhood."

Proceeding to "the intellectual pleasures derived from the study of natural history," Mr Patterson adverts to the satisfaction which the mind receives from the acquisition of knowledge merely as such—from seeing the uses to which it may be applied—from perceiving the utility of objects to man—and from tracing the evidences of design and adaptation in

the structure of plants and animals. He adds:—"There is a host of pleasures awaiting the naturalist in every country walk, or every ramble on the beach. These must be felt to be properly appreciated; and he by whom they have once been experienced will alone comprehend the delight of carrying with him, wherever he turns his steps, 'gems hidden from the world besides.' These pleasures connect themselves with an invaluable store of cheerful occupation during periods of debility, or in those vacant intervals, to which even the most busy are occasionally subjected. I can speak, from my own experience, of the happy influence of natural history at one such period. When, after a severe illness, a walk of even a mile brought feelings of weariness, I found, during some weeks in retired lodgings on the sea-coast, that the longest summer day was too brief for the employments and investigations which the ocean furnished."

The moral and devotional effects of the study of natural history are well illustrated by Mr Patterson in his third section. The existence and importance of these are too generally acknowledged to make it necessary for us to dwell upon them here; our remaining space may therefore be more usefully employed in exhibiting what the author says on "natural history as a branch of general education."

"If partiality to a favourite pursuit," he observes, "has not warped my judgment, and I am right in attributing to the study of natural history the production of such effects, I am fully warranted in desiring that it should be made universally a branch of school education.

"The honour of first placing it in this position belongs, in this town, to our zealous secretary, Mr Bryce, who introduced it into his geographical class in the Belfast Academy. Of the good effects of this procedure, after it has been ten years in operation, Professor Bache bears witness in the following words:*—'The experience of this institution may be confidently appealed to in favour of the introduction of the elements of natural history into similar schools; it has not only been found to act favourably by a direct development of the intelligence, but to react also as a stimulus to the classical studies, from the terminology which must be employed, even in the elements of the science. Under the direction of the mathematical master, the pupils have a natural history society, which has collected a very tolerable museum, and which serves to induce exertion out of the school-room.'

"In the Royal Academical Institution of this town, the same subject has, under the Rev. Wm. Hamilton, become a

* Report on Education in Europe, p. 380.

branch of education in the English school; and a 'Juvenile Natural History Society,' organized by the boys themselves, has held its meetings in the Institution for some years under the guidance of a mathematical teacher, the Rev. I. Steen, who has latterly been joined in the management by Mr Hamilton. Here also a respectable collection of specimens has been accumulated.

"A distrust of the utility of such proceedings may, however, not unnaturally suggest itself to parental solicitude; and this cannot be stated more fairly, or removed more effectually, than by the following extract from a letter written by the Rev. Dr Bryce, the learned Principal of the Belfast Academy:—'The pupils, whose ages varied between the extremes of eight and eighteen, all entered with the greatest eagerness into these subjects; so much so, that, at first, I was short-sighted enough to feel some apprehension of their being led away from their severer studies by this new and fascinating pursuit. But I was soon set perfectly at ease; for there was, in a very short time, a marked improvement in the manner in which the other parts of their business were performed by those lads who had given themselves most passionately to mineralogy and geology. This was what I ought to have expected. When a taste is formed for any one intellectual occupation, it is easy to ingraft upon it a fondness for another.'*

"I may be permitted to adduce another evidence of the good effects of the introduction of natural history into general education. My venerable friend, the Rev. Dr Hincks, who, since the time of his arrival in Belfast in 1821, has uniformly exerted himself to extend and foster a taste for such pursuits, has informed me, that, for thirty years prior to that period; it formed a part of his course of instruction, both in Cork and Fermoy; and that he was always satisfied with the results. The course which I recommend cannot, therefore, be viewed as good only in theory: it is borne out by the experience of those who have had the best possible means of arriving at just conclusions on the subject.

"If reflecting and educated parents were to concur in the views here expressed, and were to require that natural history should be taught to their sons, as regularly as geography, its introduction into schools would soon become general, and by every teacher it would be studied as invariably as geometry or classics. At present it is needful that some direct advantage, such as a preference over rival candidates, should be held out to induce those who are anxious to gain employment as tutors, to acquire previously a knowledge—even an elemen-

* Drummond's Letters to a Young Naturalist, p. 311.

tary knowledge—of natural history. Were all teachers specially educated and trained for the duties of their important calling—were they all, if not conversant with the science, at least familiar with the art of education—a pursuit bringing with it the claims already enumerated, might be left to work its way to its proper place in school education. But as this is not the case at the present time, I can only hope for its introduction into the schools established for the middle and upper classes of society, from two causes:

"1*st*, The increasing desire of parents that it should be taught; and,

"2*dly*, The enlightened competition now existing among the principals of many schools, founded on the endeavour of each to make his own system of instruction the best and most comprehensive. To this spirit we may now attribute its introduction as a branch of general education into several first-class schools; and as we all know the influence of example, we may rest assured that in this particular they will, ere long, be imitated by others.

"With respect, however, to schools for the humbler classes of society, we naturally turn our attention to those under the commissioners of national education. In examining their school-books we find, that the fitness of natural history as a branch of education is admitted; for they contain rudimentary instruction in different departments.

But at the present time, natural history does not form a part of the course of instruction to which teachers are subjected in the training schools. It is left to the capabilities of each individual teacher, and the exertions of any zealous superintendent, to furnish the requisite information for converting the lessons into a text-book. This is to be regretted, for it is leaving to chance, the acquisition of that knowledge which ought to be the regular result of systematic study. We are to consider, however, that the national schools of Ireland are as yet in their infancy; that the system is one containing, in itself, expansive principles; and that with the growing wants, wishes, and capabilities of the people, a more varied and more substantial kind of mental diet will be afforded. There would, however, be no impropriety in making known to the commissioners the views entertained by this society on the subject, and respectfully recommending the introduction of natural history as a portion of the preparatory course prescribed to their teachers. Were it effectually introduced, the birds, the flowers, the insects which are seen in every walk, would supply the teacher with ample materials to arrest the attention, and awaken the curiosity, of his juvenile auditory. Each

fact which he had acquired from the professor in the metropolis, would by him be communicated to successive hundreds throughout the country. A taste for what is intellectual rather than for what is sensual would thus be generated, and be productive of the happiest effects on the character and morals of the community. Nor is it too much to expect, that when there existed knowledge on the part of the master, and zeal on that of the pupils, little collections would gradually arise, specimens of natural history would be the chosen ornaments of the school-house, and the pupils would look with pride on local museums of their own formation. Emulation would make one teacher desirous that his school should not, in this respect, be inferior to another; and thus gradually a small collection, formed almost without any expense, and illustrative of the prevailing character of the mineralogy, botany, or zoology of a limited district, would be found attached to the village school. Even in those schools which might remain unconnected with the national board, the same effect would, from imitation and competition, be gradually produced. I need scarcely say a word on the advantage which the science itself might be expected to derive from the host of zealous cultivators thus raised up, and who, through their teachers and superintendents, would be in connection with the natural history professor in the Normal School, and with the museum, exclusively of Irish specimens, which would there be formed. Such a collection would not only supply the illustrations required for his course of lectures, but would be of high importance as exhibiting the natural productions of Ireland."

Mr Patterson proceeds to argue that natural history should take its place among the physical sciences in colleges, as a regular and indispensable portion of the academical course. Its utility to clergymen is especially insisted on. He adds, that according to the report of Professor Bache, already quoted, natural history forms in the great majority of continental schools (of which that gentleman visited a vast number in various countries) " a regular part of the course of instruction, and usually occupies from two to four hours in the week. In some places, it is connected with physical geography or with physics; in others, it stands out as a distinct branch of education, and attention is given to its different departments in successive years. The entire report gives unequivocal evidence of its good effects in awakening ' habits of observation and reflection;' and also of its being ' eminently calculated to promote early religious impressions.' It also states, that the experience of the Prussian Gymnasia may be appealed to ' as proving the entire compatibility of such instruction with

an otherwise sound system; and the entire possibility of accomplishing it without neglecting other more important branches.'"

Appended to Mr Patterson's essay are the following excellent remarks made by the Rev. Dr Bryce at the meeting of the society before which it was read:

"Natural history employs a class of mental faculties not exercised by the studies in which children are usually engaged, and therefore furnishes a species of mental culture which can scarcely be attained by other means.

"Nothing is more absurd than to magnify one intellectual pursuit at the expense of another—to set up science against classics, classics against science, or this science against that. All are essential; and he is but a fraction of an educated man who has confined his attention to one.

"The great obstacle in carrying into effect the views brought forward in the paper, will be the deplorable apathy which at present exists with respect to intellectual education. Parents, in general, are anxious merely to give to their son those acquirements—often little better than mechanical—which are needful to fit him for some particular pursuit. This is mistaken and short-sighted policy. It gives knowledge, but without that intellectual training which would turn the knowledge to good account. It aims at enabling a youth to *make* money, but without fitting him to *enjoy* it."

This judicious publication will, we doubt not, tend to hasten the universal introduction of natural history into schools and colleges. In our opinion the craving which children exhibit for knowledge of natural objects, is of itself a not less clear indication that it ought to be administered to them, than is the appetite for food an indication that man is intended to eat.

V. *Du Traitement Morale de la Folie.* Par F. Leuret, Médecin de l'Hospice de Bicêtre. Paris, 1840.

On the Moral Treatment of Insanity. By F. Leuret, Physician of the Hospital of Bicêtre. Paris, 1840.

Contemporaneously with a movement in this country for the abolition of all restraint, and for the proscription of all painful impressions, in the treatment of the insane, there has appeared in France a work of considerable pretension, the production of the superintendent of a vast asylum, and an expression of the opinions of a body of practitioners; the great object of which is to advocate the employment of intimida-

tion, fear, and pain, as moral means of cure. M. Leuret declares that we know nothing of the seat of insanity, and that all therapeutical means have hitherto been employed without fixed principles, and without success. He proposes, accordingly, the entire abandonment of such treatment, and the substitution of means purely and strictly moral. Among these he enumerates isolation, occupation, music, and education; but it is very obvious that he places much more confidence in the efficacy of the douche than in any or all of these. One-half of the volume is occupied with cases in which this instrument is used and tested. Cold water is his panacea. Affusion and immersion are all-beneficial. But to the douche, or the descent of a body of ice-cold water from a height upon the head, while the body is plunged in a hot or tepid bath, is attributed sovereign power. This remedy has been long known to act by abstraction of heat from the head, and by the shock which it gives to the system; but to M. Leuret was left its introduction as an engine of terror, and as a mode of drowning delusions or forcing the reason to act soundly, and of frightening men into their senses. While we believe that M. Leuret expects too much from the harsh course he recommends, and may do infinite injury if he pursues it without discrimination; and while we conceive him to err sadly in rejecting the assistance of medicine; we admit that he is quite right in the principle, that sanatory effects *may* be produced through Cautiousness as well as through Benevolence or Adhesiveness; and that it is too much the tendency of the present day to reject the operation of powerful and useful impressions, because they are painful. His remarks upon the working and results of the school instituted by him for the instruction of the patients in reading, writing, and arithmetic, as a means of restoration to reason, are highly interesting.

VI. *The Penny Cyclopædia. Article "Phrenology."* (Third Notice—Objections considered.)

In our last number, we said that of all the representations of phrenology given by opponents or non-adherents, the article in the Penny Cyclopædia contained the most accurate account of the doctrines, and the most honest statement of objections, which we had seen, and that therefore we intended to consider its adverse propositions in detail. We proceed, then, to consider the other objections of the Cyclopædist.

"The necessity which is felt," says he, "of limiting the comparison of cerebral and psychical development to individuals of the same species, proves that *some other condition than size* is essential in determining the energy of each faculty, and *that peculiarity of form and position* of parts of the brain *may give the external appearance of excess or deficiency of size;* admissions which must throw doubt on the sufficiency of the only means which phrenology possesses of collecting facts to support its theory."

Unquestionably size in an organ is not the *only* condition essential in determining the energy of its function. Let us apply the Cyclopædist's objection to any other portion of the structure of man and animals. Is *size* in the bones the *only* essential condition in determining their strength? Do health, age, constitution, and even "peculiarity of form and position," go for nothing? No physiologist will maintain that they do; yet do we therefore conclude that *size* is *not* an essential element in their strength? Certainly not: we say that *size*, as a *cause* of strength, will always *in the same circumstances* produce the same effects; in other words, that when we select animals of the same species, and same age and health, and compare their bones with each other, vertebræ with vertebræ, ribs with ribs, tibiæ with tibiæ, we shall find that the larger bones have the greater strength. But no one will say that if we compare the compact vertebræ of the dog with the soft and cartilaginous vertebræ of the fish, selecting them of equal size, the powers of resistance will be equal in each, merely because the size is equal. The structure is modified in each species to suit its condition; and size, as a cause of strength, is acting in each in different circumstances.

The same observations apply to the muscular system. If, then, absolute size, irrespective of all other conditions and circumstances, were an invariable measure of power of manifestation in the brain of all animals, however dissimilar; if ten grains of cerebral matter in man, the horse, the owl, the frog, the flounder, and the bee, produced exactly the same amount of psychical energy, the fundamental principles of the inductive sciences would be annihilated. Yet this is what the Cyclopædist seems to think should be the case to render it possible for phrenology to be true.

It is not easy to understand precisely what the writer means by saying that "peculiarity of *form* and *position* of parts of the brain may give the external appearance of excess or deficiency of size; admissions which must throw doubt on the sufficiency of the only means which phrenology possesses of collecting facts to support its theory." If he had asserted

that peculiarities of form *in the skull* gave the *external appearance* of excess or deficiency of the brain, we could have understood and answered his argument. But when he speaks of peculiar forms and positions *of the brain* giving the *external appearance* of excess, &c., it is more difficult to see his meaning; because, as applied to animals, it is so little the case, that the constant argument of objectors is, that in them the "external appearance" is "*not* given" by the peculiar forms and positions of parts of the brain, but by the bones of the skull. He proceeds, however, to say, that "if *structure* and *form* render it impossible by the size alone to determine the comparative psychical characters of two individuals of different species, the same conditions may often disturb the results that should proceed from comparisons of size in the organs of two of the same species." The answer to this remark is, that for that very reason the phrenologists, in seeking for *proofs*, compare the particular organ with the others in the same head. But, as in healthy individuals of the same species and of the same age "the *form* and *position*," and also the *structure*, of the different parts of the brain are to all philosophical purposes nearly the *same*, they are quite warranted in using comparisons between individuals of the same species *as illustrations*, and even as proofs, where the difference in development is so marked as to swallow up all the other modifying influences.

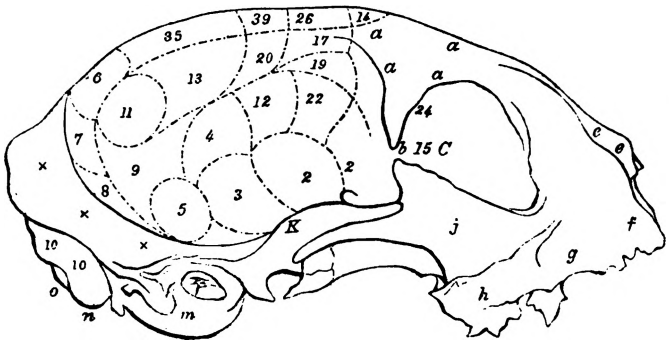
The Cyclopædist says in a foot-note—"Although, to meet the objections mentioned above, phrenologists insist on the necessity of comparing only individuals of the same species, it is to be observed that they readily make use *of illustrations* favourable to their opinions obtained by the contrary means; as, for example, in the determination of the organs of Combativeness and Destructiveness, by a comparison of carnivorous and herbivorous animals, and of that of Constructiveness, by comparing the heads of the hare and the rabbit." On this we observe, that the phrenologists having, by observations on man, ascertained the positions and functions of the organs of Combativeness, Destructiveness, and Constructiveness, and having, by observations on carnivorous and herbivorous animals, and on hares and rabbits, ascertained the absence of those organs in some, and their presence in others, have then compared the one species with the others; and this is a sound and philosophical mode of proceeding. The objection of the Cyclopædist seems to imply that they have adduced the existence of these organs in one species as evidence of their existence or non-existence in others; but this is an erroneous assumption. Dr Gall states, *historically*, that, by observing the difference above and be-

hind the ears in carnivorous and herbivorous animals, he was led to suspect that certain prominences in the brain which he observed above the ears in man, *might* be connected with the carnivorous propensity in him; but he adds that he verified this conjecture by numerous observations on human subjects. It would be incorrect to represent this as an example of attempting to "determine" certain organs in man by analogies drawn from the inferior animals. If any phrenologist has attempted to *demonstrate* the functions of the cerebral parts by comparing the brains of animals of different species, we concur with those who regard his proceedings as unphilosophical.

That the phrenologists prosecute their researches by direct observations on individuals in each species is matter of public record. Dr Vimont's work on Comparative Phrenology is regarded as the highest authority; and so far from founding his views on mere analogies, he has been led by direct observations to the opinion that "the faculty of Destructiveness has been bestowed on vertebrated animals as well as on man, as a species of auxiliary to aid their other faculties. The beaver and the squirrel cut and tear in pieces the bark, leaves, and branches of trees, to construct a cabin or a nest. The marmot gnaws a great quantity of herbs to make a warm bed in winter. Many birds could not construct a nest unless they tore in pieces many vegetable substances. The whole lives of herbivorous animals are employed in cutting, dividing, and destroying an immeasurable quantity of vegetable matter. When Gall and Spurzheim cite, in support of their observations, carnivorous and granivorous birds, as examples of the presence of the propensity to destroy in the one case, and the absence of it in the other, they commit a double error. Many granivorous birds are very fond of animal substances. I have seen fowls run with avidity to flesh, even that of a young chicken which had been cut in pieces. I have seen the same birds quit grain in order to eat shell-fish which had been thrown to them. It is quite certain that there exists a great difference between the skulls and brains of birds which live exclusively on animal substances, and those whose principal food is vegetables, a difference which Dr Gall has not correctly indicated, as I shall demonstrate; but, in my opinion, it is to be ascribed to the difference in the activity of the tendency to destroy in the different species, and not to its total absence in one of them." These remarks, be they well or ill founded in themselves, shew that Dr Vimont rests his opinions on direct observations made on the different races of animals, and not on loose analogies. He has observed the energy of particular mental powers in individuals of each species, and compared this power with the size of particular parts of the brain in

each, and by this means assigned special localities to different faculties, and special functions to different parts of the brain, in the different races. The positions of the organs, as well as the size of each in relation to the others, he finds to be modified in each species. He gives, for example, in Figure I., the skull of a full-grown cat, and delineates the organs on it as follows:

Fig. 1. Full-Grown Cat.



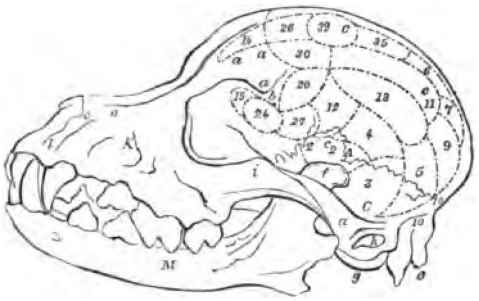
No. 2. Organ of Alimentiveness.
3. Destructiveness.
4. Secretiveness.
5. Combativeness.
6. Inhabitiveness.
7. Concentrativeness.
8. Attachment for life.
9. Adhesiveness.
10. 10. And the asterisks, Amativeness.
11. Philoprogenitiveness.

No. 12. Acquisitiveness.
13. Cautiousness.
14. Individuality.
17. Distance.
19. Resistance (Weight).
20. Locality.
22. Order.
26. Eventuality.
35. Perseverance (Firmness).
39. Mildness.

In fig. 2. he represents the skull of a spaniel bitch, with the organs marked; the numbers referring to the same organs, with the addition of the following not indicated in the cat:

15. Form. 27. Constructiveness. 30. Comparison.

Fig. 2. Spaniel Bitch.*



* The scale of this figure is reduced one-half.

In fig. 3. he represents the skull of a crow with numbers indicating the seat of the cerebral organs.

Fig. 3. Crow.

The numbers refer to the same organs as in figures 1. and 2., with the addition of the following:

No. 16. Size.
18. Geometrical Sense.
23. Time.
28. Musical talent.
29. Imitation.

We again remark that it is of small importance to our present argument whether the organs in these figures have all been correctly indicated or not; we adduce the drawings on this occasion only to prove that the phrenological mode of studying the functions of different parts of the brain in man

and animals, by means of observations made on known individuals in each species by itself, is actually followed. We have already demonstrated that it is the only *philosophical* method. Conclusions regarding the presence or absence of analogies between the brains of different species drawn *after* ascertaining, in this manner, the existence, the localities, and the functions of the organs in each, *may* be sound; but all conclusions on the same points drawn *before* ascertaining those particulars in each, are entitled to no consideration whatever, and on such alone the objections of the Cyclopædist rest.

The Cyclopædist proceeds—"In the limited field of the comparison of different individuals of the same species, phrenology is said by its supporters to be established by numberless facts of the correspondence of strength or weakness of each of the faculties with proportionate extent or deficiency of development of its organ; and they maintain that conclusions thus drawn from facts can be overthrown only by facts that contradict them." And in a foot-note, he adds—"Dr Spurzheim and his followers constantly call upon the public to decide upon phrenology by their own observations, proving that they regard it no difficult matter to observe and draw correct conclusions in the most ambiguous questions of physiology. Upon this plan there is certainly no theory so absurd but it will easily gain adherents."

When the Cyclopædist here speaks of "the field of comparison of different individuals of the same species" as being "*limited*," we understand him to use the word "*limited*" in contradistinction to universal, and we admit that in this sense the field of comparison is circumscribed. But we respectfully maintain that it is abundantly extensive to enable an accurate observer to arrive at truth. The range of mental power from drivelling idiocy up to the genius of a Shakspeare or a Buonaparte, presents striking *differences* in manifestations, while the difference in point of size between the idiot brain and that of such distinguished men is equally capable of appreciation. Nor are the cases deficient in extent of numbers. Their name is legion in all degrees of endowment and development. What then *are* the difficulties in cultivating this field of observation which the Cyclopædist represents as so formidable? The *object* of our investigation being to *discover* the *functions* of different parts of the brain, we are bound to use the most simple and effective method for doing so; to resort to the "*instantia ostentiva*" of Lord Bacon. In a court of law the judges and jury never puzzle themselves with feeble and indistinct testimony, when they can obtain strong and pregnant evidence. In the court of philosophy the rule is the same—

he who would discover truth should direct his attention to cases where the phenomena are prominent and unequivocal. We deny that phrenology when thus studied is found to present "the most ambiguous questions of physiology;" on the contrary, when cases of *extreme* power and deficiency are selected, they are easily observed; and it is by the result of observations in such cases that the merits of phrenology must be ultimately decided.

"Upon this plan," says the Cyclopædist, "there is certainly no theory so absurd but it will easily gain adherents." We would reverse the proposition, and maintain that where strong and marked cases are made the test of the truth of any doctrine, it will speedily be refuted if untrue.

The grand error into which the Cyclopædist and many others fall is, that they neglect extreme cases, and look only to instances in which the brain is of average size, and all its parts pretty equally balanced,—cases, in short, in which education and other external circumstances produce a powerful effect;—and because in these cases it is impossible to ascertain the strength of the faculties by observations on the head, they object altogether to the possibility of determining accurately the functions of the organs in any case whatever.

This, however, is unphilosophical. If there be a method free from difficulties, and cases that speak unequivocally to the senses and the understanding, these are the true touchstones of the science; and if they support it, the difficulties which attend instances lying in the middle line form no exceptions to its truth; they merely prove that there are obstacles in the way of its universal application.

It must have been from observing the tendency of many persons to bestow their first attention on these commonplace developments and powers, which often do present difficulties from the observers not attending to their nature, that Gall "admonished his auditors not to attempt practising phrenology." We regard Dr Spurzheim as in the right when he recommends personal observation as the only means of obtaining a thorough conviction of its truth; and, from having ourselves resorted extensively to observation, and read the record of the evidence in Nature's pages, we place less value on printed reports than do those who have not pursued a similar course. Evidence that can be read in the closet is preferred by many persons to proofs that may be seen and handled in nature; and because phrenologists admit the insufficiency of mere recorded evidence to satisfy a philosophical inquirer of the truth of phrenology, on account of the difficulty of entering on the record every minute circumstance which the hand feels, the eye observes,

and the understanding infers, and on this account recommend an appeal to nature, they are regarded as empirics. But this charge is unfounded. They have presented the evidence which nature affords, and the question must be judged of according to reason. They have recorded cases in their works, illustrated them by drawings, and collected skulls and casts sufficient to make out such a case of *prima facie* probability in favour of the truth of their science, as to warrant the most fastidious inquirers in resorting to personal observations, if they desire to obtain complete philosophical evidence; and this we regard as the grand use of facts, cases, and collections. In no way except by personal observation, can a conviction of the truth of phrenology be satisfactorily established in a philosophical mind.

We are aware that a list of cases might be collected in which phrenologists of reputation, when reporting on the whole organs of a particular head, have made discordant statements; but this fact does not bear on the question of the possibility of proving the functions of the different parts of the brain. It shews that phrenology is not susceptible of successful application in all instances: but in this respect it is exactly in the same condition with other branches of physiology, with Medicine, Geology, Chemistry, and other sciences; in all of which many cases occur in which even the masters differ in opinion. The true test of phrenology, we repeat, is to be sought in extreme cases. Now, we ask, if any phrenologists of even moderate skill have, for example, ever reported that the organ of Tune is as large in Anne Ormerod as in Paganini; of Colouring, in James Milne as in Douglas; of Number, in George Combe as in Humboldt; of Form, in Curran as in Geo. III.; of Order, in Curran as in the French M. D.; of Individuality, in Pope as in Sheridan; of Eventuality, in B. Franklin as in Pope; of Causality, in Sheridan as in B. Franklin; of Benevolence, in Eustache as in W. Hare; of Ideality, in D. Haggart as in Dr Chalmers; of Destructiveness, in Eustache as in King R. Bruce; of Firmness, in Mrs H. as in King R. Bruce; of Conscientiousness, in Haggart as in Mrs H.; of Cautiousness, in Dr Dodd as in King R. Bruce; and so on.

While there is reasonable facility in distinguishing the differences of size in these extreme cases, and undeviating uniformity in the feeble power accompanying the small organ, and the vigorous energy attending the large one (health, moderate age, and a tolerably good temperament, being assumed), it is impossible for an ordinary understanding to resist the conviction that a connexion exists between the power and the part of the brain; and it is unphilosophical to overlook

the palpable fact, and, in the eager desire to find objections to phrenology, and reasons for doubting its truth, to dwell upon cases in which few or none of the organs are remarkable for either great or small size, and in which the ascendency of one faculty over another may be determined by superior exercise, or other extrinsic influences.

These cases of medium development, as we have already remarked, do not afford evidence *against the truth* of phrenology. The inference which a skilful phrenologist draws when he meets with them is, that the ascendency of particular faculties, whether among the propensities, sentiments, or intellectual powers, depends on the external causes which have excited them into activity, and combined the action of several of them in particular groups; and this is the actual fact. He predicates the truth, and when the opponents object that in such cases phrenology is of no use, they forget that it is something to be able to tell whether a man who has one talent in a high degree, has also general talent or not,—or whether an individual remarkable for benevolence, is likewise honest and trustworthy.

The Cyclopædist proceeds—"Admitting that the size of a part of the brain may be taken as a measure of the power of the faculty of which it is presumed to be the organ, it can be a correct measure of power only when all the other conditions are the same. This is admitted by phrenologists, who maintain only that, *cæteris paribus*, size is a measure of power; and it may be admitted that in this proposition they are supported by the analogy of other organs of the body. But in all of them, and therefore probably in the brain, the other conditions are fully as important as size; yet phrenologists, in their usual practice, *refer to quality of the brain only when they find that the indications of quantity are manifestly opposed to their opinions.*" If the article in the Cyclopædia had not in its general features borne unequivocal marks of honesty and candour, we should have designated this as a deliberate misrepresentation; but we are convinced that it is only an unintentional mistake: it is, however, a great and important misconception. Scientific phrenologists (and by the practice of such only should the question be judged, because quacks and half-informed persons are no authorities in it any more than in medicine) in making their observations on the size and form of the head, take special care to note the age, health, and temperament, and generally the education, of the subject.

"Moreover," continues the Cyclopædist, "the estimate which phrenologists make of the quality of the brain, by observing the external appearance and temperament of the in-

dividual, is fallacious as a measure of the state of the whole mass, and is valueless as a sign of the structural condition of each of its several parts. But any one part of the brain *may* as well differ from the rest in quality as in quantity; an *assumption* which the phenomena of local diseases, which are much more common than general diseases of the brain, are sufficient to establish, and which phrenologists themselves admit in their explanation of monomania. There is here, *therefore*, a manifest source of fallacy *in every* phrenological observation; a source of fallacy comparable with, but greater than, most of those which have so long obscured the knowledge of the more simple departments of Physiology." We cannot admire the logic of this reasoning. Phrenologists maintain that *size* is so indispensable a condition of power of manifestation, that although when it is present its influence may be modified by other causes, yet no causes hitherto known can compensate for its absence. It comes then to be a question of fact, which mere argument cannot settle. Hence phrenologists have in vain challenged their opponents to adduce a *single* case in which *quality* of brain so far compensated for want of size, that a brain of less horizontal circumference than 13 or 14 inches manifests the mind with average power. There is *not one instance on record* of any quality, cause, or influence whatever, producing average manifestations from a brain of such diminutive dimensions. This proves, therefore, that size is a *fundamental element* in producing power, and that its absence cannot be compensated for by other agents. What is true of the whole brain, may be logically predicated of all its parts; and hence, if in any individual one or more organs are extremely small, *no* source of fallacy whatever intervenes to prevent us from correctly predicating that the corresponding faculty is exceedingly weak. By this means, even without farther evidence, it would be *possible* to prove phrenology to be *true*. The indication would be more difficult indeed, because the cases would be more rare; yet they would not be inaccessible. There are many more persons in a state of idiocy with respect to particular faculties than is generally believed. We have seen at least a dozen who are incapable of distinguishing certain colours; probably fifty who are incapable of perceiving melody; upwards of a dozen who are incapable of reckoning or perceiving the relations of numbers; in short, who are idiotic in these special powers; and in all of them the organs were excessively deficient. In these individuals, neither *quality* of brain nor any other condition compensated for the deficiency; yet these are examples taken from the smaller organs. We have known many who were as insensible

to justice and honesty, to the dictates of benevolence, to the delights of the beautiful, as if they had been born utter idiots, although in other faculties they were not deficient. In all of them the corresponding organs were extremely small, and quality of brain did not compensate for the defect. We repeat, therefore, that in cases of extreme deficiency no known influence will compensate for the want of size, and that hence there is *not* a manifest source of fallacy in "*every* phrenological observation."

Some readers may imagine that we are arguing merely for victory, and may regard this as special pleading; but we demur to the charge. The investigation of the functions of the brain is of high importance, both physiologically and morally, and in testing its truth it is not only allowable, but absolutely incumbent on us, to resort to those cases in which the facts are encompassed by fewest difficulties. It is inconsistent with the character of a philosophical inquirer to manifest captiousness or impatience: we are bound to search for and study the revelations of Nature at her purest fountains, however rare, difficult of access, or recondite they may be; and to draw from them the instruction which they afford. In other branches of physiology, how minute are the objects patiently unravelled, and how impalpable and evanescent are the phenomena watched and recorded, in order to discover the relations between structure and functions, and how eagerly does the inquirer select the most favourable circumstances to attain success! And why should the rules of philosophising and of common sense be *reversed* in the case of phrenology? Why should the eyes be shut against the *instantia ostentiva*, the cases which speak to the understanding with irresistible force; and be opened only to cases in which the phenomena are most entangled, and the inferences most complicated? In the latter cases, no doubt, we need to open our senses and our understandings more widely in proportion to the magnitude of the difficulties; but this is no reason why in the former we should close them altogether.

But to proceed with the Cyclopædist's objections, we ask, Is it true that "the estimate which phrenologists make of the quality of the brain, by observing the external appearance and temperament of the individual, is fallacious as a measure of the state of the whole mass?" In the first place, on the strength of numerous observations, we deny that it *is* fallacious; and, in the second place, we apply the proposition to the muscular system as a test of its intrinsic merits. Will the Cyclopædist maintain that the external appearance and temperament of a highly lymphatic individual is fallacious as a measure of the

quality of the whole muscular mass? or that, with equal confidence and satisfaction, he would choose for his assistant in labour and his defender in peril, an individual thus constituted, and one whose firm and compact frame, dark skin, and strong black hair, bespoke a highly bilious temperament, with all the power of endurance which accompanies it? Assuredly he would not. But, says he, these external appearances are "valueless as a sign of the structural condition of each of its several parts." Were we to read, "But the temperaments before mentioned are *valueless* as a sign of the structural condition of *each* of the muscles: any one muscle may as well differ from the rest in *quality* as in *quantity;* an assumption which the phenomena of local diseases of the body are sufficient to establish, and, therefore, the bilious frame may sink under fatigue as rapidly as the lymphatic, or one arm may be lymphatic while the other is bilious, or the extensor muscles may be lymphatic, and only the flexor muscles bilious in their temperament and structure;" no well-instructed physiologist would listen to these as reasons for placing equal reliance on the soft and flabby, as on the solid and compact muscular form, in enterprises where strength and endurance were required. It is of little consequence whether such things *may* or *may not* be, if, in nine hundred and ninty-nine cases out of a thousand, they *are not;* and this answer applies equally to the brain and its different parts as to the muscles collectively and individually.

The Cyclopædist enforces his argument by adding, that "Phrenologists themselves admit" his assumption "in their explanation of monomania." This is an error. Their doctrine is, that excess of size in a particular organ is one, and a common, condition or concomitant of monomania; the large size producing great energy of function, and that energy, from its excess, being prone to pass the limits of health. They add, that diseases also in the arteries, the membranes, or the bones, connected with cerebral organs, may cause diseased action in them, independently of their size; and that, hence, excess of size is not the only source of monomania. They will concede, also, to the Cyclopædist, that the quality or condition of a particular part *may* be inferior to that of the rest of the brain, and that this *may* give rise to monomania; but they affirm,—and those who have most experience in the treatment of insanity will support their opinion,—that for one well authenticated instance in which monomania can be fairly traced to the last cause, there are ninety-nine in which its origin can certainly be ascribed to one or other of the causes before mentioned.

The Cyclopædist proceeds—"There is scarcely less fallibility in the other element of a phrenological observation, viz. the determination of the mental character of the individual examined." The answer to this objection has often been presented. In *extreme cases* no such difficulties exist. It is not more difficult to decide that Paganini manifested a great talent for music, and Anne Ormerod none, than it is to distinguish between robust muscular strength and paralysis of the nerves of motion,—we had almost said between a square and a circle; and so in other cases of extreme force or deficiency in any of the faculties. We grant that, in cases in which the organs are all nearly equally balanced, it is difficult to predicate whether a certain act of alms-giving may have proceeded from Benevolence or from Love of Approbation, or from a mixture of both; and so with other faculties. But this does not invalidate the proposition, that there are *other* men notoriously vain and not benevolent, benevolent and not vain, and so forth; and if there exist such men whose peculiar dispositions and talents stand conspicuously forth, it becomes *possible* to compare such dispositions and talents with the size of particular portions of the brain.

The Cyclopædist concludes, that "sufficient has been done to shew that a person exercises a justifiable and even a philosophical degree of caution in witholding his assent from phrenology as it at present stands." We answer, that *no* justification is necessary for any man who has not studied phrenology and made observations in nature, in withholding his assent from it: the very fact that he has not studied, is justification sufficient. But the Cyclopædist has aimed at something more than justifying himself for its rejection: he has laboured with great ingenuity and zeal to shew that *no man can be justified* in yielding his assent to "phrenology as it at present stands;" and to dissuade rational minds from its study. In this we think he has not been successful. There is, however, a striking inconsistency between his admissions in its favour and his arguments against it. "We may grant," he says, "that its theory is ingenious and probable; that its plan of classifying the faculties of the mind is probably more natural than that of any other psychological system; that the existence of many of the assumed faculties admits of little doubt; that a comparison of the heads of different nations and individuals renders it almost certain that the general divisions of the part of the human cerebrum are correct; that in many cases, on balancing the evidence on each side, the result is, on the whole, favourable to the belief that the positions of several of the or-

gans in each part of the brain have been nearly determined." We have no hesitation in saying, that if the objections urged by the Cyclopædist were well founded, such results *could not have been reached*, either by the method which the phrenologists have followed, or by any other means at present known. The very admission that their investigations have been successful, even to the extent now stated, contradicts the assertion that the formidable obstacles described by the Cyclopædist really beset their path. No human intelligence could have advanced one step, if they had existed in the degree and to the extent which he has described. His valuable talents, therefore, would, in our opinion, have been more profitably employed in unravelling, rather than in weaving, a web of difficulties; and as we have a strong confidence in his love of truth, we hope still to see him ranged on the rational and philosophical side of the question. At present, he stands in a position inconsistent equally with reason and with phrenology.

VII. *Our Library Table.*

In *Tait's Magazine* for April, the reviewer of Mr Combe's "Notes on the United States" takes occasion to express, as usual, a thorough contempt for phrenology and "phrenologers." To borrow his own words, "we shall not suggest that, if there be organs at all, there must be many more than," according to the reviewer, "are hitherto recognised, and, among others, such an organ as that of *vindictiveness*. There is certainly such a disposition of mind." Unquestionably there is; and everybody acquainted with the rudiments of phrenology knows, that in Destructiveness it "recognises" the organ of that disposition—a disposition very susceptible of excitement through the medium of offended Self-Esteem. From the zest with which phrenology is again and again adverted to throughout the article, although at the outset formally "laid aside, frankly and at once," it seems to have been a peculiarly attractive subject to the reviewer. In noticing some strictures by Mr Combe on Lord Brougham's article on Dr Channing in the Edinburgh Review, he insinuates that they must have been prompted by the existence of antiphrenological opinions on the part of his Lordship, and by the circumstance that "Dr

Channing has long been a phrenologist." It is unfortunate for this theory, that Dr Channing is no phrenologist; and the unprejudiced reader of the "Notes" cannot fail to see, that in speaking of Lord Brougham, Mr Combe merely takes the part of an unhandsomely-treated philanthropist, in opposition to the writer from whom the unhandsome treatment came. The reviewer adds, that "Mr Combe insinuates that the Doctor is pressed upon because he is a Unitarian." We have in vain searched Mr Combe's pages for expressions susceptible of being twisted into such a meaning. Again, the reviewer, in saying, "We cannot see of what use phrenology is ever to be to the general run of mankind, if minds of the order of Barclay and Gordon cannot understand it"—is guilty of perverting the words of Mr Combe, which are, that these talented men "condemned what they *did not* understand." And why did they condemn? Not for want of *ability* to understand, but for want of that study of the subject without which no system of knowledge can be understood.—"If our recollection does not fail," says the reviewer, "the phrenologists formerly placed the African skull below that of the Red Indian, in the scale of man. Now, Mr Combe, at least, places the Negro considerably above the Red Indian." The reviewer's recollection *does* "fail;" for no comparison has till now been instituted between Negro and American skulls, and what has been written on the subject of these skulls,* is perfectly consistent with the result of Mr Combe's observations in America. It is farther affirmed by the reviewer, that "Mr Combe appears to have somewhat modified his opinion of the Negro head, in which he now says there are so many varieties, that he may perhaps find it rash to assert too much." In fact, however, the idea of there being many varieties of the Negro head, is so far from being new, that in a paper published by Mr Combe so long ago as in 1824, the following passage occurs: "The different tribes which inhabit Africa present very different appearances in point of civilization; but none of them have made so great a progress as the European nations. We have been informed by persons who have been long resident in the West India Islands, that great differences are observed in the natural talents of the Negroes, according to the provinces from which they have been brought. Some parts of Africa yield persons capable of becoming excellent operative mechanics; others, clerks and accountants; and some, mere labourers, incapable of any intellectual attainment. *It would be extremely interesting to learn in what respect they differ in*

* See Phren. Jour. vol. ii. pp. 10–13; and System of Phrenology, 4th ed. pp. 752, 749.

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the forms of the heads."*—The non-phrenological parts of Mr Combe's publication are treated with greater fairness than the phrenological; but as the latter alone fall within our province, we do justice enough to the reviewer in making this acknowledgment in general terms.

Dr Poole's *Memoranda regarding the Royal Lunatic Asylum, Montrose*,† is intended to serve as a history of that institution, and possesses more of a local than of a general interest. As the description, however, of the rise and progress of the first retreat for the insane in Scotland, and as a summary of the various obstacles and difficulties which are encountered in conducting such an undertaking to a happy and successful close, in introducing architectural, medical, and moral improvements, where change or a progressive advance with science and experience was but little contemplated or provided for, it well deserves to be consulted. It is calculated to shew, moreover, how much may be effected by the exertions of private individuals, and how much Scotland is entitled to claim of the merit of ameliorating the condition of the insane. The appendix to the work contains a vast deal of information concerning the mode of management in the private asylums around Edinburgh, and demonstrates, if demonstration be required, how urgent is the necessity for investigation and reform in many of these establishments. Wherever the subject admits of such observations, Dr Poole insists upon the paramount importance of a correct knowledge of the true physiology of the brain and nervous system in the treatment of insanity.

There is a poor article on Phrenology in *The Scientific and Literary Treasury, by Samuel Maunder.*‡ The writer admits that, "were phrenology an established science, and were it possible to draw unerring deductions from the data which it lays down, its discovery would be the greatest step ever made in mental philosophy, and its application the most beneficial ever used for the amelioration of the human race." "But," he adds, "neither is phrenology an established science, nor, if it were, can it ever be applied with certainty to the illustration of individual character. Many of the organs are so heterogeneous in their nature, that they may indicate faculties or dispositions diametrically opposite, while others are furnished with compensating organs, which balance the good

* Phren. Jour. vol. ii. p. 11. The passage is repeated in the System, p. 750.

† Montrose: 1840.

‡ London: Longman & Co. 1840.

or the evil of either, and thus render both ineffective. Thus you may have the organ of *Destructiveness* developed largely, and yet be a peaceable and good man. How is this accounted for? Your organs of *Cautiousness* and *Benevolence* are brought to bear upon it, so that it is tamed down to a very harmless affair, and would not even hurt a fly." The writer then resuscitates the old objection that no divisions of the organs are visible, and states that phrenology has at least "furnished a large fund of amusement, if not of instruction, and also given rise to many sagacious remarks from its votaries, upon the naughty propensities or amiable affections of their friends. But," adds the writer with a chuckling air, "it may be worth while, at the same time, to inquire whether the advocates of phrenology have not discovered that they themselves possess some fondly-cherished bump, by which their own exemplary character has been proved to their entire satisfaction, and so, out of pure gratitude to the science, had become its willing converts." Perhaps we, on our side, may be allowed to inquire, whether it does not sometimes happen that phrenology is opposed by individuals who perceive it telling too plain a tale about their own mental qualities. The article concludes with an extract from Lord Jeffrey's paper in the Edinburgh Review; Mr Maunder confessing, that in spite of having "more than once seen a lecturer arrange his craniological specimens, from the classic models of ancient Greece down to the orang-outang, and heard him descant, in marvellously learned terms, respecting the indications of Amativeness, Secretiveness, or Destructiveness, &c., which they severally presented," he still finds himself "in a most deplorable state of unbelief." It is not, we think, *very* "deplorable," that Mr Maunder continues an unbeliever while so ignorant of phrenology as he evidently is, even although having "more than once" been present at a phrenological lecture. From the "marvellously learned descantations" which he then listened to, and the article of Lord Jeffrey in the Edinburgh Review, he seems to have derived his whole stock of information respecting phrenology; so that, instead of finding in his *Treasury*, what the consulter of such a work is entitled to expect,—an exposition of the leading principles and facts of the science, on which a judgment might be formed by each reader for himself,—we are treated to little else than a series of flippant remarks and distorted representations. It is totally erroneous to say, that, according to phrenology, many of the organs "may indicate faculties or dispositions diametrically opposite." A large and well-constituted organ is always accompanied by strength of the special faculty which it serves to manifest; although, from the

strength of other faculties, the individual may not, *in his conduct*, follow its dictates. There is no fact in human nature more familiar than the existence of opposite emotions in the mind at the same moment, or than the difference of nature which the same men exhibit at different times, and under different circumstances. "The soul," says Goldsmith, "may be compared to a field of battle, where two armies are ready every moment to encounter; not a single vice but has a more powerful opponent, and not one virtue but may be overborne by a combination of vices." "Man," says Lord Kames, "is composed of many principles, which, though seemingly contradictory, are perfectly concordant." Sir Walter Scott describes George Staunton, in The Heart of Mid-Lothian, as having, with all his violence of character, "good temper, and reckless generosity." And we are told of Shungie, a New Zealand chief, that although "celebrated and dreaded as one of the very greatest of its warriors, and in battle ferocious and bloodthirsty as a beast of prey, yet was this man at other times all equability and gentleness, and not more distinguished by the mildest manners and the kindliest affections than by a natural taste and ingenuity in such arts as his rude condition of life had made him acquainted with." (Lib. of Ent. Knowl.; The New Zealanders, p. 290.) Such instances might be multiplied without limits; and we should be glad to learn any other explanation of the phenomena than the clear and consistent one furnished by phrenology. A man with a large Destructiveness, but a brain well-balanced in other departments, may be (like Othello) mild and peaceable in his ordinary behaviour; but he is conscious of the promptings of the faculty, is apt to find difficulty in checking its ebullitions, and, in circumstances tending to call it forth, is found to display it with vigour. In the words of Thomson—

> "Ev'n the good patient man, whose reason rules,
> Rous'd by bold insult and injurious rage,
> With sharp and sudden check th' astonished sons
> Of violence confounds; firm as his cause,
> His bolder heart, in awful justice clad;
> His eyes effulging a peculiar fire:
> And, as he charges through the prostrate war,
> His keen arm teaches faithless men no more,
> To dare the sacred vengeance of the just."

The object of an unpretending little work, entitled *Thoughts on Phrenology; or Phrenology tested by Reason and Revelation, by a Barrister of the Middle Temple*,* is indicated by the aphorism of Solomon, quoted in its title-page,—"He that answereth a matter before he heareth it, it is folly and shame

* London: James Nisbet & Co. 1841. 18mo., pp. 116.

unto him." The work is an expostulation with those who reject without knowing phrenology, and a statement of arguments calculated to dispose the previously hostile and contemning mind to candid and patient inquiry. From the moderation of its tone, and the good sense by which, on the whole, it is characterized, we think it well suited for this purpose; as far, at least, as regards that numerous class of readers which has little craving for precision of thought or expression, and readily dispenses with minute accuracy of detail. In short, the perusal of it may serve as a useful preliminary to the study of more scientific and precise treatises; but the author's phrenological knowledge is confessedly too limited to permit of a more important office being assigned to it.—In the first chapter, he maintains the doctrine of the plurality of cerebral organs to be a legitimate deduction from correct reasoning; in the second, he answers the objection that phrenology leads to materialism; in the third, the plurality of cerebral organs is supported by several arguments, some of which, however, are not very conclusive; in the fourth, the author maintains that the same doctrine is borne out by *facts;* chapter v. is entitled, "Various objections answered;" chap. vi. "Power in manifestation of mind dependent on the extent of cerebral organs—objections to Phrenology on this ground answered;" chap. vii. "Objections to Phrenology on the ground of fatalism answered;" chap. viii. "Consistency between Phrenology and Revelation." We do not always concur in the author's statements of fact, nor do his reasonings uniformly seem to us unobjectionable; still, however, there is much that may arrest the attention even of well-informed and intelligent readers. The concluding chapter is the one which pleases us least; some of the theological doctrines which the author unhesitatingly invests with the character of revelation, being among those concerning the scriptural foundation of which a difference of opinion exists among learned, intelligent, and honest men. In this way it happens, that phrenological doctrines which to one class of religious persons appear *consistent* with Scripture, may to another class present the aspect of *inconsistency.* And surely no sect, unless able to shew that it is endowed with infallibility, is entitled to assume that all other sects are in error.

Mr Deville has recently published a new and improved edition of his *Manual of Phrenology,* or Accompaniment to his Phrenological Bust. Besides an outline of the science, it contains an account of his extensive collection of casts and skulls, and particularly of that department which consists of casts from the heads of the same individuals at different ages. Of

these and other phrenological subjects, the volume contains a variety of illustrative engravings on wood.

Dr Charles Cowan's *Phrenology consistent with Science and Revelation*,* reached us just in time to be mentioned in this number; but as yet we have been able only to glance at its pages. It seems a well-conceived and vigorously-executed defence of the fundamental principles of phrenology, and a refutation of the objection that the science leads to materialism and fatalism, and so destroys the prospect of a future state. To no farther extent is its consistency with revelation discussed. In general scope and object, this volume resembles the "Thoughts on Phrenology" already noticed above; but its author is better informed concerning both phrenology and physiological subjects at large.

The British and Foreign Review for May 1841 contains a long and remarkably dull, though arrogantly written article, professing to be a review of Mr Combe's "Constitution of Man." Not any merit in that work, says the reviewer, but the alarming fact that "forty-four thousand sources of error and crime have been opened at once upon a generation," induces him to assail it; but instead of performing his intended service to mankind, by overturning Mr Combe's principles, he expends nearly all his efforts upon several short passages, some of which he divests of their real import by severing them from the context, and all of which, moreover, may or may not be liable to exception, without affecting the soundness of the leading and essential doctrines expounded in the work. It would be out of place here, even though room could be afforded, to shew that those doctrines are neither refuted nor fairly represented by the reviewer. We merely beg those who peruse his strictures, to make themselves acquainted with the book reviewed, and then to judge for themselves. A very unjust insinuation is conveyed in these words—"We apprehend that Mr Combe himself would not dare openly to deny, that virtue and happiness are the two principal objects of human attainment"—as if to point out the most certain methods of attaining virtue and happiness were not the grand object of Mr Combe's inquiries in the volume reviewed! The depth of the reviewer's understanding, and the extent of his philosophy, may be inferred from his positions, "that it is beyond the power of the human intellect to discover the real constitution of any substance," and that "we are unable to

* London: Sherwood & Co. 18mo, pp. 55.

trace cause and effect" among observed phenomena. If such be the case, the foundation of all science is rotten. The maintenance of these opinions, nevertheless, does not prevent the reviewer from assenting to the truth of the general principles of phrenology, which, he says, he by no means wishes to assail, though adverse to views promulgated by a phrenologist. His admissions, however, being little else than an echo of those made in the Penny Cyclopædia, are of no farther value than as they shew to what extent the conductors of periodicals now feel safe in venturing to speak respectfully of a subject which, in former times, was only a butt for ridicule.

The Medical Journals have, during the last six months, contained a good deal of matter interesting to phrenologists; but want of space compels us to delay till next number our intended notice of them, as well as of *The American Phrenological Journal.*

III. INTELLIGENCE.

Proceedings of the Phrenological Association.—The Fourth Annual Session of the Association was held in the Hall of the Society of Arts, John Street, Adelphi, London, on the 2d of June and following days. The meetings were held, alternately, in the mornings at half-past one, and in the evenings at half-past seven. On each occasion there was a full and most respectable audience, comprising a number of eminent scientific and medical gentlemen. At the first meeting, Dr Conolly having taken the chair, the Honorary Secretary, Mr Bastard, proceeded to read a report of the proceedings of the Association since its commencement, and of the Committee since the meeting of last year at Glasgow. The chief points noticed in the report were, 1st, the change in the plan of the meetings determined on at Glasgow, as our readers are already aware, and in consequence of which the present meeting was held in London instead of Plymouth; and 2dly, that the Committee considered it most convenient to have no permanent President, but to select one for each meeting from the Committee. The report having been approved of, Dr Elliotson read an opening address, in which he traced the progress of Phrenology from its first enunciation by Gall, notwithstanding the opposition it had met with from kings, emperors, scientific bodies, and reviewers. When Spurzheim, he remarked, first visited this country, he was assailed with the epithets of "quack" and "charlatan," and his followers were designated "fools," "madmen," and "infernal idiots." Yet how has Phrenology spread! Appreciating, as we do, its benefits, let us congratulate ourselves that we are still such "fools," such "madmen," and such "infernal idiots." After adverting to the services which had been rendered to Phrenology in this country by Messrs Combe and Mr Deville, the latter of whom, as a collector of casts and illustrations, stands *facile princeps*, Dr E. concluded with a well-merited compliment to the chairman, Dr Conolly, in relation to his efforts to ameliorate the condition of the insane,—efforts which he hoped would be crowned with all the success they deserved.

Dr Charles Caldwell of the United States then proceeded to read his re-

port of the progress of phrenology in his native country, apologizing for its being necessary, from his intimate connection with that progress, to say so much about himself. Phrenology began to be heard of in America about the year 1804, but few had any intimate knowledge of it. The first attempt to plant it in the soil of the United States was made by Dr John Bell of Philadelphia, who succeeded in instituting a Phrenological Society, which, however, soon ceased to meet. Dr Caldwell himself first became acquainted with phrenology through MS. notes of Gall's lectures, which he met with in America. These he only glanced at, however, and they did not induce him to pay further attention to the subject. On subsequently visiting Paris, he became acquainted with Gall and Spurzheim, attended their lectures, and was fully convinced by them of the truth of their doctrines. On his return to the United States, he began, and continued, to teach phrenology, and to defend it against numerous assailants. In the Lexington University he delivered annual courses of lectures on it to the students, to audiences of from 150 to 300 persons; and from the impression thus made, much good may be anticipated. Medical men in America, proceeded Dr Caldwell, have little time for the cultivation of science; they are fully occupied in obtaining a livelihood by the practice of their profession. An interest in phrenology is very generally diffused through the United States; and as they possess none of those old institutions which, with all deference to the country in which he was now sojourning, he must say obstruct the advancement of truth, he anticipated that the younger branch of the Anglo-Saxon race on the other side of the Atlantic would become a nation of phrenologists long before the older branches on this side.

Professor Otto of Copenhagen next rose to make a few observations on the state of the science in Denmark. Not having anticipated being called on, he was unprovided with a formal report; but as he had been told since entering the room that it would be interesting and desirable that the meeting should be informed of the state of phrenology in his native country, he had made a few notes of the chief circumstances connected with the subject. He must apologize as the preceding speaker had done: for a history of the progress of Phrenology in Denmark was pretty much a history of his own proceedings. After leaving Vienna in consequence of the decree of the Emperor prohibiting his lectures, Gall visited Denmark, where he excited much attention; and it has been remarked, that of all the Universities which he visited, that of Kiel was the one at which he remained longest. He visited also Copenhagen, where his lectures were attended by the late and the present king, and consequently he had large audiences. Notwithstanding the interest Gall excited, few continued to turn their attention to the subject after his departure. Dr Otto, having been but a child at the time, can recollect but little of his visit. It was when studying at Paris that he attended the lectures of Gall, and also those of Spurzheim, "whom to hear," he remarked, "was to become a phrenologist." On his return to Denmark, he continued to cultivate the science in conjunction with Dr Hoppe (a name well known to our readers), Dr Müller, and another whose name escaped us. With the assistance of these gentlemen, he established a phrenological journal, which, considering the small population by which the Danish language is employed, was very successful: it continued to be published for four years, when the duties of the professorship of Forensic Medicine, to which he was appointed, compelled him to give it up. To phrenology he owed his appointment as physician to the Penitentiary. The king, being aware of the attention he had paid to phrenology, preferred him on that account to the other candidates, observing that the Penitentiary was exactly the field required to test the truth of Gall's doctrines. Not so his professorship. He had long wished some appointment in the University, as he believed his talents fitted him best for teaching. His predilection for phrenology stood long in his way; and fatalism, materialism, and many other *isms*, were imputed to him. He was told by a shrewd friend that though he might cultivate phrenology as much as he pleased, he ought by no means to write upon it. This advice, however, he could not approve of.

At last the objections were overruled, and he was appointed to the chair which he at present holds.

Thursday, June 3.—Evening meeting; Sir G. S. Mackenzie in the chair. Mr M. B. Sampson read a paper by Mr George Combe on the application of phrenology to guarantee societies, recommending such societies to employ phrenology as a means of ascertaining the dispositions of those for whose conduct they become responsible, as Life Assurance Companies employ medical men to report on the health of applicants for assurances. After some remarks made by several members, Mr Sampson informed the meeting that the directors of the Guarantee Society, lately established in London, had passed a resolution to employ phrenology.

Mr Deville read a paper on Insanity, illustrated by a number of casts shewing the extraordinary forms of head met with in cases of that disease, and the correspondence which he stated exists between the diseased mental manifestations and the phrenological development. He also exhibited a few casts taken from the same individuals at different periods, shewing the changes of form of the head which resulted from the disease of the brain.

Friday, June 4.—Mr Churchill in the chair. Mr John Isaac Hawkins read a communication on a method of measuring the head, and exhibited several ingenious instruments for drawing profiles. His instruments for measuring are chiefly modifications of the callipers and craniometer. For drawing profiles, he prefers a thick tin wire, which, being applied closely to the head in the desired direction, retains the curve, and, when laid on paper, serves to guide a pencil drawn along its inner side. Mr Hawkins also adverted to the utility of certain fixed points in the head, of which he particularized only the spot in the crown where the hair parts, as landmarks in examining heads.

Mr Simpson read a paper on the Sense of Resistance, following out the views which he has published in this Journal. He argued that the double root of the third pair of nerves, a purely motor nerve supplying the muscles of the eye, furnishes a strong reason for believing the nerve to consist of two parts with distinct functions: these he inferred to be, first, the already ascertained function of conveying the influence of the will to the muscles of the eye, and, secondly, the function of conveying a knowledge of the state of the muscles to the brain—in other words, one of the roots is the nerve of the *sense of resistance*, and conveys impressions, of which the *mental faculty* of Weight or Force takes cognizance.

Mr Richard Beamish read a communication, and exhibited a cast, illustrative of the influence of excited Cautiousness in injuring the health. The patient, a young boy, had long been in a delicate state, and the medical treatment in this country proving unavailing, his parents were about to remove with him to a warmer climate. Some time before their intended departure, an accidental circumstance led them to infer from the boy's large development of Cautiousness, that he was frightened by being every night from two to three hours in bed in the dark alone, before his parents retired to rest; a feeling which his large Love of Approbation induced him to deny for some time, and, from large Secretiveness and Imitation, with perfect command of countenance. On his conflicting feelings, as inferred from his development, being explained to him, he at last, however, admitted the fact. He was then promised a light and an attendant, and an immediate improvement of his health was the consequence, so great as to render it unnecessary to go abroad. (This case is published in the *Lancet* of 12th June.) Mr Beamish also exhibited a cast of the head of a rope-dancer, in whom the organ of Weight was highly developed. Besides rope-dancing, he excelled in other feats of dexterity, such as balancing feathers, ladders, and cart-wheels, on his chin.

Saturday, June 5.—Dr Elliotson in the Chair. Dr Caldwell read a paper explanatory of his views of the causes of the different temperaments. At the time he first published his opinions on this subject, he believed them peculiar to himself; but afterwards he found that Dr Thomas of Paris had published views coinciding with them in an extraordinary degree. From the many coincidences in their publications, the reader might almost be led to suppose that they had written in concert, or that one had pla-

giarised from the other: this, however, was not the case; he firmly believed that Dr Thomas did not know of his existence when he wrote. Dr Caldwell considers that temperament depends entirely on the state of the solids of the body. Though the fluids may differ in different temperaments, still they are but the creatures of the solids. The so-called Bilious Temperament has no dependence on bile, nor the Phlegmatic on phlegm or pituita. The Nervous is correctly named, depending, as it does, on the brain and spinal marrow. The Sanguineous, too, is correctly designated. It is to the predominance of the lungs or sanguifying organs, and the heart and bloodvessels, or circulating organs, that it owes its origin. He could assign no precise cause for the bilious: but still he had his conjectures. He supposed it might depend on the abundance and firmness of the primitive fibres of the body; and it might be inferred that the opposite temperament, the phlegmatic, depended on an opposite cause, namely, laxity and deficiency of fibrous tissue; and both he seemed to consider rather as modifiers of the other temperaments, than as distinct species. He divides the temperaments into seven varieties;—1. The Mixed; 2. Encephalic; 3. Thoracic; 4. Abdominal; 5. Encephalo-Thoracic; 6. Encephalo-Abdominal; 7. Thoracico-Abdominal;—all depending on the different development of the viscera of the three great cavities, and their cases or walls. Of these he gave the preference to the mixed. Individuals of that temperament have well-proportioned bodies, all the functions of which are in full and healthy action. About middle age, however, there is a tendency to an increase of the proportion of the abdominal temperament. The encephalic he considered eminently the temperament of great men,—of men not great in one or two particulars, but great in all, and who left an impression upon their age. Along with the thoracic, producing the encephalo-thoracic, it is the temperament of men great in action: such was the temperament of Washington, a man above ordinary stature, with a large broad chest, and beautifully balanced large head. Dr C. regretted that the time he had already occupied would prevent him entering on the consideration of the other temperaments. He would, therefore, conclude by thanking the meeting for the attention with which they had listened to him.

Mr Atkinson then read a paper on the Connection of Phrenology with the Fine Arts, pointing out its utility to the artist, from its affording an analysis of the different mental conditions which he is called on to pourtray, and directing his attention to the natural language in which each manifests itself. He will learn from it also that the true standard of taste is to be sought for in the full and equally-balanced development of the mental faculties. The great cause of the decline of the fine arts has no doubt been the absence, in daily life, of circumstances which continually excite the imagination and other faculties required for their successful culture. It is to the highly imaginative state of religion that we owe most of the masterpieces that have come down to us. Now, however, religion is little else than a source of polemical dissension and sectarian hatred.

Monday, June 7.—The members met at half-past 12, to transact the private business of the Association, and consider a code of laws proposed to them by the Committee. Among the laws passed was one deciding that the meetings should take place annually, and that they should be held at least every three years in London, leaving it to the Committee to choose the place of meeting for the two intermediate years. A demonstration of the brain having been announced for 2 o'clock, the private business, not being finished at that hour, was adjourned till Tuesday at 12.

Two o'clock. Dr Caldwell in the chair.—Mr Erasmus Wilson proceeded to demonstrate the anatomy of the brain, which he illustrated by a number of preparations, drawings, and models. Many ladies were present.

Owing to the number of papers still remaining to be read, the Association held another meeting in the evening at 8 o'clock, Mr Churchill in the chair; when Mr M. B. Sampson read a paper on Criminal Jurisprudence, advocating a more humane treatment of criminals, and one better calculated to reform them, and rouse their moral faculties, than the present. Criminals, he said, should command our pity as much as the sick man. Those who, from

being well-conducted during their whole previous life, suddenly exhibit a change of character and lapse into crime, are regarded as insane, and receive commiseration: but if a man, from original malformation of the material instrument of the mind, commit crimes from the very first, it seems to be considered his own fault, and the severest punishment is dealt to him. As well might we confine our pity to the man who becomes suddenly ill through exposure to cold, and refuse it to him who becomes so from congenital deficiency. Obedience to the law should be considered the test of sanity. The laws of a country represent the average mental advancement of the inhabitants. Many rise above this average, and many fall below.

Mr Cull read an account of a young lady, Miss Jones of Cambridge, who, at the age of three years, lost her sight, hearing, and voice. She exhibits much intelligence; and names are readily communicated to her by indicating the letters of the finger-alphabet on her own hand. She understands the value of different kinds of money, and of various articles which she sends the servant to purchase. Giving the servant a certain sum, she expects a certain amount of change, and is dissatisfied with less. She is anxious to act as much as possible like other people, and, although quite blind, always makes use of a lighted candle when going to bed, and likewise arranges her hair with a lighted candle on each side of the looking-glass. If the candles are put out, however quietly, she recognises what has happened, and insists on their being lighted again. Her head is fully developed, and well balanced.

Mr Vernon next made a communication on the progress of Phrenology in the south-west of England, which he stated to be highly satisfactory. He then exhibited the cast of a very peculiarly shaped head: it was greatly elongated, as if compressed laterally; and of considerable height. Mr V. had inferred, that the individual would most probably be liable to insanity with despondency, and might attempt suicide, which he was informed was the case. The individual had been removed just three weeks before from an asylum, and his father had committed suicide. The attention of the meeting was called to the large development of the knowing organs, particularly those of Order and Number; the latter of which was manifested in a high degree, and tested by Mr V. himself with several intricate questions in arithmetic, which were solved mentally. Attention was directed also to the very large Concentrativeness, and the fact of there being a very strong tendency to dwell on internal emotions and ideas. He would sit for hours brooding on a single idea. Mr V. also pointed out the narrowness of the head at Cautiousness, and asked the opinion of the meeting, whether that organ, though not indicated as large by the breadth of the head, might not be so by the great elongation, and thus correspond with the strong manifestations. It was suggested by several members, that, the head being a diseased one, no conjectures could be formed with any degree of certainty respecting it. Mr V. then presented the cast to the Association.

Tuesday, June 8.—The adjourned meeting for private business was held at twelve o'clock. Among other transactions, a committee of twenty-four gentlemen (with power to double their number) was appointed to make arrangements for the next annual meeting. Their names, with the report and laws passed, will be published in our next Number. At two P. M., the public meeting commenced; Mr Richard Beamish in the chair. Mr Hawkins exhibited several profiles illustrative of the difference of form of the same head at different ages. In these the moral region had increased with age, and Cautiousness had diminished.

Dr Elliotson, being unexpectedly called away, was prevented from making an intended communication at this time, and Mr Simpson proceeded to deliver an address on the educational formation of character. In consequence of the limited time, he restricted himself to the management of the moral and animal faculties, pointing out their uses and the proper methods of training them.

At the conclusion of this address, Dr Elliotson, who had returned, exhibited the ossified cerebellum of an old gelding, which had given no sign of ill health or paralysis till within a short time of its death, when it became

gradually weaker, and finally lost all power of motion. He remarked that if the cerebellum were a regulator of motion, or an organ of sensation, some affection of these powers should have occurred at a much earlier period, as the ossification was most complete, and must have been going on for a long time. Nothing was known as to the state of the phrenological function of the organ. The preparation belonged to Mr Sewall the veterinary professor.

Dr E. next exhibited an ancient Roman skull, brought by himself from the tomb of Augustus at Rome. It was of the form we see represented in antique busts, of pretty large size, very broad above and behind the ears, and comparatively little elevated in the coronal region. The emperor himself was not buried in the tomb, which was intended for his relations and the members of his household; whence we may suppose that the individual, though possessing so barbarous a development, must have been a person of some consequence. The skull must be about 1800 years old. Dr Elliotson shewed also two masks of individuals presenting a small development of the organ of Colour, both of whom were deficient in the power of perceiving and distinguishing colours. One of them could distinguish two colours—blue and yellow, we think, but not red. The other could distinguish only blue. Dr E. remarked that the organ was rather larger in the one who could see only one colour, than in the one who could see two; but we were inclined to think, that it was only apparently so, from the external angle of the frontal bone being rather more prominent in the second.

As several communications still remained undisposed of, a supplementary meeting was held in the evening at eight o'clock, Dr Caldwell in the chair; when Dr J. P. Browne read a paper on Concentrativeness. Dr B.'s observations had led him to think that Dr Spurzheim had correctly assigned the function of Inhabitiveness to the organ No. 3; and he exhibited to the meeting a number of casts of heads, presenting the organ large and small. The manifestations of Inhabitiveness corresponded, while those of Concentrativeness, the faculty assigned to the organ by Mr G. Combe, were observed in very various degrees. In opposition to Vimont's proposition that the cerebral part includes two organs, the upper of Inhabitiveness, and the lower of Concentrativeness, he pointed out, that, in several of the casts, the prominence or deficiency was chiefly at the upper or at the lower part of the organ; and that the manifestations of Inhabitiveness corresponded with the prominence or deficiency, whether in the upper or the lower part.

In the absence of Mr Gardiner, Mr Symes presented to the Association a large number of skulls of convicts, obtained by that gentleman from the convicts' burying-ground at Portsmouth. These afforded very good examples of the criminal head, being very broad and comparatively low. A number of skulls of French prisoners, also obtained by Mr Gardiner at Portsmouth, from the prisoners' burying-ground, were likewise presented. As they belong to one class—the military—they cannot be regarded as representatives of the type of the national skull; and, moreover, several probably belonged to individuals of other nations, such as the German, Polish, or Italian, who served in the French armies. Several were evidently of the German type. Attention was called, however, to the development of Love of Approbation and Self-Esteem in many of them. The thanks of the Association were unanimously voted to Mr Gardiner for his valuable donation of skulls, in obtaining which, Mr Symes mentioned, he had incurred not only much trouble and some cost, but also a great deal of odium from the old women of both sexes.

A communication was next read by Dr Otto on the influence of different medicines on different mental faculties. He began by establishing the *a priori* probability of his proposition, by referring to the effects of different states of the body, various kinds of weather, and different periods of the day, on the mental faculties. With the effects of the first two causes most of our readers must be familiar, and they are probably aware of the third. Dr Otto stated it as his opinion, that there is a tendency to activity of Hope and Ideality in the m[illegible]nd of Wonder and Cautiousness at night. The
es too[illegible] are more active in the night; and hence, most

crimes and mischiefs occur then. Acute diseases excite Cautiousness, and thus lead the patient to take all the care and precaution required for recovery; chronic ones, on the other hand, excite Hope and Ideality, and, in incurable cases, the patient is often supported by the former to the very last hour. Diseases of the liver and spleen stimulate Cautiousness, and those of the lungs Ideality and Hope. He is inclined to think that toothach excites the animal propensities, more perhaps than any other disease; at least it is so in his own case. Medicines which reduce the circulation in the brain excite Ideality, Hope, and Benevolence. Those which excite the circulation have various effects: volatile stimulants, such as æthers and the compounds of ammonia, excite the reflective faculties, Ideality, and Hope; empyreumatic substances, castoreum, musk, and similar drugs, phosphorus, and cantharides, excite the cerebellum; balsams also excite the cerebellum and Ideality; camphor depresses the cerebellum; Peruvian bark excites Cautiousness; opium excites the cerebellum and anterior lobes, especially Language and Ideality; hyoscyamus and belladonna, on the other hand, act on Cautiousness, producing despondency and melancholy. Tobacco seems to act specifically on Language; the students in Germany, when they want a good conversation, have recourse to the pipe, and then the conversation never flags. Different kinds of food affect the mind variously. Eggs act on a particular faculty; meat on the animal propensities; and vegetable food on the moral faculties. Of drinks, water is indifferent. Wine in moderation acts on the moral organs, particularly Benevolence, and on Ideality, Wit, and Adhesiveness; if immoderate, its effects are the contrary. Ardent spirits act particularly on the animal propensities; which is a strong reason for encouraging temperance societies. In beer there are so many ingredients and differences of composition, that it is difficult to state its effects; in the south of Germany it seems to depress Language and the intellect generally, as there the students sit for hours drinking it without speaking. Coffee and tea excite the intellect, and hence are the beverages of literary men. In this country, from the manner in which coffee is taken, we cannot judge of its effects. If, instead of after dinner while digestion is going on, a cup of coffee were taken in the morning, the effects would be much more evident; and if a cigar be combined, Language will be most perceptibly excited. It is scarcely necessary to point out the practical value of these remarks. The importance is obvious, of regulating diet and medicines in penitentiaries, lunatic asylums, and in cases of disease, so as to conduce to that change in the mental state of the individual which it is our object to effect.

After a vote of thanks to the two foreigners, Professors Caldwell and Otto, who had honoured the Association with their presence, and contributed their able assistance, the Session was adjourned. Due notice will be issued by the Committee, of the place and time of the next Session, when the arrangements are completed.

Eighty-one new members have joined the Association, making the total number 239. We hope to be enabled to publish the additional names; and, in the mean time, may state that, in the list of members which appeared in our April No., the names of Mr Wm. Bally, 54 King Street, Manchester, and Mr Hudson Lowe, 12 Warwick Court, London, were accidentally omitted.

Lectures on Phrenology.—The following courses of lectures have been delivered within the last three months:—

1. Four lectures at *Burton-on-Trent*, on Easter week, by Mr J. K. Dow of Nottingham. According to the *Nottingham Mercury*, "they were thinly but most respectably attended; for two hours on each evening the utmost attention was paid to the lecturer, and the greatest interest was manifested in favour of the science. Several very influential parties have since regretted that they did not embrace the opportunity thus presented for hearing the science expounded, and of being initiated in its study; most probably, however, the lecturer will be invited to deliver a more extended course. Mr Dow's large collection of busts was very much admired, and a deep impression was produced as he pointed out the predominant, or negative development of the parties, in connection with their general character."

2. Nine lectures at the Literary and Philosophical Institution, *Cheltenham*, by Mr Richard Beamish, F.R.S., in April and May. The course was originally intended to consist of six lectures; but much interest having been excited, and the audience having gradually increased from 50 or 60 to upwards of 300, Mr Beamish was induced to give three additional lectures, principally on Education and Physical Training. The whole are largely reported in several Cheltenham newspapers. In noticing the concluding lecture, the *Looker-on* of 22d May states, that it "was listened to throughout with the most profound attention, and at its termination called forth an unanimous expression of approbation from one of the largest and most respectable audiences that we have ever seen collected in the lecture-room of the Institution. When the applause had somewhat subsided, the Rev. S. Middleton rose and proposed a vote of thanks to Mr Beamish, for the very interesting and instructive course of lectures which had just been brought to its close. This was seconded by Dr Thorp, who, though entertaining an opinion of the science of Phrenology totally at variance with that held by Mr Beamish, yet felt the Institution was largely indebted to him for the very able and talented manner in which he had discussed the subject. In course of his address, Dr Thorp entered at some length into the general argument of the truth of the principles of phrenology, with the view of shewing that they were not based upon correct physiological data. The vote of thanks was carried by acclamation, and Mr Beamish, in acknowledging the compliment, took occasion briefly to reply to the observations of Dr Thorp." A supplementary reply by Mr B. to Dr Thorp subsequently appeared in the newspapers, and was followed by the Doctor's rejoinder, in which he says he adduced, from the pages of an eminent physiologist of last century, "two cases in which *both sides* of the brain, together with all the connecting fibres, were *destroyed* (not merely *distended*, as in water in the head) without injury to the mind having supervened." To be consistent, Dr Thorp must believe the mind to have no connection whatever with the brain. Another small controversy took place between Mr B. and the reporter of his lectures in the *Cheltenham Chronicle*, where he was represented as having affirmed "that a man was a most incorrigible thief and yet was a sincere Christian." Mr Beamish having characterized to his audience this report as inaccurate, the reporter, in subsequently affirming that "he did make use of the expression," gives, however, a very different version of it, and thus, in effect, admits the inaccuracy of what was originally published. This second version is, that Mr Beamish, "when speaking of some individual who had committed enormous crimes, —whose name we now forget, but we think it was Greenacre—said, that he went regularly to a place of worship, and was constant in religious observances (or words to this effect), which, said Mr Beamish (by way of parenthesis), he might have done and been no hypocrite either." This is just saying that a man addicted to crime may nevertheless have strong devotional feeling; a truth which nobody acquainted with human nature will deny, and which by no means implies that the individual is a good "Christian." Before the Christian character can be fairly laid claim to, a man's conduct must be in harmony with the dictates of Benevolence and Conscientiousness, not less than of Veneration.

3. A course of lectures at *Dartmouth* by Mr W. J. Vernon, in April and May. A correspondent who writes from that town on 20th May under the name of "W. J. Smith, Solicitor," but who, as the handwriting plainly shews, *is no other than Mr Vernon himself*, gives a flattering account of the skill and success of "the highly-gifted gentleman" as a lecturer and manipulator. Really, however, we must be pardoned for declining to insert a communication so little creditable to the party concerned, and which, were we so inclined, might be made the subject of severe animadversion.

4. Three lectures at the Mechanics' Institution, *Maidstone*, by Mr Logan, in the middle of March. The *Maidstone Gazette* of 23d March says, "These have probably been the most interesting lectures that have yet been delivered in the County Assembly Rooms, and afforded great instruction and gratification to most respectable audiences. At the close of the lecture an enthusi-

astic vote of thanks was awarded to the talented lecturer. Mr Logan lectured last evening before the Mechanics' Institution at Chatham."

5. A course of popular lectures at *Newcastle-on-Tyne*, by Mr Alexander Falkner, before the Popular Lecture and Musical Society. The first lecture was delivered on the evening of 5th June, to an audience of about 300 persons. "It was creditable," says the *Tyne Mercury* of the 8th, "to the talents and research of Mr F., and was admirably fitted for a mixed audience, although at times delivered in rather a low tone. The language was perspicuous, and the lectures cannot fail to be attended with good results, inasmuch as they will bring this difficult subject clearly before the working classes." In the same paper we observe an advertisement consisting of an extract from this Journal, putting the public on their guard against phrenological quacks. It has, we understand, been inserted in consequence of an ill-informed person of the name of Hamilton having lately been wandering about the northern English counties, where his manipulations have brought him a rich harvest, particularly in Carlisle. The walls of Newcastle are now placarded with his bills, and men with great boards march to and fro, announcing the terms and place of business of the "practical phrenologist."

6. Three lectures, on 1st, 8th, and 15th April, at the Mechanics' Institution, *Swansea*, by D. Nichol, Esq., Honorary Secretary of the Royal Institution of South Wales. We have seen only the announcement of these lectures, and are not aware how they were attended. The present is stated to be "the fourth course of three lectures."

7. A course of lectures, in May and June, at the Mechanics' Institution, *Wolverhampton*, by Mr W. R. Lowe. The third lecture, which is the only one we have seen a notice of in the newspapers, is said, in the *Staffordshire Examiner* of 29th May, to have been "illustrated by numerous casts," and the audience to have been "large and highly respectable."

We learn that it is in contemplation to get up a course of lectures on phrenology next winter in Edinburgh; different branches to be treated of by different lecturers. Nothing, however, has yet been determined on.

Wolverhampton Literary and Philosophical Society.—This Society held its usual meeting on Tuesday evening, when a paper was read by Mr W. R. Lowe, on "The Ludicrous." In his preliminary remarks it was stated that in every mind, not absolutely idiotic, there is implanted a keen relish for the ludicrous, and that this emotion or feeling appears to belong peculiarly to man; for that, though the lower animals are doubtless susceptible of delight, none of them are known to laugh. It was also observed that there are a variety of opinions among philosophers as to the nature and source of this emotion: Hobbes considering laughter to be "the result of a proud comparison of ourselves with others;" Dr Thomas Brown viewing it as "a mixed feeling of astonishment and delight;" Mr Hewett Watson deeming the ludicrous "a mode of action (like perception and memory) of all the intellectual powers;" and Dr Spurzheim and Mr Combe considering it a simple emotion, connected, like all the other original powers and feelings, with an independent organ in the brain. To the last of these opinions Mr Lowe inclined; adding, however, that phrenologists are by no means agreed on the subject, the function of the organ denominated "Wit or Mirthfulness" being still a matter of debate among them, and that the phrenological world are busily employed in collecting facts which may bear upon the subject. Mr Lowe next went on to examine the various classes of objects, ideas, and relations which call this feeling of the ludicrous into exercise, and which were referred to two principal genera, namely, those in which congruity is unexpectedly discovered amid incongruity, and, secondly, the converse of these—those in which incongruity is discovered where congruity was expected. The first source of ludicrousness noticed by Mr Lowe was "wit," the meaning of which, though well understood, it was exceedingly difficult to explain. One source of this difficulty was considered to be the extreme obscurity of the derivation of the word; and another, the variety of phrases and aspects which this "character of the mind" assumes. The definitions given by Lord Kames, Locke, Mr Combe, and Mr Rumball, were all ex-

amined, but none of these considered entirely satisfactory. Under the head of wit (though some of them, perhaps, not strictly belonging to it) were classed puns, parodies, conundrums, epigrams, alliterations, and caricatures. The second class of relations examined were those in which "objects are brought together that are noble and mean, or the forms of language used in treating of subjects high and low, are transferred from one to the other;" under which head were classed humour, mimicry, the burlesque, and the mock-heroic. The third class of relations were those which "derive their ludicrousness not from the objects themselves, but from the mind of the hearer or reader having been prepared to expect something very different from what is presented to it." This was illustrated by reference to the sharp retorts with which barristers have sometimes met when examining shrewd witnesses in our legal courts, as well as what are termed the cross-readings of newspapers. The fourth and only other class of relations examined were those in which " the ludicrousness arises from our consideration of the mind of the speaker, or writer, or performer of the action," and which was illustrated by some of the laughable mistakes occasionally made in orthography and punctuation, and the bulls and blunders for which our Hibernian neighbours are so pre-eminently noted. The paper gave rise to an interesting conversation, in which, however, the phrenological opinions respecting the organ of " Wit" formed the principal topic.—*Wolverhampton Chronicle, 14th April.*

Phrenological Discussions.—From a long and well-written letter in the *Liverpool Chronicle* of 1st May, subscribed " a Phrenologist," we learn that a phrenological controversy had recently taken place in that town, between Mr Bridges, a lecturer on phrenology, and Mr Kenyon, an anti-phrenologist from New York : "and I may safely say," observes the writer, " that I never heard a discussion conducted so loosely, and with so little apparent knowledge of the subject on both sides. As, however, the anti-phrenologist seemed to me to have the decided advantage over his opponent in tact, fluency, correctness of expression, and clearness and vigour of statement, it may serve the cause of what I believe to be truth, if I briefly notice some of the errors into which he fell, more especially as very few of them were noticed by his antagonist. Victory over a phrenologist ought not to be confounded with a victory over phrenology, and from the remarks that follow the public will be able to judge of Mr Kenyon's success in the cause that he has undertaken." After detailing some important admissions made by Mr Kenyon to the phrenologists, the writer proceeds to answer, one by one, a long string of objections; in doing which he evinces an intimate knowledge of the matters at issue. The debate lasted two evenings, and was conducted with good temper.

There is a foolish squib against phrenology in the *Exeter Gazette* of 24th April. It is merely an attempt at ridicule, without any spice of fact or argument. A reply from the pen of Mr H. U. Janson, president of the Exeter Phrenological Society, appeared in the same paper on 1st May.

Sheffield.—The *Sheffield Independent* of 17th April contains a long communication urging the propriety of engaging a lecturer to deliver a course on phrenology in some of the institutions for popular instruction in that town. We have not heard that any effect has been produced by it.

New York Phrenological Society.—The following is a list of the office-bearers of the Society for the present year :—Professor B. F. Joslin, A. M., M. D., President; Rev. T. J. Sawyer, Vice-President; G. C. Shaeffer, Esq. Corresponding Secretary; A. Boardman, M. D., Recording Secretary; F. Fawcett, Esq. Treasurer; E. Newberry, Esq. Warden.

History of Phrenology in Philadelphia.—Dr John Bell, in a review of Mr Haskin's History and Progress of Phrenology, in the Eclectic Journal of Medicine, June 1840, states some facts of interest respecting the history of the science in this city. As these facts serve to correct some statements

already published in phrenological works, and will be valuable for future reference, we deem them worthy of record here. They are as follows:—

"The first phrenological society in the United States was founded in this city in the month of February, 1822, of which Dr Physick was made president, Dr John Bell, corresponding secretary, and Dr B. H. Coates, recording secretary. From this time, and not 'twelve years since,' as Mr Haskins has it, we date the public advocacy of phrenology by Drs Coates and Bell. The subject was more formally introduced by Dr Bell delivering two lectures to the 'Central Phrenological Society, established at Philadelphia,' at its meetings on the 4th and 18th of March 1822. These lectures, published in the 4th volume of Dr Chapman's Medical and Physical Journal, were intended to illustrate and enforce the doctrine by various proofs and analogies.

"An interest was manifested to such an extent, as to induce the society to procure an excellent collection of casts from Paris and Edinburgh; and although the zeal was not maintained by the many, yet the original inquirers and converts after inquiry have ever continued to explain and defend what they believed to be the truth. A stronger proof cannot well be furnished of the fruits of the seed thus sown in Philadelphia, than the fact, that here Mr Combe had the largest class by far of any which has listened to him in the United States, and it was only exceeded in point of numbers in one of the cities of Great Britain.

"In 1822, Mr Combe's Essays on Phrenology were republished by Messrs Carey and Lea, with considerable additional matter furnished by D Bell, viz. a Preliminary Essay, consisting of the lectures already mentioned, and a chapter on the anatomy of the brain, as displayed by Gall and Spurzheim, and another on insanity. A review of these essays will be found on reference to Dr Chapman's Journal, vol. 5th, and one of the Transactions of the Phrenological Society of Edinburgh (1824), and of Dr Caldwell's Elements of Phrenology (1824), in the 8th volume of that Journal. The last was written by Dr Bell. In the 7th volume of the same Journal, there is an able article entitled *Comparative Phrenology*, from the pen of Dr B. H. Coates. In the 12th volume of the North American Medical and Surgical Journal, a full review of Dr A. Combe's work on Mental Derangement, written by Dr Bell, is preceded by an outline of the science of phrenology, and of the basis, anatomical and physiological, on which it is believed to rest. From the same pen, there is a similar sketch given in the Appendix to the third edition of Broussais's Physiology, translated by Drs Bell and La Roche.

"From the year 1823 to the present time, Dr Bell has given some lectures on phrenology every summer to the class of the Medical Institute, as a part of his course on the institutes of medicine. We ought not to conclude without stating, also, that Dr Harlan, even then advantageously known for his zealous prosecution of natural history and comparative anatomy, gave a short course of lectures on phrenology in the Philadelphia Museum, during the spring of 1822."—*American Phren. Jour.* vol. ii. p. 476.

Dr Morton's Collection of Skulls.—We have before us a catalogue of the skulls of man and the inferior animals in the collection of Dr S. G. Morton, of this city (Philadelphia). This is the most extensive collection of crania in the United States, and is not surpassed, in number and variety of specimens, by more than one in Europe, viz. that of the late Professor Blumenbach, of Gottingen; and even this exception is doubtful. There are in Dr Morton's cabinet more than *five hundred* human skulls, collected from all parts of the world. He has a very great variety of Indian skulls, and a large number of Mexicans and ancient Peruvians. There are about *one hundred* skulls of the ancient Egyptians, obtained from the catacombs of Thebes and Memphis, and supposed to be more than four thousand years old; some of these possess great interest, in a phrenological point of view. There are also about the same number of skulls of native-born Africans, or negroes; these, in their cranial developments, present quite a contrast with the preceding class, and evidently show that their possessors must have be-

longed to an entirely different race, or at least had characters essentially different. At some future time, we may give a description of the more rare and valuable human crania in Dr Morton's collection.

The number of animal skulls, including quadrupeds, birds, fishes, and reptiles, is equally extensive, exceeding five hundred specimens. The receptacle of such a collection may very appropriately be named "*Golgotha*," a "place of skulls." "The principal object," says Dr Morton, "in making the following collection, has been to compare the characters of the skull in the different races of men, and then again with the skulls of the lower animals, and especially with reference to the internal capacity of the cranium, as indicative of the size of the brain." That magnificent work, the "Crania Americana," is already, in part, the fruit of Dr Morton's researches in this department of science, and we are happy to learn that he is still prosecuting his inquiries with the view of farther contributions to the public.—*Ibid. Jan.* 1841.

Phrenological Newspaper.—A weekly newspaper, devoted partly to phrenology, and entitled *The Western Athenæum and Journal of Phrenology*, is published at Andersontoun, Indiana. It is edited by Thomas Sim, M.D. Sixteen numbers have already been issued; and we learn, from a recent editorial notice, that the work has met with so good encouragement, that it may be considered as "now firmly established." There is in course of publication in this journal, *A Text-Book on Phrenology*, by the editor, appearing in successive chapters in each paper, which promises to be a valuable treatise on the science. We hail the publication of this journal as a harbinger of good for phrenology in the "far West," and hope that it will prove a valuable auxiliary in diffusing more generally the principles of the science.—*Ibid. February* 1841.

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Theatrical Representations beneficial to Lunatics.—The Abbé Bolonia, physician-in-chief of the Lunatic Asylum at Reggio, has been trying the effect of dramatic representations on a certain number of his patients, with a result which leads him to reckon upon important benefits from this form of appeal to their ancient sympathies and habits. Twenty-six of them were lately taken under his own care to the public theatre of that town, the audience being warned by printed bills who these unusual spectators were, and requested to refrain from any thing which might offend or irritate them; and the Abbé affirms that a salutary impression has been produced on all, under the influence of which their cure is steadily progressing.—*Athenæum*, April 10. [The Italians have a lunatic asylum—we are ignorant whether it is the one at Reggio—where music is largely employed as a means of cure, and the effect is said to be beneficial. About six months ago, we observed in a Dumfries newspaper, an announcement that a concert had been performed by the Brass Band of that town, in the Crichton Institution for the insane;

" under something like a reasonable hope that it would bear solace to many a wearied, woe-worn heart; calling up old, forgotten, but healthy associations and memories; and, for a moment, stealing the mind from itself, from its errors, and from its 'rooted sorrows.' Upwards of sixty auditors participated in the experiment. There may have been no keen nor critical appreciation of the beauty of the pieces played; but there were, we understand, great attention and pleasure manifested. A selection was made of such tunes as could easily be recognised, and were calculated to act upon national and early sympathies and recollections. The evening's amusement commenced with 'Auld Lang Syne,' and terminated with 'God save the Queen:' And how interesting to watch, in the faces of that auditory, the emotions called up in their sad hearts and darkened intellects by sounds so linked with 'our land's language,' so much part and parcel of our affections! And we think it well worth while to record the matter, because the experiment is, we believe, the first of the kind in Britain, and because it has been so perfectly successful." (*Dumfriesshire Herald, Dec.* 10. 1840.)—ED.]

Diffusion of Phrenology.—Notwithstanding the derision with which the doctrines of Gall and Spurzheim were received by the literary and scientific world on their first announcement, they are now avowed by a numerous sect in Europe and America, who have not merely given completeness to their systematic form, but also made them the basis of a practical philosophy. In this country, in particular, they may be said to constitute the ethical opinions of a very large proportion of the shrewdest and best-informed of the middle and labouring classes throughout the manufacturing districts. The most active promoters of secular education, the leading directors and lecturers in the Mechanics' Institutions, are either avowed phrenologists, or individuals who, without assenting to the "organology" of the phrenologists, entertain similar views of practical morals. If in a manufacturing district you meet with an artisan whose sagacious conversation and tidy appearance convince you that he is one of the more favourable specimens of his class, enter his house, and it is ten to one but you find Combe's *Constitution of Man* lying there.—*Spectator*, April 10. 1841.

Hints to Travellers about the Observation of Heads.—The following extract is worthy of attention. It is quoted from a series of "Queries respecting the Human Race, to be addressed to Travellers and others," drawn up by a Committee of the British Association, 1839, and suggested by the observations of Dr Pritchard, in a paper upon "the extinction of some varieties of the human race." "The head is so important, as distinctive of race, that particular attention must be paid to it. Is it round or elongated in either direction? and what is the shape of the face—broad, oval, lozenge-shaped, or of any other marked form? It will contribute to facilitate the understanding of other descriptions, to have sketches of several typical specimens. A profile and also a front view should be given. In the profile, particularly notice the height and angle of the forehead, the situation of the meatus auditorius, and the form of the posterior part of the head. The form of the head may be minutely and accurately described by employing the divisions and terms introduced by craniologists, and the corresponding development of moral and intellectual character should in conjunction, be faithfully stated." (Page 5.)

This is not only good in itself, but is worthy of record as an acknowledgment,—although a late, and imperfect, and inadequate acknowledgment,—of the assistance and precision which phrenological views have given to anatomical and physiological research; of the necessity of ascertaining the truth of these views, and of proceeding as if that truth had been determined; and of the phrenological decisions being the only ones upon which an investigation into national character can be founded.—W.A.F.B.

"*Timon but not of Athens.*"—In the American Phrenological Journal for February, Bulwer is erroneously stated to be the author of this work, and

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consequently "a phrenologist." The book, we have reason to believe, is the product of a very different writer.

Books received.—Thoughts on Phrenology; or, Phrenology tested by Reason and Revelation. By a Barrister of the Middle Temple. London: James Nisbet & Co., 1841. 18mo, pp. 116.—The Edinburgh Monthly Journal of Medical Science, April and May 1841. Edinburgh: Maclachlan, Stewart & Co.—Silliman's American Journal of Science and Arts, for January 1841.—The British and Foreign Medical Review, April 1841.—The Medico-Chirurgical Review, April 1841.—Manual of Phrenology; or, an Accompaniment to J. Deville's Phrenological Bust. A new edition, with a variety of Illustrations. London: J. Deville, 367 Strand. 12mo, pp. 184.—The American Phrenological Journal, Nos. for Nov. and Dec. 1839; Jan. Feb. March, Sept. Oct. Nov. and Dec. 1840; and Jan. Feb. and March 1841.—Outline of the Academic Course in practice at South Street School, Sheffield, under the direction of Samuel Eadon, A.M., &c.—An Outline of the Plans and Course of Study pursued at Castlegate Academy, Nottingham, conducted by Mr Packer.—Phrenology consistent with Science and Revelation. By Charles Cowan, M.D. E. & P., &c., Physician to the Royal Berkshire Hospital and Reading Dispensary. London: Sherwood & Co. 18mo, pp. 55. 2s. 6d.

Newspapers received.—The Future (New York), Jan. 30.—The Cheltenham Looker-on, March 27. April 3. 10. 17. 24. May 8. 22.—Bath Herald, April 3.—Maidstone Gazette, March 23.—Wolverhampton Chronicle, April 14.—Exeter Gazette, April 3. and 24. and May 1.—Sheffield Independent, April 17.—Nottingham Mercury, April 23.—Gardener's Gazette, April 24. and May 1.—Liverpool Chronicle, May 1.—Cheltenham Journal, May 17. 24. 31.—Staffordshire Examiner, May 29.—Tyne Mercury, June 8.—The New World (New York), May 8.

Notes to Correspondents.—The following papers have been received:—Hints on the Education of the People, by Mr W. R. Scott.—A Phrenological Analysis of the character of King David, by Mr H. U. Janson.—Suggestions on a Faculty of Retentiveness, by Dr Kennedy.—On the Source of the Perception of Rhythm and Cadence in Language, by Mr J. E. Hytche.—Case of Insanity in a Cat, by Mr G. T. Black.—On Imitation, by Mr Wm. Williams.—The last of these will not suit us; but we hope to find room for most of the others.—The letters of J. R. of Bridport, and Mr C. Donovan, have likewise been received.—The concluding half of Dr Browne's paper on the Hereditary Tendency to Insanity, will appear in our next number, where we expect to be enabled to publish also the remainder of Mr Hudson Lowe's essay on Imitation, of which the MS. is not yet in our hands.—We regret to announce that Mr Beamish's lithographed views of heads are not yet ready for publication, in consequence of the unexpected amount of that gentleman's time consumed in preparing and delivering his course of lectures at Cheltenham, which he was induced, by the interest they excited, to extend beyond the limits originally proposed.—Many short articles are unavoidably deferred.

Communications for the Editor (prepaid) may be addressed to Mr Robert Cox, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall and Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor six weeks before the day of publication. Communications for the section of "INTELLIGENCE," and also advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—eight lines, 6s.; twelve lines, 7s. 6d.; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent either to the Editor or to the publishers in Edinburgh or London.

1*st July* 1841.

THE

PHRENOLOGICAL JOURNAL.

No. LXIX.

NEW SERIES.—No. XVI.

I. MISCELLANEOUS PAPERS.

I. *On the Application of Phrenology to the Purposes of the "Guarantee Society, for providing Security for Persons in Situations of Trust, where Sureties are required, on payment of an Annual Premium."* By GEORGE COMBE.

IN 1841, a joint-stock company under the above title was established in London, with a capital of L.100,000, divided into 20,000 shares, of L.5 each, for the purpose of "guaranteeing the fidelity of persons employed by others." The prospectus states, that "this company guarantees the faithful application of funds entrusted to managers, secretaries, clerks, agents, travellers, stewards, collectors, and all other persons holding situations involving responsibility; and provides security for the fidelity of persons seeking to hold situations of trust. The mode of carrying out the views of the company, resembles in many respects the conduct of life assurance business. Small annual, or half-yearly, payments are made, differing in amount according to the nature and extent of the risk; and for such payments the company become responsible for defined sums of money, in the event of the party holding the company's obligation suffering a loss by the dishonesty of the person who is the subject of the guarantee."

The objects aimed at by this society are useful, and, if prudently conducted, it can scarcely fail to be successful. If phrenology afford a correct indication of the natural talents and dispositions of individuals, it should present to the managers of such a society, a valuable means of acquiring knowledge of the tendencies of those for whose honesty they propose to become responsible. In point of fact, suretyship is a lame substitute for a satisfactory acquaintance with human qualities. There are men whose sound sense, prudence, and integrity, are proof against every temptation; and if we were certain that any particular individual whom we designed to trust, or whom we intended to employ confidentially in our

affairs, was one of these, we should desire no other security for his solvency or good conduct, than that afforded by his own superior nature. But we have learned by observation, that there are plausible and *ostensibly* honest men, who are really rogues in disguise; and we are never certain prior to experience, that the individual whom we are disposed to trust or employ, may not, in an unlucky hour, when beset by temptation, prove himself to be one of them. We, therefore, require that some friend, who knows his dispositions and abilities, and is assured of his prudence and integrity, should certify to us his possession of these qualities, and certify them in the only way which can convince us of the perfect sincerity of the recommendation, namely, by engaging to pay the debt which he incurs if he do not discharge it, or to indemnify us, if we employ him in the administration of our property, and he prove unfaithful.

The circumstance which first led me to the perception of the utility of phrenology in selecting persons for confidential situations was the following. In 1816, I was requested to find out and engage a person bred to business, accustomed to keep books, of strict integrity, and of an agreeable address, to act as salesman, cashier, and confidential clerk, to a manufacturing company, the business of which, by the death of the proprietor, had devolved on his family, none of whom were at that time in a condition to carry it on themselves. Before this occurrence I had attended Dr Spurzheim's lectures, and was slightly acquainted with phrenology, but had little experience in observing the organs, and, consequently, no reliance on it as a science of practical utility. I proceeded, therefore, in the ordinary way to discover a fit person to fill the situation. At length an individual was recommended to me by a merchant in Edinburgh whom I had long known and esteemed; and the qualifications ascribed to him were the following. He was nearly thirty years of age, married, an excellent book-keeper, of pleasing address, highly religious, and of the strictest integrity. He was at once engaged by my friends, and entered on his duties. He was entrusted with the cash and cash-book; but every week one of his employers balanced the cash-book, and counted the money on hand, in order so far to keep a check on his honesty.

From the first, I had observed that his organs of Conscientiousness were very deficient, and that Firmness was not large. His intellectual organs were well developed, as were also those of Benevolence and Veneration, while Love of Approbation was very large. I expressed to the gentleman who had recommended him, my regret that his organs of Conscientious-

ness were so palpably defective; when he replied that he knew nothing about the effect of the organs, but that he had had experience that Christianity had cured any defects which might originally have existed in the dispositions of the individual, and that he was an honest man. I could not venture to controvert this view, and the person's conduct appeared for several years to confirm it.

He was a leading member of a dissenting congregation, and his house, which was situated within the manufactory, was the resort of his numerous friends for prayer-meetings. The solemn notes of the psalms and hymns which they sang, were often heard resounding through the adjoining apartments in which the operations were carried on. My own impression became strengthened, that a great natural defect might be supplied by other principles; but in the course of time different views of his character were evolved. His cash-book became confused; the days for balancing it were postponed by him under a variety of pretences; the usual returns from the sales began seriously to diminish, and I was led to insist on an investigation of his conduct and transactions. He then came to me in great agitation and prefaced his address with these words: "I am come to acknowledge to you that I am the greatest villain on earth; you may have me hanged if you please." He then confessed that from a very early period of his employment he had embezzled the funds entrusted to his care, and falsified the entries in his cash-book to conceal his deficiencies, till at last the alterations had become so numerous that he himself was no longer able to discriminate between the fictitious and the real.

This case produced a strong impression on my mind of the importance of phrenology as an indication of natural qualities; and in examining the details of this individual's delinquencies, the close connection between his conduct and the peculiarities of his cerebral development became still more striking. He confessed freely the use to which he had applied the embezzled money. He was not in the least addicted to sensual debauchery in any form; but his large Benevolence and Love of Approbation rendered him kind and hospitable, and his first error was that of entertaining his friends at an expense disproportionate to his income, and his second was assisting them in their pecuniary difficulties, with loans of his employer's funds, which were never repaid. These two forms of temptation led him into embezzlements to the extent of four or five hundred pounds. He then became alarmed at the prospect of detection, and, as the state lottery was then existing, he purchased tickets in it to a large amount, and, as he stated to me, he

prayed fervently that they might become prizes—not from any desire for the money for his own sake, but that he might be enabled by an act of Providence to escape from the pit into which he had fallen. All the tickets turned up blanks, and his acknowledged deficiencies amounted to L.600 at the time when the avowal was made.

I could not avoid the conclusion that this sacrifice of character on his part, and of property on the part of his employer, was to a great extent the consequence of having placed him in circumstances of temptation which his natural qualities were not calculated to resist; and he was not prosecuted. His previous employer had not entrusted money to him confidentially, and had not been cheated. He was, therefore, dismissed with a solemn admonition not to belie his Christian character in future; but I regret to add that his subsequent life afforded no indications of moral amendment. He entered into trade on his own account, and after one or two bankruptcies left Edinburgh, and I heard of him in the United States still living by the practice of plausibilities and falsehood.

From that time forward, I directed much attention to the connection between practical conduct and particular combinations of the cerebral organs. I not only visited prisons, but adopted the rule not to engage domestic servants without examining their heads. In selecting them, I preferred individuals in whom the moral and intellectual organs predominated; and after the experience of fifteen years, I very respectfully but firmly offer my testimony to the fact, that there is no single indication of character comparable to that afforded by the development of the brain. I speak also from negative cases. At the time when I became a phrenologist, I had in my employment individuals in whom the organs of Conscientiousness were deficient, and I did not on this account dismiss them from their situations. One of them I retained for several years, through motives of benevolence; and I was cheated by him, notwithstanding a vigilant superintendence which I exercised over his conduct. Another quitted my service for a situation of higher emolument, but in which he was left more to the guidance of his own faculties than with me: He fell a victim to his moral deficiencies, was dismissed, lost his character and condition in society, and lived to become a dissipated beggar, on whom his former equals bestowed pence and old clothes.

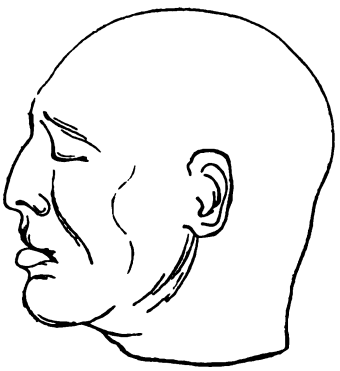
As a contrast to these cases, I state that in no instance in which I have been thoroughly satisfied with the cerebral development of a servant, has the conduct disappointed me; except in three cases, in which previous habits of intoxication had been formed, of which I know of no indication in the

brain. When I had obtained individuals in whom the moral and intellectual organs decidedly predominated, and whose sobriety I had ascertained by experience, I did not hesitate to place implicit confidence in them. In 1834, Mrs Combe and I made a tour to Switzerland, and left our domestic establishment in Edinburgh entirely in the hands of servants; and on our return, we learned that during our absence their conduct had been in every respect as exemplary and becoming as if every action of their lives had been superintended by ourselves.

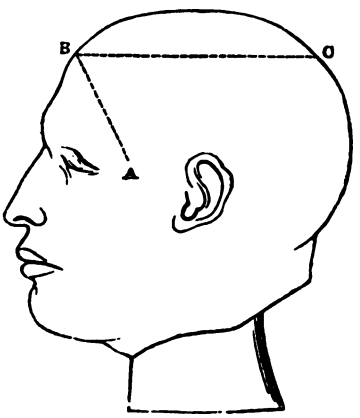
I have stated these facts as an apology for attaching so much importance to this branch of Phrenology, and for recommending it to the Guarantee Society as worthy of their attention as an index to natural dispositions and capacities. I now proceed to mention the conditions and modifications under which it appears to me that it should be applied.

The phrenologist recognises in nature three great classes of heads, with which decided peculiarities of character are connected. First, that class in which the organs of the animal propensities are large, and those of the moral and intellectual faculties are small. The following specimens exhibit this combination :—

LINN, Parricide.



HARE, Murderer.

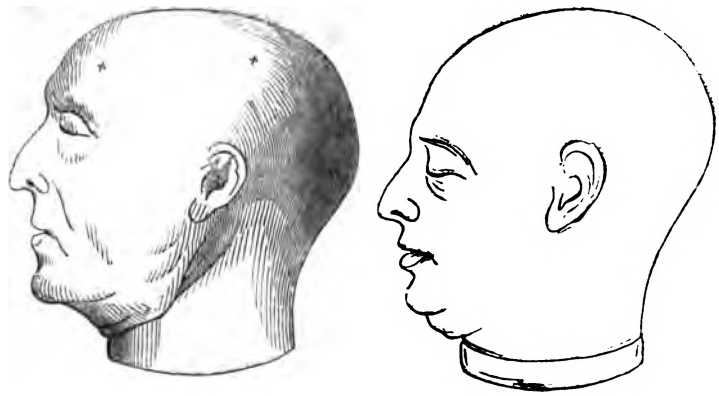


I believe that the experience of phrenologists admits of no exception, that men thus constituted are morally idiotic, that they are so defective in moral perceptions and in the power of controlling the animal propensities, that there is only one way of preserving them in the paths of virtue,—that of withdrawing them from all possibility of doing wrong. In no circumstances would a phrenologist place an individual thus constituted in a situation of trust and responsibility.

It may be objected that it is hard to condemn a man as morally incapable on account of the shape of his head: But is it not equally severe to decline to employ a blind person in a situation in which vision is necessary, merely because he has had the misfortune to lose his eyes? If certain organs of the brain be, as it were, the eyes of the moral faculties, it is neither more nor less harsh to decline employing an individual who, through defect of these organs, is morally blind, than to decline employing another who, through defect of eyes, is physically blind. In either case, the individual is not to blame; he is the victim of a calamity, and it is the duty of those who are more favourably constituted to place him in circumstances in which his misfortune will not operate as a bar to his usefulness. Places of trust and responsibility, in which stronger temptations to do wrong are presented to him than his constitutional powers of resistance are capable of coping with, are not those in which he is fitted by nature to act with success; and therefore he should not be employed in them.

The *second* class of heads is that in which the organs of the animal propensities, of the moral sentiments, and of the intellectual powers, are all largely developed; where, in short, the balance is pretty equal among all the powers. The grand

MAXWELL. JOHN ADAM.



feature of this class of heads is, that the organs of all the leading faculties are largely developed, and that there is a corresponding degree of energy in the three mental departments of propensity, sentiment, and intellect. In such men, therefore, are present the elements of great good or great evil, according to the *cultivation* and *direction* which the faculties may receive from education, external temptations, and other influences.

As this class of persons is the most numerous, and the one of which most specimens will present themselves to the Guarantee Society, I shall enter into a few details concerning the modifications under which I think phrenology should be applied in judging of their probable course of conduct from their cerebral organization. The observations now to be presented are applicable also to the other classes, although to a less striking extent.

1. The influence of temperament should be carefully weighed. I have observed that when the three classes of organs are nearly equally balanced, the temperaments produce the following effects.—The lymphatic temperament, being attended with a low state of activity in the brain, abates the craving of the propensities, and although it renders the moral and intellectual organs equally blunt and slow, it is conducive, to some extent, to harmless conduct, because apathy in vice is at least one step towards virtue. Accordingly, I have observed that individuals of both sexes, in whom this combination of organs has been accompanied by the lymphatic temperament, have been, to some extent, passively virtuous at least, and that they have not given indications of that restless craving for animal excitement, which leads individuals with the same combination of organs, and more active temperaments, to seek for opportunities of sensual indulgence. Supposing such persons to be employed confidentially, and intrusted with money, it is a considerable advantage in favour of their proving faithful, that their inward goading propensities to self-indulgence are somewhat blunt. Their other faculties will be dull also; but the Guarantee Society is answerable only for their negative virtue, and in this point of view alone am I now speaking of them. Habits of intemperance, however, are fatal to this class; because intoxicating liquors at once supply excitement to the propensities, and weaken the controlling powers.

When the sanguine temperament, indicated by a large chest and ruddy complexion, or the sanguine-bilious, or sanguine-nervous, is combined with the three classes of organs all large, the whole brain is then active, and as the organs of the propensities come earliest into play, such individuals are subject to great internal temptations to animal indulgence, especially in youth. With such a constitution, there is an intense capacity for enjoyment, a buoyancy of spirits, a brilliancy of hope, and often a boldness and daring of disposition, that render the mind disposed to *try* all fortunes and run all hazards, even with the consciousness that the course of action is in itself morally wrong, and may lead to disastrous results. It is on this class of persons that the experience of other men pro-

duces the least effect. They read of misconduct and suffering, but secretly resolve to try the experiment of life themselves. John Bunyan gives a vivid description of his own feelings when he was actuated, as I infer, by vivid propensities and a glowing temperament. He informs us, that, having adopted the conviction that he was already sure of being consigned to eternal perdition, he concluded that, "if he must be so, he had as good be damned for many sins as be damned for few; wherefore," he adds, "I found within me great desire to take my fill of sin, that I might taste the sweetness of it; and I made as much haste as I could to fill my belly with its delicates, lest I should die before I had my desires." "Now, therefore, I went on in sin, still grudging that I could not be satisfied with it as I would." When, however, the propensities and his physical organization were exhausted by three or four weeks of indulgence, the moral organs regained the ascendency, and he experienced bitter repentance. If, in the state of temptation, he had had in his custody a large sum of money belonging to an employer, and none of his own, it is quite conceivable that he might have been tempted to misapply it, and have forfeited his character for ever.

The *internal* temptations to vice, which arise from an active temperament and large animal organs being thus great, I proceed to inquire what countervailing influences may be brought to bear on the mind of the individual to direct and retain him in the paths of virtue. In such instances training and education exert a great influence. When the organs of the moral sentiments and intellect are well developed, these faculties possess corresponding natural vigour; but there is this difference between them and the propensities—that the propensities act spontaneously, or find excitements constantly presented to them in the mere external circumstances of ordinary life, while the moral and intellectual powers need special cultivation and training to enable them to act with full effect. The Guarantee Society, therefore, should inquire minutely, not merely whether such persons have received *intellectual* instruction, but whether they have been morally and religiously *trained*, been accustomed to practise *self-denial*, and enjoyed the advantages of living in a moral family and among moral associates. If they *have not*, the risks of their being seduced by their propensities in offices of trust is increased; if they *have*, the risks are diminished.

2. The Society should calculate what influence the circumstances in which they are about to place such individuals will exercise on their natural tendencies. A young man of this class appointed to the office of confidential clerk

or manager to a gin-palace, would almost certainly fall a victim to the temptations which such a situation would present to his native dispositions. If he were employed as receiving-clerk in one of the fashionable retail shops in Regent Street, and his accounts were balanced every night, he might preserve an irreproachable character. Before I knew phrenology, I had employed as clerks two individuals belonging to this class, and one of them while in my service conducted himself invariably well. I kept him out of temptation, treated him in a friendly manner, and preserved alive his gentlemanly feelings. But, as already mentioned, after he left my service for one of greater emolument, but in which the same external influence was not exercised over him, he became a complete profligate. The other individual gave me many proofs of a low mind, but, on the whole, I succeeded in rendering him useful, and preserved him in comparative respectability. A third clerk, who enjoyed a superior moral and intellectual development, with moderate propensities, now fills a highly honourable and confidential situation, with equal advantage to his employers and to himself.

3. In judging of the probable conduct of individuals of this class, it is highly important to attend to the organs of Conscientiousness and Secretiveness. If the former be deficient and the latter large, the risks of peculation are greatly increased. There is, from the deficiency of the one, an imperfect feeling of moral obligation, and, from the great size of the other, an internal love of deceit and a consciousness of power in deception, which rarely fail to lead to crooked ways. I could present a list of ten or twelve individuals in different ranks of life whom I have known to fall victims to this combination. They were men in whom Intellect, Benevolence, and Veneration, were well developed, and who had enjoyed the advantages also of a moral and religious education. But their strong propensities continued to crave for indulgence. They thought that by concealment they might enjoy the pleasures of vice along with the reputation and advantages of virtue. A deficient Conscientiousness is not so formidable a defect when Secretiveness also is small, for the individual then has no internal reliance on his own powers of concealment and deception. He is impressed with the idea that all his actions will be at once traced and ascribed to their true motives; and when this is the case, Veneration, Benevolence, and Love of Approbation, become more influential in restraining the propensities.

When large Conscientiousness and Firmness are present in this class of heads, they very greatly diminish the risks of

misconduct; because the former operates as a constant monitor to virtue within the mind itself, and the latter gives great powers of perseverance in an honest course.

Finally, the character of the employer, as an important external circumstance, exerts a great influence on this class of minds. There are rogues among masters as well as among servants, agents, and clerks: and there are masters who expect their clerks to act as rogues for their benefit when dealing with the world, but to be scrupulously honest in their conduct towards themselves. This expectation is as irrational as the hope that a river should run down and up in alternate parts of its course. There is much more of this kind of temptation presented to young men than many persons believe. One clerk told me that in writing his master's cash-book, he was instructed to leave two or three lines blank at the bottom of each page, and was subsequently desired to fill them up with entries, partly of fictitious sales and partly of discounts of accommodation-paper. In the course of time his master became bankrupt, and he himself, thus mis-educated, died miserably in the West Indies some years later.

It will probably occur to many of my hearers, that these inquiries and distinctions are by far too minute to be practicable by a Guarantee Society, who must proceed on the broad principle, that among a given number of men a certain proportion will be rogues and the remainder honest, and who must calculate their premiums to cover the average risk. This must of necessity be the fundamental principle of their business, just as a similar one is the basis of life, sea, and fire insurance; but in all these other branches of guarantee, the most scrupulous inquiries are made into the *condition of the subject insured*, such as the sea-worthiness of the ship, the state of health not only of the individual but of the family to which he belongs, the uses to which the buildings are devoted, and the materials of which they are composed. Temperament, natural dispositions, education, training, and external circumstances, bear the same relation to the liabilities of the Guarantee Society that the foregoing particulars bear to the risks of the other offices. If phrenology afford no aid to the Guarantee Society in discriminating these risks, my fear is, that the average premium on all persons, if guaranteed on the faith of general character only, will be so high, that honest men will not pay them. The Society should have common, hazardous, and doubly-hazardous rates, to draw business and to protect themselves.

There is one risk to which this Society may find itself particularly exposed, namely, that of being made the prey of bands

of swindlers. It is not improbable that some fictitious firms (such as are frequently instituted in the metropolis for purposes of fraud, and, under the appearance of respectability and business, entrap confiding persons and rob them) may obtain guarantees from the Society for large sums for the good conduct of confidential clerks or cashiers, and send them off to America, or the Continent, with a view to claim indemnification for losses never sustained. I should regard phrenology as affording valuable means of protection against such dangers. The organs of Conscientiousness will uniformly be found *minus*, and those of Secretiveness *plus*, in all the parties engaged in such schemes; and where this combination occurs, the parties would do well to limit their guarantees to very moderate sums, and to exact a considerable premium, otherwise they will be exposed to suffer losses to a serious amount.

The *third* class of heads is that in which the moral and in-

MELANCTHON.

tellectual organs decidedly predominate over those of the animal propensities. In such individuals the dispositions correspond. The risks of their committing frauds or embezzlements are small, and they may be regarded in the same light as the best lives, or the strongest and best formed ships, in the departments of life and marine insurance. If the individuals thus endowed have been virtuously educated, they are

very rarely indeed deficient in common honesty. The magnitude of the trust only increases the extent of their anxiety and care to do justice to their employers. Such men value character above all earthly possessions. There is a constant monitor in their own consciences, which is ever wakeful to remind them of duty; and temptation rarely finds them unprepared for resistance. If the temperament be bilious, or bilious-nervous, and the organs of Conscientiousness, Cautiousness, Firmness, and Causality be large, and those of the propensities moderate or average, I should say that such men are proof against all temptations to commit fraud, and that (disease apart) they will resign their life sooner than their integrity.

In the foregoing observations, I have confined myself as much as possible to general combinations of organs and the general effects of them, because the varieties of natural character produced by particular combinations are endless. Nevertheless, in the practical application of phrenology to the objects of the Guarantee Society, these should be attended to. The phrenological adviser of such an institution would require to enjoy a combination of rare qualities and attainments, to fit him for his office. He should possess not only practical skill in manipulation, but the capacity of analysing mental talents and dispositions into their elementary qualities, and of judging of the effect which particular external circumstances will produce on their modes of action. He should have extensive experience of business, and have been accustomed to observe the human faculties evolving themselves (if I may use such an expression) in the ordinary affairs of life. It may be difficult at present to find such an adviser, but the nearest approximation possible should be made to obtaining one thus qualified; and a record should be accurately kept of the temperament, cerebral development, age, and education, of every individual whom he examines. He should be required to write down his anticipations of the manner in which the candidate for employment will conduct himself in the situation on which he is about to enter; and every fact subsequently ascertained concerning his behaviour should be entered in the same record. The Society by this means would gain invaluable knowledge by experience.

And here, I beg leave to enter a caveat for the use of the Society. They must not judge *prematurely* of the success of the phrenological indications. I have had the advantage of observing particular combinations of organs evolve themselves in practical conduct during five and twenty years, and I could produce a considerable number of instances in which, at the end of the first ten years of that period, common observers

would have declared that the conduct was far superior to the head, while at the end of the second ten years the same persons would have certified that it had been all along in perfect accordance with it. The instances in which this occurs are those in which large intellectual organs, with large Secretiveness and Love of Approbation, and perhaps Veneration and Benevolence, are combined with very deficient Conscientiousness. Such individuals often maintain an external appearance of rectitude for many years, even while there is an under-current of secret dishonesty running on all the time. During this stage of their career, a phrenologist is laughed at who speaks of their native defect of Conscientiousness; but at last some event occurs which unmasks the true character, and phrenology is found to be in the right. Another source of error into which the Society may be led, may be their not attending sufficiently to the adaptation of a particular combination to a particular situation in life. On one occasion, I was consulted whether it would be safe to employ, in a certain office, an educated young man, who, having been in business for himself, had made free with funds committed to him in trust, and lost them, and by other acts had forfeited his character for honesty. I observed that he possessed the nervous and sanguine temperament, an excellent development of the intellectual organs, large Benevolence, Veneration, and Love of Approbation, average propensities, with a palpable deficiency of Conscientiousness. I considered it unsafe to trust *money* confidentially to an individual thus constituted and exposed to the common temptations of society; but, as the office for which he was a candidate was one in which it was not intended to trust and tempt him in this form, I expressed an opinion that he might fill it with credit; and he has done so for several years. If he had come into this office first, he might have obtained a high character for good conduct and moral principle, on the faith of which he might have been promoted to a confidential charge of money, and his promotion might have become the cause of his ruin, by presenting to his weaker faculties temptations which they could not withstand. If this had happened, a skilful phrenologist, although he had received the highest testimonials of his upright conduct in a situation adapted to his faculties, would not have recommended him as a proper person to fill another office, in which he was liable to temptation; because it would have been perceived that the circumstances of the first did not try those powers of the mind on which correct conduct would mainly depend in the second.

I would observe farther, that the Guarantee Society needs

entertain no apprehensions on the subject of phrenological examinations deterring persons from applying for their guarantee. In the course of more than fifteen years' application of the science in a similar way, I have never met with refusals to submit to examination, except from persons who were conscious of some secret delinquency which they thought the head might expose; and few even of these have objected, for, in general, they have no idea that dispositions which are not manifested before the phrenologist in actions can be discovered from the proportions of the brain.

Finally, in submitting these observations to the consideration of the Phrenological Association, I would remark that the duty of phrenological adviser to such a Society should be undertaken with the understanding on the part of the Society and the public that this is a new science, and that its application in this department of human affairs is comparatively recent, is attended with great difficulties, requires judgment and cautious discrimination, and therefore cannot protect from all risk of losses. But making every abatement on account of these difficulties and imperfections, I can testify from experience, that where I have been satisfied with the combination of organs, and the education and training, of an individual, I have never (except in instances of intemperate habits and disease) been disappointed with his conduct. I add disease; because, now when I write, I know a young woman who, in apparently full health, and with a beautifully formed brain, is exceedingly deficient in memory and judgment; but the defect may reasonably be ascribed to concussion of the brain, the consequence of a severe fall, by which she seriously injured her spine about two years ago, and since which time her mental capacity appears to have greatly diminished. Her moral dispositions are unexceptionable; only, like the intellectual faculties, they are lessened in vivacity and vigour.*

* This paper was read before the Phrenological Association on 4th June 1841, at the meeting in London. At the conclusoin, Mr M. B. Sampson announced to the Association that the Directors of the Guarantee Society having, a few weeks previously, been presented with an opportunity of becoming acquainted with Mr Combe's views, had passed a resolution to adopt the aid of phrenology for the purposes of the Company.

II. *Some Notes upon the Hereditary Tendency to Mental Disease.* Read before the Dumfries Phrenological Society, by W. A. F. Browne, M.D., Superintendent of the Crichton Institution for the Insane. (Concluded from p. 231.)

II. There may be hereditary taint from malformation of the brain; where at maturity such irregularities of conduct appear as the natural manifestations; or where imbecility occurs; or where age or circumstances press too heavily upon some weak or wounded part, and the whole fabric falls.

The transmission of particular forms of head is best shewn by reference to national characteristics, or even to the organization of the great divisions and varieties of the human race. We know idiocy to be connate, and to exist in several branches of the same family; that it is hereditary is likewise true, but examples are comparatively rare, as the marriage of individuals thus affected can take place only where there exist neither legal nor prudential nor moral restraints, or where the necessities of caste or entail are truly exigent. Imbeciles, and those who are entrusted with liberty but with few of its privileges, and whose duties are as limited as their powers, often form alliances and originate a race characterized by feebleness. The head is in such cases always below an average size. The descent of such a form of head is said to be found among the Sicilians and Portuguese of rank.

That there is a tendency to particular forms of madness in certain families, depending upon vicious conformation of the brain, is well established. This has been chiefly remarked in suicidal mania, perhaps because the act is so striking and horrible as to attract attention, because it outrages all our sympathies, or because the event stamps to the least observant the nature of the disease. Gall knew a family of seven, who one and all destroyed themselves. Falret mentions a son, a father, and an uncle, who had committed suicide; on the authority of another member of the family who had frequently resisted a disposition of the same kind. Individuals who carry with them this taint in its most intense degree, often exhibit peculiarities which might be held to be premonitions or stages of the approaching paroxysm of disease. They are manifestations of that excitability and unequal activity and energy which flow directly from the vicious conformation which is now under consideration, and which merge into disease whenever acted upon by the appropriate irritants. They mingle with every act and relation of life: as eccentricities they may gain an unenviable notoriety; as inequalities of temper and irregularities of conduct they embitter the springs of peace to all around; as wild

and vague enthusiasm they may place the zealot among saints, or patriots, or traitors; as weaknesses of character they expose the possessor to the designs of every more energetic intellect: but they all tend towards disease; they all converge to that point where reason ceases to rule. It must not be imagined that all the odd or zealous are branded with this taint, or are all to be swallowed up in this common ruin; but where an insane parent is succeeded by an eccentric child, we are justified not only in concluding the presence of a hereditary taint, but in predicating the invasion of insanity under certain circumstances.

Hereditary taint proceeding from vicious conformation of the brain should likewise be viewed as affecting responsibility. If one man be more liable than another to such a suspension or disturbance of reason as to obscure his sense of right and wrong, and if he be most exposed to this suspension and disturbance at the very time, and by the very circumstances, and by the feelings which actuate him when he is tempted to commit violence or crime; and if it be shewn that in many cases, even where the taint may be said to be quiescent, there remain strong peculiarities, a fluctuation of purpose, an ill regulated will, which are all calculated to interfere with correct judgment and conduct; such liability may surely be held to extenuate the culpability of any given act, if not to exonerate the individual altogether from the consequences. Juries do well if they compare the transaction with the previous conduct, with the natural and healthy manifestations, of the accused; but this is not doing enough. The investigation must be carried further back, and whenever madness is suspected or pled, it should comprehend the history of the race as well as of the individual. To acquit a man because he is the representative of a line of homicidal maniacs may appear sadly inconsistent with law; but to condemn and execute him because a diseased condition of the brain, transmitted to him with the frame and features of his parents, at certain times and under certain influences impels him to imbrue his hands in blood or cast firebrands into palaces or cathedrals, appears equally at variance with humanity. Such a heritage may be a sound reason for depriving the unfortunate possessor of liberty, but not of life; for prescribing a strait waistcoat, but not the scaffold. The soundness of these views appears to have been recognised in the recent trial of Oxford. In that proceeding the venerable expositors of our criminal code must have been somewhat astounded to hear medical men refer to the s and shape of the head as an indication and proof of i and b to entertain the principle that if a r her have both been mad, there is a will be of unsound mind likewise.

The destruction of human life during a paroxysm of homicidal mania is regarded as an involuntary and irresponsible action; but what is here contended for amounts to this—that the mere tendency to commit such an infraction of law, when depending upon constitutional taint, should form a matter for grave consideration in all trials or discussions as to punishment; as such an element in the character, or acting upon it, must signally modify the influence of certain motives, the power of resistance to others, and even the perception of the consequences of any given act or course of conduct.

John Oxford, the grandfather of the regicide, was of intemperate habits, and was twice affected with furious mania, during which he destroyed every article of furniture within reach, pursued his brother-in-law armed with a spit, and gave way to the most uncontrollable violence. The first paroxysm occurred immediately before marriage. At all times, even when able to perform duty as a Greenwich pensioner, his conduct was strange and eccentric; he, even then, announcing himself as the Pope of Rome and St Paul. He had three children—a daughter, who appears to have been of sound mind; a son, who was at one time insane; and the father of the culprit, whose mind was, from infancy, warped, wilful, and deranged, compounded of acute perceptive powers which procured and preserved for him a character for ability, and of diseased passions and propensities which should have consigned him to a madhouse. Alternately an industrious workman and an inveterate drunkard, an ardent lover and a domestic tyrant, he, about maturity and the time of his marriage, became insane, and never perfectly recovered. He twice attempted to commit suicide, repeatedly assaulted and severely injured his wife, and recklessly burned, broke, and squandered his own property. During his wife's second pregnancy, this insane monster deprived her of food, wounded her, and terrified her by imitating the grimaces of a baboon in her presence. The offspring was an idiot, with features exactly resembling the grimaces its father had used. In her fourth pregnancy, his deportment was even more brutal. He persecuted her with gibberings and hideous distortions of his body as before, knocked her down, and fractured her head with a quart pot. The birth of Edward Oxford immediately followed this treatment. The regicide himself is described as imbecile but partially educable, wayward, proud, destructive; and he, upon one occasion, seemed to labour under delusion, having declared that he was St Paul. He was about eighteen years of age when he fired at the queen.

Here, then, is an uninterrupted descent of the same qualities

through three generations. The original dispositions of the individuals differ little, the derangement is of the same character, although, as the stream runs onward, it seems to become darker and deeper; the development of the disease occurs at the same period of life, and the third member of the series is so complete a type of his ancestor as to reproduce even the very same form of delusion. Dr Conolly "examined the prisoner's head, and it appeared so formed in the anterior part as to shew that the brain was not fully developed. There are persons so developed who are of unsound mind." Such evidence leaves little room for doubt that this defective development and diseased condition of the cerebral organization were transmitted.

III. There may be hereditary tendency to disease from the want of balance between parts of the brain. The man with large Cautiousness, Secretiveness, Wonder, and Veneration, and small Intellect, Firmness, and Combativeness, and who educates and ministers to the strong feelings thus pervading his character, runs great risk of the mania of fear and superstition. It has been laid down as a proposition, that hereditary predisposition is apt to produce madness, and the same kind of madness in different individuals at the same time of life. This is what might have been anticipated from the same type of head running through successive generations, and especially where, as is often the case, the taint appears to depend upon the predominance or imperfect development of particular groups of organs. There are, however, too many exceptions to such a rule, and too many sources of deviation in the supposed course of transmission, to permit such a proposition to be received as a true and rigid interpretation of nature. There may be only one or there may be both parents insane; they may be affected with different degrees and descriptions of insanity; the father may be eccentric, the mother epileptic; the one may have issued from a pure and vigorous stock, the other may be connected with a race of imbeciles; and thus all calculations as to the precise result must be rendered hazardous and doubtful. There are under my charge at this moment a father and a daughter who are both insane, but whose morbid feelings and delusions are in no respect assimilated. The father lives in constant fear of death, and has taken his last meal, according to his own account, three times a-day for the last two years; the daughter is a merry, garrulous, incoherent maniac; a younger daughter was formerly insane, and laboured under religious despondency. Jonathan rtin, who set fire to York Minster, died deranged; his son

inherited the tendency to madness, but not to the monomania of incendiarism. The father gloried and rejoiced in his delusion, the son committed suicide in a fit of despondency and depression. Nor must the invasion of the disease at a particular period be regarded as inexplicable or wonderful, as the attack will be found to be contemporaneous with the exercise of those passions, or the occurrence of those events, which are most calculated to injure or destroy the equilibrium of the reasoning powers. The individuals are, at the same age, placed in nearly similar situations, and fall victims to the duties, or pleasures, or anxieties, by which they are surrounded. But there is confessedly a periodicity in nervous disease, and it may extend to the development of hereditary taint. As an illustration of the regular return of mania, I may state that I was the other day consulted respecting a family, of which a father and two sons, arrived at manhood, have been insane, where it appeared that the parent became, for three successive years, raving mad upon the first of March. But, although the different explosions of the malady coincided to a day, the symptoms varied in each attack. He was miserable from penury and impending want in the first; joyous, and lavish of the wealth which he actually possessed, in the second; and reduced to second childishness in the third and fatal attack.

The family of Elwes, the celebrated miser, affords an example of insanity depending upon the inordinate development of apparently one organ transmitted through two generations. The penurious habits of the mother of Elwes led to gradual self-destruction by starvation; she lost her life in saving a penny. His paternal uncle had no other pursuit but to accumulate, and after having lived surrounded by wealth which he could not enjoy, he died like a beggar, unwept, unhonoured, the possessor of half a million sterling and a coffin. Elwes, the representative of these martyrs to gold, began his career as a gambler, and by those who fail to detect in that course avarice gilded by hope, his disposition is supposed to have been then liberal, and to have undergone a change when he left society, relinquished its pleasures, and condemned himself to unheard of privations in order to save money. But in this early display, as in every subsequent act of life, the incontrollable, the diseased propensity to *hoard* was conspicuous; and even the madness which clouded his latter years was little more than the same feeling roused to extreme excitement, and running into the dread of robbery and spoliation.

There are certain phenomena connected with the appearance of derangement, depending upon extreme or deficient development of particular regions of the brain in successive

members of a family, which claim a moral as well as a physiological interest. The man of violent temper and incontrollable passions, which, during a paroxysm of excitement, suspend the operation of reason and conscience, is often succeeded by children who inherit his infirmities and at last become mad. It frequently happens, that, in tracing the history of a case of insanity, the relatives of the patient are declared to have lived and died free from all similar affections, and perhaps to have been distinguished by great sagacity or by brilliancy of imagination. But the inquiry should be carried further; the dispositions of the parents should be ascertained, their principles of action examined, the extent to which the propensities have been indulged determined; and the sum of the conclusions will give, more frequently than what has been hitherto conceived, bursts of rage or habitual irritability in the parent as the remote source of alienation in the child. Those who have witnessed, or analyzed, or felt the manifestations of excessive, unrestrained, or, it may be said, cultivated, Destructiveness, Combativeness, and Self-Esteem, can well appreciate how closely these resemble the symptoms of furious mania. In fact, there can be no doubt that, for the time, the conditions are identical, or that both are states of disease involving irresponsibility. It has not, however, been sufficiently observed, that anger, in other respects besides irrationality and violence, approaches certain other nervous diseases, and may have equally detrimental consequences. There is the sudden development of great muscular power, often attended with rigidity or spasmodic contractions of the muscles, followed by tremor and prostration, sometimes by fainting; there are temporary insensibility to pain, great disturbance of the circulation, and frequently the periodical return of the paroxysms. It is highly probable that the whole of the nervous system sympathizes, under such circumstances, in the disturbance of a part, and that, as a consequence of the morbid intensity of the functions of the base of the brain, great injury is done to the other portions of that organ, and a condition induced which is handed down, and consigns, or may consign, the next generation to the mad-house. This is, at least, a description of the facts. There is a gentleman now under my care, in whose lineage no instance of insanity can be discovered. His mother died in early youth, his father was regarded as shrewd and intelligent. But the latter was a domestic despot, a man who, from the most ungovernable fury, under the influence of which he assaulted his wife and all around, flung dishes at the cook, &c., giving way to blind destructive delirium, passed to oppressive maudlin kindness, and profuse generosity towards the

very victims of his oppression and cruelty. These whirlwinds of passion were called forth by the slightest provocation, were altogether disproportioned to the exciting cause, and were directed indiscriminately to the offender and to all upon whom he dared to wreak his vengeance. This man died sane, according to the liberal or lax interpretation of his friends, but his son is furiously and irrecoverably mad.

IV. There may exist hereditary tendency to mental disease where distant parts are so organised as to act detrimentally upon the brain. The predisposition to insanity may, in this way, be communicated by the hereditary arrest of development,—the structural defect or the disproportion of certain parts to the general system,—or the disease, debility, or inordinate energy of any organ; the irritation or disturbance of the functions of these parts acting indirectly upon the brain. This is chiefly true as to hereditary enlargement of the heart, which is now recognised as a frequent cause of derangement; but the same observation is applicable to pellagra, scrofula, gout, and other affections, which implicate important organs, are obviously transmissible, and either act as irritants of the nervous system, or, by attacking the brain directly, give rise to insanity, in the same manner as when, by attacking the glands and cartilages, they give rise to pains, swellings, and so forth. According as one or other of these explanations is adopted, it must be concluded either that there is one hereditary tendency, modified by the structure and functions of the parts affected, or that there are two tendencies to disease running collaterally in the same system.

That temperament is hereditary is very obvious, and that madness is more frequently associated with the nervous and bilious than with any other modification of temperament, has been rendered equally so by recent investigation. Were the present an inquiry into the secondary or collateral causes which may influence the development, or even contribute to the propagation and continuation, of hereditary taint, this would be the stage at which to discuss the connection of temperament with transmissible mental qualities, and with the transmission of particular conditions of organization; but it seems better to confine this paper to the indication of the conditions upon which hereditary taint appears to depend, and to reserve such considerations for another opportunity.

Where hereditary tendency, depending upon any of the causes now assigned, exists in families, but is not developed, such exemption may generally be referred to one of three sources:—1. Either, one of the parents has been of robust

and pure constitution; or, 2. The natural physical powers and training of the individual exempt have been such as to afford protection; or, 3. His rank, or position, or profession in society, has removed him from the influence of the excitement, fluctuations, and reverses of fortune, which are so fertile of danger. And the reappearance of madness in a family which has for several generations escaped, may in like manner be traced to intermarriage with a tainted stock, or to circumstances which break down the system and revive the latent poison. The limitation of hereditary predisposition to the males or females of a family may be explained upon similar principles. There are under my care at present two instances of the incursion of insanity in a father and son, while the females of both families enjoy, and have during life enjoyed, perfect mental health. In these cases, the mother possessed and transmitted to her daughters a vigorous constitution. Another striking illustration of this limitation has come under my notice. An eccentric father left three sons and several daughters. The eldest son died in premature old age from apoplexy, preceded by loss of memory and fatuity; the second is notorious for oddity and eccentricity, which emulate disease, and for passion, vindictiveness, and excess, which cannot be distinguished from brutism; the third is now losing piecemeal his recollection of places, periods, and persons, and is the sport of his own irritability. In his sons the tendency has been displayed in its most distressing form. Several have died in a state of idiocy, and one is now so singular and hypochondriacal as to be unfitted for the occupation he had chosen. The females of both generations have remained free from all nervous disease. The evidence, of which these examples form a part, countenances the opinion that, in the transmission of qualities, the influence of the mother acts more directly upon the female, and that of the father upon the male offspring. Esquirol adds, that madness is more frequently transmitted by the mother than by the father. If it be considered,—*first*, that there are a greater number of females insane, and predisposed to be insane, than males; *secondly*, that from constitution, training, and position, females are much exposed to causes calculated to call this predisposition into activity; and, *thirdly*, that children are, during early education, more exposed to acquire the tone of the mind of the mother than of the father, the proposition is denuded of all indication of paradox, which it at first wears, and becomes a simple announcement of fact. Both parents are rarely affected. In a table of 514 cases, of which 255 were males and 259 females, in which taint was either acknowledged, or had been

traced, only six instances occur in which the father and mother of the patient died mad. From the same table, it appears that the disease descended in 76 from the mother, and in 57 from the father; that in 30 cases two relations were deranged, in 484 only one; and that in only two cases are three generations mentioned as having been so. The sexes of the diseased progenitors stand thus: of twenty degrees of consanguinity enumerated, six were male and six female, seven both male and female, and of one the sex is not specified. I have myself compared the sexes of nearly a thousand cases, in which hereditary taint could be traced, and find that the proportions are as follows: of 969 patients treated in various asylums, 440 were males and 529 females.

I likewise find that, of a hundred cases of insanity recently treated by me, and of which 59 were males and 41 females, 36 only were affected with tendency to nervous disease of some kind, 24 of these being males and 12 females. Of the 36 thus predisposed, the tendency to insanity, without apoplexy, epilepsy, or other forms of nervous disease, had appeared in the families of twelve; the tendency to nervous disease, without insanity, in the families of sixteen; and the tendency to both insanity and nervous disease in the families of eight. Seventeen appeared to have had one relation affected; fifteen, two relations; two, three relations; one, four relations; and in one instance the number is not stated. Of the same number there was one case in which a cousin was the relation insane; in two, a son or daughter; in four, uncle or aunt; in four, father and mother; in fourteen, father; in eleven, mother; in sixteen, brother or sister; and in one the relation is not stated.

A patient under the care of my friend Dr Mackinnon, in Morningside Asylum, affords an example of the more intense forms in which hereditary taint is sometimes displayed. The individual is herself a suicidal maniac; her brother committed suicide; her sister has been threatened with melancholia; her mother, maternal grandmother, and paternal uncle, were all insane.

The length of the stream of hereditary taint has not been traced, nor have the number of generations been observed in which it may appear; indeed the information upon this, as upon all other branches of the subject, is extremely meagre and defective. I have met with hereditary taint times without number in two and frequently in three generations; occasionally it has been noted in four successive descents, but the rareness of such observations, except in such instances as the Cretins and Cagots, should not create surprise, as they

have hitherto depended exclusively upon personal experience, and as there must have been a thousand motives to conceal, and not one to disclose, the existence of such family misfortunes.

As it was before observed, individuals organically predisposed to derangement are more liable than others to relapses. They have to struggle against the tendency which all structures manifest to resume that particular morbid action to which they have before been subject; against the debility engendered by repeated attacks of alienation, and against that sensibility and susceptibility which at once make them more alive to the misfortunes and difficulties and contrarieties of life, and less able to resist their influence. The frequency of these paroxysms does not seem to interfere with the curability of the disease. The first in the series appears indeed to be more amenable to treatment, than cases where no taint can be detected. This is neither paradoxical nor inexplicable. The patient succumbs in many cases to some cause, such as intoxication, or passion, or disappointment, which is formidable only from the presence of predisposition, which is temporary, and which leaves the mind exhausted and excitable, but unchanged. To escape from the source of annoyance, to retire to such seclusion as will allow the intellect and feelings undisturbed rest and tranquillity, is generally all that is necessary to bring about convalesence. A period arrives, however, when, from the frequent occurrence of the malady, and from the approach of the decline of life, all remedial means lose their efficacy, and early decrepitude of mind and premature age appear together, and the patient passes into a state of incurable mania, or imbecility, or paralysis.

At this point, where observation may be expected to merge into conjecture, we leave the subject, in the hope that the facts have been brought prominently forward—that the speculations incidental to so new and interesting a discussion have held a subordinate place—and that the great object originally proposed has been attained, by shewing that hereditary tendency to mental disease is dependent upon organization, is subject to the ordinary laws of the system, and, in so far as our knowledge of that organization and of these laws extends, may be cured, counteracted, or ameliorated, in the same way, and upon the same principles, as the tendencies to other diseases.

III. *A Phrenological Analysis of the Character of King David.* By Mr H. U. JANSON, President of the Exeter Phrenological Society.*

The present essay is by no means one of a novel character, but resembles some which appeared in the early volumes of the Phrenological Journal. These, however, differ from it, in being analyses, not of real, but of *imaginary* characters—chiefly from the works of Shakspeare and Sir Walter Scott. This is a branch of the applications of phrenology, which has excited, more perhaps than any other, the wonder and ridicule of "the scoffers." They inform us that such characters as Othello, Iago, and Macbeth, never in reality existed, but are merely the creatures of imagination; "and how then," say they, "can you possibly have examined *their* heads? how have you contrived to grope *their* bumps?" When I recently told a friend that I was about to write a phrenological analysis of the character of King David, his answer was precisely what I expected—"King David!!! why, where on earth did you get *his* skull?" And, indeed, it is surprising how difficult it is to convey into an uninitiated mind this simple proposition, that, supposing our science to be true, and that a certain development of the cerebral organs will produce a character of a certain description, the *converse* of this must equally hold good; so that, if this character were described to a phrenologist, he could as easily, and as certainly, determine what must have been the development from which it sprung. Thus, if I hear that a man has committed a depraved and atrocious murder, without even the plea of provocation, and without any object to be gained by the crime, I infer that, if sane, he must have possessed great Destructiveness with deficient Benevolence. If, on the contrary, I meet with such a case as that of Haggart, who, indeed, committed murder, but without intention (his wish being merely to *stun* his jailor and thereby obtain his liberty, and who, on hearing that his victim was dead, was struck with the most poignant remorse), I then infer a much better development, and that his Benevolence was probably larger than his Destructiveness: and, on examining the cast of Haggart now before you, we find it so to be. Again, in the case of an individual who has delighted the world by his writings, the phrenologist finds little difficulty in pronouncing what must have been the organization from which proceeded those ideas or sentiments which have so pleased the

* With the permission of the author, we have slightly condensed this essay.—ED.

public mind. Thus, when reading the magnificent Astronomical Discourses of Dr Chalmers, which a learned critic has aptly compared to " the onward flow of a mighty river 3000 miles deep," I am led to conclude that the author, in addition to considerable intellect, must have possessed a splendid development of Ideality; and, accordingly, on examining his cast, I find that the development of this organ is enormous. Or, if I read the speeches of Mr Joseph Hume, and find a great want of the sublime and beautiful, and see that they consist, as Lord Byron quaintly said, merely of " words, words, words," I then expect to find in his head a striking contrast to the case of Chalmers; and truly so it is. Now it is just as easy to predict the development of an individual who lived many ages ago as of our own contemporaries, provided we possess a sufficient number of data concerning him, that is to say, of facts relating to his talents, dispositions, and actions, from which the development may be inferred. Thus, when in ancient Roman history we meet with such a character as that of Nero, an incarnate demon, whose principal enjoyments appear to have been derived from persecution and massacre, who poisoned his own mother, and caused Rome to be set on fire in several places at once, that he might enjoy the spectacle of its conflagration, a phrenologist would unhesitatingly affirm that he must have exhibited a cerebral conformation of the vilest description; even were this assertion not corroborated (as it is) by medals, and by the magnificent marble busts which the sculptors of that distant age have bequeathed to posterity. Or if we carry our researches still further back, even into the pages of Holy Writ, we still find the same striking differences in the delineations of human character presented to our contemplation; and we conclude that among the Jewish kings, for example, Josiah, Joash, Jehoshaphat, and Hezekiah, were endowed with brains of a different conformation from those of Ahaz, Abijah, Manasseh, and Jeroboam the son of Nebat. Still it cannot be denied that the majority of the characters presented to us in holy Scripture are but slightly traced; the data given us concerning them are but few in number; and, generally speaking, we can infer from them little more than that some of the individuals described were naturally of a virtuous, and others of a vicious character. Here and there, however, we meet with an exception to this rule in a delineation of greater minuteness; and among these, but far above all others, stands preeminently conspicuous the personage whose character I have chosen for the subject of my present attempt.

The character of King David, as it is set before us in the

Old Testament, is so minutely drawn, and (although to one "sitting in the seat of the scornful" the phrase may appear ludicrous) his mental constitution is so *phrenologically* depicted, that it forced itself on my mind as one peculiarly adapted to the purpose I had in view; and I was the more inclined to make the endeavour, because, as far as I have been able to discover, it is hitherto untrodden ground, the idea of this analysis not having, it would seem, occurred to any other of our phrenological persuasion.

I now, therefore, commence my task, without troubling you with any of the usual preambles of young authors. Taking the faculties in the order in which they are arranged by Dr Spurzheim, I come in the outset to speak of the function of the cerebellum. This organ, we are compelled, by the numerous and unequivocal data given us by King David's biographers, to conclude, must have been of more than moderate dimensions in his royal encephalon; and although in other respects he was so pleasing to his Creator as to merit the emphatic appellation of "the man after God's own heart," yet, on the other hand, the excessive activity of this propensity was the means of bringing upon him a great measure of the Divine wrath, and of embittering his otherwise happy career. He appears, indeed, to have exceeded even the copious latitude allowed by the indulgent laws of his day; and, not content with the unrestricted polygamy which was then held allowable, he at length had recourse to seduction, and that, too, under circumstances peculiarly base and aggravating.

But, as the contemplation of this dark side of the picture is melancholy and unpleasing, we will now proceed, in the course of our sketch, to the organ No. 2—that of Philoprogenitiveness, the faculty which, when in considerable development, produces an instinctive attachment to infants or very young children. Of the strength of this feeling in King David we have several unequivocal indications, the most interesting of which is in the twelfth chapter of the Second Book of Samuel, relating to the death of the child which was born to David by "her that had been the wife of Uriah," and which child, we are told, the Lord took from him as a punishment for his iniquity. The account of David's conduct on this occasion is given with that artless simplicity which forms so striking a feature in the style of the Old Testament writers. "And the Lord struck the child that Uriah's wife bare unto David, and it was very sick. David therefore besought God for the child; and David fasted, and went in and lay all night upon the earth. And the elders of his house

arose, and went to him to raise him up from the earth; but he would not; neither did he eat bread with them. And it came to pass, on the seventh day, that the child died. And the servants of David feared to tell him that the child was dead: for they said, Behold, while the child was yet alive, we spake unto him, and he would not hearken unto our voice; how then will he vex himself if we tell him the child is dead." Now, had the organ under consideration been small or even moderately developed in the head of David, his conduct on this occasion would have been characterized by a great deal more of what it is fashionable to call "philosophy," but the true name of which is *apathy*.

We next arrive at the organ marked No. 3, which I pass over, because it is one of the few upon which there still exists a considerable degree of uncertainty respecting their real functions. Following it is the organ called Adhesiveness,—that is, attachment, affection, or friendship. This quality is of a different nature from that produced by No. 2, the effect of which appears to be the feeling of sympathy with infancy, or any thing that is little, weak, and helpless; whereas Adhesiveness appears to produce attachment only to adult persons. Every one must be conscious, that the feeling of attachment experienced by one man for another is very different from that of a man towards a little child. Phrenology has fully proved that they derive their existence from different organs, and, indeed, there is probably no cerebral organ more firmly established than these two. In the character of King David, Adhesiveness appears to have formed one of the most prominent features. It may be laid down as a rule, that only those who are themselves formed for friendship can inspire others with reciprocal attachment. Now, the friendship of David and Jonathan is proverbial, and the lamentation which David made upon hearing of the death of Saul and Jonathan is truly pathetic. "Then David took hold on his clothes and rent them, and likewise all the men that were with him. And they mourned, and wept, and fasted until even, for Saul and for Jonathan his son, because they were fallen by the sword." In his passion of grief he exclaims, "I am distressed for thee, my brother Jonathan; very pleasant hast thou been unto me: thy love to me was wonderful, passing the love of women."

We now turn from this amiable and pleasing part of the picture, and proceed to contemplate the subject of our observations in a new light, namely, under the influence of Combativeness and Destructiveness; when, strange to say, the kind, gentle, and affectionate David suddenly starts up before us as the ferocious and sanguinary warrior, thirsting for revenge and slaugh-

ter. The limits of a paper of this description will not permit me to give more than a very few of the numerous examples of the unrestrained indulgence of these belligerent propensities. It appears, however, that, in this respect, David exceeded the approbation of Him who is called (in Old Testament language) "the God of battles;" and, as a punishment, he was forbidden to build the house of the Lord, which he seems to have earnestly desired to do. His own words, given in the 22d chapter of the 1st Book of Chronicles, are these: "And David said to Solomon, My son, as for me it was in my mind to build an house unto the name of the Lord my God: but the word of the Lord came unto me saying, Thou hast shed blood abundantly, and hast made great wars; thou shalt not build an house unto my name, because thou hast shed much blood upon the earth in my sight."

The whole history of David presents the most striking illustration of the activity of these powers. Of Combativeness he appears to have been even at an early age a prodigy. When a mere youth, he astounded the host of Israel by attacking and slaying the mighty Giant Goliath, "the staff of whose spear was like a weaver's beam, and whose spear head weighed six hundred shekels of iron." And this amazing attack, we are told, was made on the part of David with so insignificant a weapon as a sling. At a still earlier period, when only a shepherd boy, we read that David, alone, contended at once with a lion and a bear, and slew them both. He says to Saul,—"I caught him by his beard, and smote him, and slew him. Thy servant slew both the lion and the bear, and this uncircumcised Philistine shall be as one of them." Throughout his life he appears never to have hesitated at encountering the greatest inequality in battle, and his prowess was generally marked with excessive carnage. "Saul," it is said, "slew his thousands, and David his ten thousands." It cannot be denied that his proceedings in battle are marked by great, and, as it would seem, unnecessary cruelty. On the conquest of Rabbah, a city of the Ammonites, we read that "David brought forth the people that were therein, and put them under saws, and under harrows of iron, and under axes of iron, and made them pass through the brick-kiln: and thus did he unto all the cities of the children of Ammon." And it is remarkable that, even to the end of his life, his character in this respect remained unaltered. His last charge to Solomon, when "the days of David drew near that he should die," was literally one of revenge and bloodshed. "Thou knowest," said he, "what Joab the son of Zeruiah did to me; . . . . do therefore according to thy wisdom, and let not his hoary

head go down to the grave in peace. . . . . And, behold, thou hast with thee Shimei the son of Gera, a Benjamite of Bohurim, which cursed me with a grievous curse in the day when I went to Mahanaim: Now, therefore, hold him not guiltless; his hoar head shalt thou bring down to the grave with blood." Immediately after giving these last injunctions, David, we are told, "slept with his fathers;" and it appears that his commands were fulfilled to the letter by his son.

The next organ in order is Constructiveness, the basis of the mechanical arts. This, when joined with a considerable development of Form and Colour, produces a talent for painting. United with Weight, and good perceptive faculties, it gives a proclivity for mechanical science; and, with intellect and Ideality, a love of architecture. Of this last tendency, we have some intimation in the desire which David had to erect the temple; but, as may well be supposed, a life such as his, which must have been a constant vortex of activity in far different matters, would afford but little leisure for the cultivation even of the comparatively little mechanical science which was then known.

We now arrive at the organ of Acquisitiveness; which, as its name denotes, gives a desire to obtain any kind of property which the individual may value. Of this faculty, I consider, we have clear indications in the character before us. There does not indeed appear to have been any case in which David abused this propensity in the form of sordid covetousness, as in the instance of Ahab and the vineyard of Naboth. Nevertheless, it cannot be denied, that, in his numerous wars and incursions, David seems always to have had a remarkably keen eye towards the *spolia opima*. His object in making war seems to have been quite as much the plundering, as the slaying, of his enemies. Of this we have numerous proofs, from which I will select two or three. At the capture of Rabbah, we are told that "David took their king's crown from off his head (the weight whereof was a talent of gold, with the precious stones), and it was set on David's head: and he brought forth the spoil of the city in great abundance." In his war with the Syrians (2 Sam. viii.), we read that "David took the shields of gold that were on the servants of Hadadezer, and brought them to Jerusalem; and from Betah, and from Berothai, cities of Hadadezer, king David took exceeding much brass." Again, in his war with the Amalekites (1 Sam. xxx.), it is stated that "David smote them from the twilight, even unto the evening of the next day: and there escaped not a man of them, save four hundred young men, which rode upon camels and fled. And David recovered all

that the Amalekites had carried away; and David rescued his two wives. And there was nothing lacking to them, neither small nor great, neither spoil nor any thing that they had taken to them: David recovered all. And David took all the flocks and the herds which they drove before those other cattle, and said, This is David's spoil."

We must now deviate from the regular track hitherto pursued; partly in order to shorten the essay, and partly because the analysis upon phrenological principles requires the grouping of several powers together. The first group presented to our notice is that of Cautiousness, Secretiveness, and Imitation. It may indeed at first sight appear strange and improbable, but it is nevertheless a historical fact, that David, the dauntless and formidable warrior, who seems to have rejoiced in an atmosphere of strife and contest, was, under certain circumstances, subject to paroxysms of fear and panic. In one very remarkable instance, he had recourse to a surprising, and, as it appears, successful piece of duplicity, in the form of acting, in order to protect himself in what he considered a dangerous situation; I allude to his flight from the wrath of Saul, as detailed in the twenty-first chapter of the first book of Samuel. "And David arose, and fled that day for fear of Saul, and went to Achish the king of Gath. And the servants of Achish said unto him, Is not this David the king of the land? did they not sing one to another of him in dances, saying, Saul hath slain his thousands, and David his ten thousands? And David laid up these words in his heart, and was sore afraid of Achish the king of Gath. And he changed his behaviour before them, and feigned himself mad in their hands, and scrabbled on the doors of the gate, and let his spittle fall down upon his beard." Now it is the phrenological doctrine that the organ of Imitation confers the power of assuming manners, expressions, language, and, in short, a general effect quite different from that which is natural to us; and also that Secretiveness greatly assists this power by enabling its possessor to draw a thick veil over his character; that Imitation *alone* may produce *mimickry*, but that great Secretiveness is *also* essential to ensure success in that higher degree of acting called *personation*. In the case before us the *personation* seems to have been effected with equal skill and success. The king of Gath was completely deceived, and David's purpose attained. "Then said Achish unto his servants, Lo! ye see the man is mad: wherefore then have ye brought him to me? have I need of madmen, that ye have brought this fellow to play the madman in my presence? shall this fellow come into my house? David therefore departed

thence, and escaped to the cave of Adullam." I doubt whether the whole range of history affords a more striking example of the three powers last mentioned than this. It is indeed a complete masterpiece in histrionic science.

We will next unite the organs of Self-Esteem and Firmness. There are numerous proofs that David had a strong feeling of self-respect; and one case is recorded, in which this feeling, with Love of Approbation, being "mortified," he never forgave the offending person, but kept up the pique to the very last. I allude to the case of David dancing before the ark, when it was brought from Kirjath-jearim. "And as the ark of the Lord came into the city of David, Michal, Saul's daughter, looked through a window, and saw king David leaping and dancing before the Lord; and she despised him in her heart." The speech of Michal to David on this occasion is precisely of the kind calculated to wound the feelings of a man in whom Self-Esteem and Love of Applause appear to have been any thing but deficient. "And Michal, the daughter of Saul, came out to meet David, and said, How glorious was the king of Israel to-day, who uncovered himself to-day in the eyes of the handmaids of his servants, as one of the vain fellows shamelessly uncovereth himself!" The answer of David is highly characteristic of Self-Esteem and Firmness. He says, "I will yet be more vile than this, and will be base in mine own sight; and of the maid-servants which thou hast spoken of, of them shall I be had in honour. Therefore Michal, the daughter of Saul, had no child unto the day of her death." The meaning of the latter words is sufficiently obvious; and when we consider that Michal was David's first love, we cannot but allow that here was a striking example of that quality which has been quaintly defined as "perseverance, in a good cause, and obstinacy, in a bad one." There are, indeed, numerous cases on record in which David shewed himself very "touchy:" in all cases it is clearly referrible to irritated Self-Esteem and Love of Approbation, the inseparable concomitant of which is, of course, dislike of disapprobation. His intense hatred of Joab, which, as we have seen, existed even to the last, appears originally to have been aroused by the harsh and insulting speech which Joab made to him whilst lamenting the death of his beloved son Absalom. "And Joab came into the house to the king, and said, Thou hast shamed this day the faces of all thy servants, which this day have saved thy life, and the lives of thy sons, and of thy daughters, and the lives of thy wives, and the lives of thy concubines; in that thou lovest thine enemies, and hatest thy friends: for thou hast declared this day that thou

regardest neither princes nor servants; for this day I perceive that if Absalom had lived, and all we had died this day, then it had pleased thee well." This speech the king appears never either to have forgotten or forgiven, although, upon a fair and candid review of all the circumstances of the case, it must be admitted that Joab had a considerable show of reason on his side. It is the phrenological doctrine, that when Self-Esteem or Love of Approbation is mortified, it immediately excites the organs of Destructiveness. This is one of the many and curious instances of sympathy between the cerebral organs upon which, as yet, we possess but little accurate information.

We now come to the organ which is situated on the superior-anterior region of the cranium, and at the upper part of the frontal bone, namely, that called Benevolence, whence proceed kindness of heart, joy in witnessing the happiness, and grief in witnessing the pain, of others. I purpose considering this organ and that of Conscientiousness together; because I fear that our data concerning both are rather of the negative description. But it is to be kept in mind, that David lived in an age when philanthropy was unknown—a time when it was not those who "did justly," and who "loved mercy," that were prized by their fellow-men; but those who could strike hard, fight bravely, and conquer in battle. Still there is here and there a faint trace of these qualities also. Perhaps the best example is that given in chap. xxiv. of the Second Book of Samuel. The Lord, "whose ways are past finding out," wishing to punish the children of Israel, excited David to number them; and this act of taking a census of the people was, for reasons which we cannot comprehend, accounted a great crime. "And the anger of the Lord was kindled against Israel, and he moved David against them to say, Go number Israel and Judah." It is but right, however, to observe in passing, that in the 21st chapter of the First Book of Chronicles, the matter is placed in a different light, and we are there informed that it was "Satan" who "provoked David to number Israel." The modification, or *media via*, would appear to be, that God, who, although never the *author*, is, nevertheless, to a wonderful extent, as Dr Edwards observes, "a *permitter*, or *not a hinderer of evil*," in this instance permitted Satan to tempt David, as we are elsewhere informed he permitted him to tempt Job. However, leaving this knotty point to be settled by ecclesiastical polemics, we return to our subject. In consequence of this act of David, we are told "the Lord sent a pestilence upon Israel; and there fell of Israel seventy thousand men." And the pathetic

prayer of David on this occasion certainly does exhibit the language of Benevolence and Conscientiousness: "And David said unto God, Is it not I that commanded the people to be numbered? Even I it is that have sinned and done evil indeed; but as for these sheep, what have they done? Let thine hand, I pray thee, O Lord my God, be on me, and on my father's house, but not on thy people, that they should be plagued."

We have now attained the highest step of the ladder—the organ of Veneration. Concerning this faculty our data are boundless. This excellent faculty was David's grand redeeming point, and here I cannot do better than quote the words of "good old Isaac Walton," who, like the immortal Bunyan, has had many imitators, but no equal. In his parting charge to his pupil, he says, "My honest scholar, all this is told to incline you to thankfulness, and, to incline you the more, let me tell you, that though the prophet David was guilty of murder, and adultery, and many other of the most deadly sins, yet he was said to be a man after God's own heart, because he abounded more with thankfulness than any other that is mentioned in holy Scripture, as may appear in his book of Psalms, where there is such a commixture of his confessing of his sins and unworthiness, and such thankfulness for God's pardon and mercies, as did make him to be accounted, even by God himself, to be a man after his own heart." David's Veneration, I may observe, was manifested (as it usually is) not only towards the Deity, but also towards those of his fellow-men whom he looked up to as superiors. Although Saul was continually persecuting him, and striving to take his life, yet he appears to have felt the most profound respect for him because he was "the Lord's anointed." And, in the case where David cut off the skirt of Saul when he found him asleep in the cave of En-gedi, the compunction which he immediately felt, seems to have been greater than what he experienced after his adultery with Bathsheba and the subsequent murder of Uriah. (1 Sam. xxiv. 5, 6, &c.) "And it came to pass afterward that David's heart smote him because he had cut off Saul's skirt. And he said unto his men, The Lord forbid that I should do this thing unto my master, the Lord's anointed, to stretch forth mine hand against him, seeing he is the anointed of the Lord."

Hitherto we have been considering David merely by his *biography*. But we must not forget that our illustrious subject was not only a king, a warrior, and a statesman, but also an *author*, and one of great celebrity. Let us now therefore contemplate him through the medium of his *works*. Here indeed it is that criticism is lost in admiration. The book of Psalms abounds with the most intense manifestations of Veneration,

Hope, and Ideality, clothed in the most beautiful language. His Veneration exclaims, "Praise the Lord, O my soul; while I live will I praise the Lord. I will sing praises unto my God while I have any being. Great is our God and greatly to be praised; sing unto him and talk of his wondrous works." His Hope exhibits itself continually in such expressions as these: "Why art thou disquieted, O my soul? hope thou in God. Happy is he whose hope is in the Lord. I will hope continually, and will yet praise thee more and more." And no intelligent biblical phrenologist will require to be informed that the Book of Psalms is a complete treasure of poetry, abounding with innumerable passages of the sublime and beautiful.

It is remarkable that David appears to have had no idea of praising God otherwise than through the medium of music. Had we his skull in our possession, and were the organs of Tune and Veneration found strikingly deficient, it would be an infinitely severer blow to phrenology than the ridicule by which opponents have so long and so vainly attempted to impede its progress. David seems, indeed, to have been a proficient in music. Even while yet a youth and tending sheep, he was sent for to perform on the harp in presence of Saul. "And it came to pass, when the evil spirit from God was upon Saul, that David took an harp, and played with his hand: So Saul was refreshed, and was well, and the evil spirit departed from him." I do not wish to agitate the old controversy, whether this mental disorder of Saul was really a supernatural visitation, or only a lowness of spirits produced by natural causes; in either case, it speaks highly of David's proficiency in the "joyous science," that he was immediately pitched upon, before all others, as the most suitable person for the purpose. In after life, when he became king over Israel, we find him giving free scope to this proclivity; keeping an immense band of minstrels, and living, so to speak, in an atmosphere of music.

As our hero lived at a time when the intellectual faculties were not generally cultivated, we cannot be surprised that it is much more difficult to collect data concerning them than concerning the feelings and sentiments. Judging from the tenor of the life and writings of David, I infer that his intellectual faculties in general were decidedly above average; he seems to have possessed considerable acuteness both of perception and reflection. This, of course, was not the age of metaphysical profundity; yet there are occasional traces of what the metaphysicians of the present day have named "relative suggestion;" and the adaptation of means to an end is every-

where sufficiently conspicuous. The only reflective faculty which appears to have been much used at this early period is Comparison. Of David it may truly be said that he "used similitudes." I have selected the following from numerous examples in the Psalms:—The righteous man is compared to a tree planted by rivers of water; the ungodly to chaff which the wind driveth away; the Lord to a rock, a fortress, and a shepherd; the judgments of the Lord to honey and fine gold; the righteousness of the Lord to great mountains; the flourishing of the wicked man to the growth of a green bay tree; the words of a deceitful man to oil and butter; the imaginers of mischief to a bowing wall and a tottering fence; the days of man to smoke and a shadow that declineth; the dwelling of brethren in unity to precious ointment upon the head; the passing away of the wicked to the melting of a snail; and children to arrows in the hands of a mighty man. These, it must be acknowledged, are curious specimens of symbolical elucidation, and not likely to have occurred to a man in whom the organ of Comparison was very deficient.

Throughout this essay I have endeavoured to keep clear of theological topics. For this reason I have said nothing about the organ of Wonder, or, as it was formerly named, Supernaturality, which faculty has been supposed by some to be that which gives the power of credence or faith in those mystic points in religion which are incomprehensible to the human intellect. And, my object being an analysis of the *natural* character of this interesting personage, I of course waive all reference to his power of prophecy, which I believe to have been entirely supernatural, and with which our science has no connexion whatever.

But it is now time to conclude. And I cannot do so without observing that our science is the only exposition of human nature by which these curious facts, these apparent contradictions in character, can possibly be explained. By what system of metaphysical philosophy could this be accomplished? How can such strange incongruities be unriddled by reference to Conception, Suggestion, Association, and Abstraction? But once admit that, in the same brain, there may be a development of several naturally opposing faculties, and that these faculties may be successively aroused into action by existing circumstances, and the mystery is at once dispelled.

IV. *Report of the Committee of the Phrenological Association, at the Fourth Session, held in London in June* 1841 : *With the Laws, and a List of Additional Members.*

COMMITTEE FOR THE ENSUING YEAR.

Henry G. Atkinson, Esq. F.G.S.
Dr Barlow.
Thomas H. Bastard, Esq.
Fras. B. Beamish, Esq.
Richard Beamish, Esq. F.R.S.
Dr Browne.
H. B. Churchill, Esq.
George Combe, Esq.
Dr Conolly.
Dr A. Cox.
Richard Cull, Esq.
James Deville, Esq.
Dr Elliotson, F.R.S.
Professor Evanson, M.R.I.A.
John I. Hawkins, Esq.
William Hering, Esq.
Sir George Mackenzie, Bart., F.R.SS.L. & E.
Dr Moore.
Robert Maugham, Esq.
M. B. Sampson, Esq.
James Simpson, Esq.
Samuel Solly, Esq. F.R.S.
J. Soper Streeter, Esq.
Edmond S. Symes, Esq.
Walter C. Trevelyan, Esq. F.R.S.E.
Charles A. Tulk, Esq.
Erasmus Wilson, Esq.

M. B. Sampson, Esq. Clapham New Park, Surrey, *Honorary Secretary.*

1. *Report.*

In preparing their Report, your Committee feel it necessary to take a slight review of the circumstances under which they came into office, and the state of the Association at that period.

They must first premise, that no authentic document or record of the proceedings of the Association, previously to their entering into office, has come into their possession, except the auditors' financial report of the last meeting; and

that the only recorded information on the subject to which they have had access, is that which at different times has been published in the Phrenological Journal.

It appears that the first suggestion of an association for the promotion of Phrenology was made by Sir George Mackenzie, in a prospectus of a "British Association for the Advancement of Mental Science," published in the Phrenological Journal for March 1835. No further steps, however, were taken in the matter, until the year 1838, when some phrenologists, attending the meeting of the British Association at Newcastle, formed themselves into a body, and, in fact, founded the present Association, with the intention, as it was then proposed, that its meetings should be held concurrently with those of the British Association. Accordingly, the two Associations met at the same times and places in the years 1839 and 1840; but at the last meeting, which was held at Glasgow, an alteration in this respect was made, as it was there resolved, that the next general meeting of the Phrenological Association should be held in London, in the first week of June 1841; without, however, laying down any general principle for the future meetings of the Association.

At the Glasgow meeting, a committee of the following gentlemen (with power to add to their number) were appointed to carry into effect all necessary measures for the London meeting, viz.—

Henry G. Atkinson,	Thomas H. Bastard,
Richard Beamish,	James Deville,
John I. Hawkins,	Hewett C. Watson;

and Messrs Bastard and Watson were appointed Joint-Secretaries to the Committee.

It was also then resolved, "That, as the Council and General Committee have the power, according to the rules of the Association, of altering the laws, the same are hereby altered, so far as the above resolutions are not in accordance with the original constitution."

In the exercise of the powers vested in them, your Committee enlarged their numbers, by electing such gentlemen as they conceived would be most likely to promote the objects of the Association; and in doing this they were chiefly desirous to act in such a manner as to produce unanimity amongst the phrenologists of the United Kingdom, in the great object of advancing and diffusing their science, and thus rendering it subservient to the improvement of the physical, intellectual, and moral condition of mankind.

Mr Watson having declined to accept the office of Secretary, as well as that of a member of the Committee, Mr Atkinson

kindly consented to fill his place, as Honorary Secretary, with Mr Bastard.

As previously stated, your Committee found no record of laws authentically passed, and feeling the want of a guide in this respect, they gave their early attention to the subject. In the Phrenological Journal, a code of laws had been published as having been drawn up during the meeting of the Association at Birmingham in 1839, but no mention is there made of their having been regularly adopted by the Association. These, although good in spirit, appeared to your Committee somewhat too complicated, both in reference to the government of the Association, and also to the number and different kinds of office-bearers; and it was therefore deemed advisable to prepare a code of laws, which, in the course of the present session, will be submitted to the consideration of the members.

It will be sufficient now to state, that experience led your Committee to consider an active Committee to be the only governing body necessary for the Association, and that the only officers required would be a Treasurer and two Secretaries, whose offices should be honorary. In conformity with this principle, no President has been chosen, but it is proposed to elect a Chairman for each meeting of the Association during the session.

Your Committee have great pleasure in stating, that the number of members has considerably increased during the past year. At the close of the session at Glasgow, they amounted to 158; since this period the names of 84 new members have been enrolled, making the present number 242.

Two small balances were handed over to the present Secretaries, one by Mr Watson, the late Secretary, and the other by the local Committee at Glasgow; which, with the subscriptions and donations for the present occasion, will be accounted for at a subsequent general meeting.

During the present session, it will be necessary to decide on the time and place of the next meeting of the Association, and to this subject the Committee request the attention of the members, from whom they invite suggestions.

The Committee feel that their thanks are due to Mr Deville, for his liberal offer to furnish casts for the illustration of all papers which may be read during the session; and the meeting will be glad to learn that, on the mornings of those days when the Association meets in the evening, his Museum will be open to the members and visiters, between the hours of two and six, on the presentation of their tickets.

In order to guard against misconceptions, your Committee

think it necessary explicitly to state, that, as a body, they cannot be held responsible for individual opinions, which may be expressed in any of the papers submitted to the meeting.

As the duties of your Committee will cease with the business of this session, they take this opportunity to express their hopes, that if any of the measures which they have taken, or any of the arrangements which they have made, should be unsatisfactory, the fault will be attributed solely to the novelty of their position, and to their having been obliged to strike out a course entirely for themselves; and your Committee conclude their Report, with assuring you that, whatever success may attend their exertions, they have been actuated in all they have done by zeal for the welfare of this Association, and the important science which has led to its formation.

2.—*An Account of the Receipts and Disbursements of the Committee for the Year ending with the Fourth Session, held in June* 1841.

Dr.	£.	s.	d.	*Cr.*	£	s.	d.
Balance received from Mr H. C. Watson, the late Secretary,	5	0	0	Stationery,	2	10	6
Balance received from Mr Cunliff, the Local Secretary for the Session held at Glasgow,	6	16	9	Advertising,	13	9	6
For Members' and Visiters' Tickets,	52	15	0	Printing,	11	0	0
Donation from Mr Geo. Combe,	5	0	0	Lighting and Attendance for Committee Meetings at the Gallery of Science,	1	13	0
				Use of the Great Room at the Society of Arts, during the Session; Lighting, Attendance, &c.,	21	9	0
				Subscription returned to a Member who did not receive his Ticket,	0	10	0
				Postages,	4	9	8
				Messengers and Sundries,	1	12	7
					L.56	14	3
				Cash in hand,	12	17	6
	L.69	11	9		L.69	11	9

I have examined the above Account with the Vouchers, and find the same to be correct. (Signed) S. Logan.
25*th June* 1841.

3.—*Laws of the Phrenological Association.*

1. The objects of the Association are the advancement of the science of Phrenology, and the promotion of intercourse amongst Phrenologists, by means of Annual Meetings for the reading of papers, the exhibition of casts, crania, and other illustrative specimens; and by discussions and investigations, calculated to lead to new discoveries; to point out the importance of Phrenology as the true philosophy of the mind,

and its several applications in education, jurisprudence, and medicine; to correct misrepresentations respecting the science, and to awaken a more extended interest in its cultivation.

2. The management of the Association, and the disposal of its funds, shall be vested in a Committee, not less than twenty-four and not exceeding forty-eight in number, to be elected by the members and renewed at each Annual Meeting; with power to elect members from the general body, to fill up vacancies occuring between the periods of the annual meetings. Five members to form a quorum.

3. The Committee to appoint a Treasurer and two Secretaries, whose offices shall be honorary; and a Chairman for each day's meeting of the Association.

4. The Meetings of the Association shall be held annually, once in three years, at least, in London, and in the two intermediate years at such places and times as the Committee shall direct.

5. The election of new members of the Association shall, subject to the terms of the next rule, be vested in the Committee.

6. Individuals who are members of any learned or scientific body, or who shall have been recommended by two members of the Association, are eligible as members, on transmitting to one of the Secretaries the following declaration in writing, viz.:—"I, the undersigned,
recognise the general truths of Phrenology, and engage to submit to the laws of the Association, so long as I shall continue a member of the same."

7. The Secretaries, on receipt of the above form, duly signed, may admit a candidate as a member of the Association, subject, however, to the confirmation of the Committee at their next meeting.

8. The subscription of a member shall be ten shillings for each annual Session he may attend, for which he shall have the privilege of introducing one lady or gentleman; and additional visiters' tickets, at five shillings each, for the Session, may be granted to the members.

9. Should any member of the Association be charged with conduct unbecoming his connexion with it, the Secretaries shall, on a requisition, signed by not less than five members, call a general meeting of the Committee, eleven of whom shall form a quorum, to inquire into the grounds of such charge or charges.

10. That should a majority of the Committee, after due deliberation, consider the charge or charges sufficient to call on the party accused for his defence, a statement of the evi-

dence, with the opinion of the Committee, shall be furnished to the party accused, with an invitation to rebut such charge or charges, either personally or by writing; and should the reply prove satisfactory, no further steps to be taken by the Committee; but if otherwise, the whole case to be laid before the next General Meeting, whose decision shall be held final; when, if the party accused be declared deserving of expulsion, he shall thereby be expelled, and all his interests, rights, and privileges, in the Association shall cease and determine.

11. The Committee may issue, at their discretion, tickets for the admission of strangers to the annual meetings.

12. The Secretaries shall, on each day during the Sessions of the Association, post notices at the place of meeting, stating the subjects for reading or exhibition, and the hours and order of business, for the following day.

4.—*List of Additional Members of the Association.**

P. R. Arrowsmith, Bolton, Lancashire; W. M. Adams, 12 Laura Place, Bath; — Black, M. D., Edinburgh; William Bally, 54 King Street, Manchester; Francis B. Beamish, M. P., Cork; James P. Browne, M. D., 32 Cadogan Street, Sloane Street, London; — Baird, M. D., Duke Street, Liverpool; Francis Bennock, 35 Wood Street, Cheapside, London; B. Bernasconi, 19 Alfred Place, Bedford Square, London; J. S. Buckingham, 4 Camden Terrace, Camden New Town; William Brewster, Waterloo House, Pall Mall, London; Thomas Brettingham, 14 Endsleigh Street, Tavistock Square, London; John Conolly, M. D., Lunatic Asylum, Hanwell, Middlesex; Thomas Clough, Blackburn, Lancashire; H. B. Churchill, barrister, 2 Raymond Buildings, Gray's Inn; Henry Clarke, surgeon, Walton-on-Thames, Surrey; Thomas Coates, 59 Lincoln's Inn Fields, London; Robert Chambers, publisher, Edinburgh; William Case, surgeon, Fareham, Hants; Professor Charles Caldwell, M. D., Louisville, United States; Francis R. Conder, civil engineer, Holly Terrace, Highgate; George Dudley, Swansea; Frederick Dover, surgeon, 54 Great Coram Street, Russell Square; J. Durieux, Angel Place, Worcester; Bryan Donkin junior, Paragon, New Kent Road, Surrey; John Donkin, Paragon, New Kent Road, Surrey; J. Denison, Halifax; Frederick Dawes Danvers, Lancaster Place, London; John Elliotson, M. D., F.R.S., 37 Conduit Street, London; Richard W. Edwards, 63 Great Russell Street, London; John Forbes, M.D., 12 Old Burlington Street; William Farr, General Register Office, London; James Fairhead, sur-

* See former list, p. 119 of this volume.—Ed.

geon, 51 Goswell Street, London; Robert Frampton, R. N., Weymouth; Charles Greville, M. D., Bath; W. B. S. Gardiner, Roche Court, Fareham, Hants; T. Greening, Warrington, Lancashire; John Glendinning, 77 Portland Street, Manchester; William A. Greatorex, solicitor, 70 Upper Norton Street, London; Hunter Gordon, barrister, Devereux Court, Temple, London; Lord Douglas G. Hallyburton, M.P.; W. Hardy, 6 Foley Terrace, Pentonville; Charles Hooper, surgeon, Cheltenham; C. Hewett, 9 King's Row, Pentonville; William Hering, surgeon, 14 Foley Place, London; J. D. Holm, Highgate, London; H. Haley Holm, surgeon, 2 Frederick Street, Connaught Square; John Hawksham, F.G.S., Manchester; A. P. Herrmann, Cork; Joseph Heath, solicitor, Chesham, Bucks; R. W. Heurtley, Bank of England; G. E. Hering, 4 Southampton Street, Fitzroy Square, London; Frederick Hering, Duke Street, Portland Place; David Jameson, M. D. Newtonwards, Down, Ireland; the Rev. G. B. Jermyn, LL.B., Swaffham Priory, Newmarket; William Johnson, Grosvenor Wharf, Westminster; Samuel Joseph, 41 Charlotte Street, Fitzroy Square, London; Thomas Jennings, Cork; R. C. Kirby, 8 Cumberland Place, New Road, London; Abram King, Bridgewater, Somerset; Hudson Lowe, London; Robert Leigh, solicitor, Heywood, Manchester; Charles Henry Lovell, solicitor, Furnival's Inn, London; James Lane, solicitor, Chancery Lane, London; J. A. Legard, Commander, R. N., 11 Montague Street, Portman Square, London; Philip Bennet Lucas, surgeon, 12 Argyle Street, London; Charles Meymott, surgeon, 59 Stamford Street, London; John Morrison, 2 Surrey Place, Old Kent Road; George Miller, surgeon, Emsworth, Hants; Thomas Mann, General Register Office, London; William Miller, Bank of England; Matthew Marshall, chief cashier, Bank of England; Frederick Morgan, Clifton; Henry Mosely, Howland Street, Fitzroy Square, London; A. O. Molesworth, Fareham, Hants; Charles Morgan, Charlotte Street, Queen Square, Bristol; Robert R. Noel, Rosawitz, Tetschen, über Dresden; Peter Niddrie, M.D., assistant-surgeon, H.M.S. Princess Charlotte; J. S. Nodin, merchant, 23 Crutched Friars, London; Alexander Nasmyth, dentist, George Street, Hanover Square, London; Professor Otto, M.D., Copenhagen; Thomas Oldham, civil engineer, Bank of England; John Patterson, surgeon, Park Head, Glasgow; George Reid, 14 Leadenhall Street, London; J. Q. Rumball, surgeon; H. D. Richards, 4 Richmond Terrace, East Street, Walworth, Surrey; Alexander Robertson, 23 Portland Terrace, Regent's Park, London; Miss Ritchie, 5 Woodland Terrace, Trafalgar Road, Greenwich;

Richard Rothwell, 31 Devonshire Street, Portland Place; George Rudall, 37 London Street, Fitzroy Square, London; Edward Stone, Waterloo House, Pall Mall East, London; John Syme, Edinburgh; J. B. Sedgwick, College of Physicians, London; J. S. Streeter, surgeon, 20 Harpur Street, London; Edmond S. Symes, surgeon, 38 Hill Street, Berkeley Square, London; — Stallard, 1 Rochfort Place, Bath; James Straton, Aberdeen; Samuel Solly, surgeon, St Helen's Place, Bishopsgate, London; W. W. Simpson, 8 Montague Place, Russell Square, London; Charles A. Tulk, 19 Duke Street, Westminster; Edward A. Turley, Worcester; Theyer L. Townsend, Bishop's Cleave, Cheltenham; George F. Thorpe, Fareham, Hants; Thomas Uwins, R. A., 41 Charlotte Street, Fitzroy Square, London; Walter Wilson, Pulteney Street, Bath; Erasmus Wilson, surgeon, 55 Upper Charlotte Street, Fitzroy Square, London; James Watson, Bath; William Wood, surgeon, 58 Charlotte Street, Portland Place, London; W. S. B. Woolhouse, 26 Cornhill, London.

V. *Letter from Sir G. S. Mackenzie, Bart. to the Editor of the Phrenological Journal.*

Sir,—When I expressed in the Committee of the Phrenological Association, that there was something wanting to fill up the time of the members on the days when there was no morning meeting, and suggested that the members should have opportunities of proving to others the truth of their science in prisons and hospitals, I was informed that admission to such establishments would not be granted, as it had been refused on the application of individuals.

Nothing is of so much importance to society as inquiring into the causes of crime and the means of preventing it. Our science is the only one that has offered to exhibit both; and even had it not been put to the test of experiment, we are bound to give it a fair trial, for the sake of those unhappy beings for whom restraint is necessary, and of those who need a beacon to warn them of their danger. There are multitudes who still say we have no proofs, who will not look at them when offered; and we ought the more to press them on the notice of every one who doubts or opposes. It appears from its present aspect, that London is the last place in which Phrenology will flourish and be useful. The avocations of the people, caused by the *auri sacra fames*—the love of ease too,

and the enjoyments of sense, are too numerous to admit of any satisfactory result being derived from exertions made in the metropolis of England. There must be, therefore, a pressure from without, and London must be left behind, until her people shall feel ashamed of not being in advance, notwithstanding her possession of a band of most talented and industrious phrenologists. It is to be lamented that, in London, scarcely any thing appears capable of being touched without the demon of party instantly arising from the depths in which he ought to be chained, and disturbing every proceeding. It is hoped, that when the meeting of the Association shall take place in Edinburgh, every facility will be afforded to such of the London phrenologists as may be present, as well as to others, for putting the science to the test. Edinburgh having fulfilled the prophecy of Spurzheim, that she would be the centre from which Phrenology would diffuse itself over Britain, so she will also, it is hoped, shew her capability of sustaining what has been done, and not look in vain for the co-operation of phrenologists from every part of the kingdom.

After the lapse of a good many years, I revisited Mr Deville's museum, and was much delighted with the surprising number of most valuable specimens which he has brought together. His merit is great indeed, and the debt which phrenology owes to him is of no slight magnitude. He has set up as a mental physician, and his practice has become very extensive, numbers of parents (led, some of them, perhaps, as much by superstition as philosophy) consulting him about their children, and many persons for other objects. Though it be impossible for him to learn a variety of circumstances that may have operated so as to render his decisions uncertain, the amount of confidence bestowed upon him is very large, which proves the general correctness of his deductions; and, considering he makes no pretensions to education or philosophy, it is wonderful to what a wide circuit he has extended faith in phrenology. He carefully records every case that occurs t him as remarkable, and his store of facts, collected from every quarter, will be found most useful to the philanthropist and the physician. Is Phrenology asleep in Ireland, where she has so many able votaries? An invitation for the Association to meet in Dublin would, I am sure, be gladly accepted. The day is no doubt approaching, when, from many places where Phrenology is active, invitations will arrive.

It seems to me to be necessary that some means should be taken to keep Phrenology more in the public eye than it is. A newspaper and an almanack are forthcoming; but were established journals, known to be favourable to the cause, to

refer to it more frequently than they are accustomed to do, more rapid progress would be made. Ridicule is not now to be feared; nor is Phrenology now a thing to be so dreaded as evil, as to render it unsafe to inquire or to read about it. Its enemies are greatly reduced in numbers, because it is found vain to contend with or to laugh at truth. Phrenology should be looked at by those who have not studied it, as an assemblage of facts, true in nature, among the other works of the Creator; and if in their bearing on anything that has been regarded as true, they demonstrate its falsehood, surely to be rid of false notions, that hinder the progress of society towards the adoption of moral conduct, is a great blessing. Phrenology ought also to be regarded, as it really is, an infant science. While its foundations are sure, it will require much time and study to develope a superstructure so immense as that which the strength of these warrants being laid upon them. Error in speculation, error in deduction, in the explanation of facts and their bearings, must be looked for; and it is evident that a large amount of anatomical and physiological knowledge is yet wanting. Let us look at the state of chemistry as a science half a century ago, and regard it now. Phrenology also requires time and laborious investigation to advance it; but let us, nevertheless, not scruple to apply what we have got to useful ends. I am, faithfully yours,

G. S. Mackenzie.

Berchwood, *5th July.*

VI. *Remarks on the Function of the Organ of Imitation.* By Mr Hudson Lowe. Continued from p. 149 of this Volume.

Part III.

In my former communication to this Journal, I endeavoured to show that all imitation necessarily presupposes the use of the observant powers; that its success must be proportioned to the capacity of those powers; and that, analysing every act of imitation into an observant and a reproductive process, the last *generally* could not be considered as depending upon the special organ in question, least of all in what relates to the *immediate* means of producing an effect. I concluded by remarking, that "the heads in which the organ had been observed largest, were those of novelists, dramatists, and historical painters, the principal and common feature of whose tasks is the embodiment of character."

There is a mimicry which is purely servile, and is confined to the reproduction of merely mechanical acts—such as that

of a soldier following his fugleman. The mimic of character —the portrait-painter—must not confine himself to this, but conceive and reproduce character. The actor, especially the tragic, must make a stronger effort of conception; he has no living original before him, but must embody the character given him by his author. The dramatic author rises higher still; he has not only to conceive and embody, but to create. The creations of the last, however, obviously depend on the same powers acting in combination with higher degrees of reflection, as the conceptions of the actor. The question I now propose to solve is the nature of the power of conceiving and embodying character.

We have two points of view whence to consider the various phenomena of the mind—either as operative principles producing certain effects, or in their internal nature as feelings.

All our knowledge of the latter kind rests necessarily and absolutely on the facts of our own consciousness. A man destitute of a particular faculty may form a notion of it of the first kind, but must be wholly ignorant of it otherwise. We read of Lessing the German poet and critic, that he left a concert-room wondering how people could sit and listen to a succession of unmeaning sounds. Lessing, therefore, could form no idea of the pleasure derived from music, except as a cause inducing people to listen to unmeaning sounds. A man utterly destitute of the sentiment of Benevolence—such, for instance, as Volesus described by Seneca, who, walking amid three hundred carcasses of his decapitated victims, exclaimed, "O royal deed!" "*O rem regiam!*"—a man like this, after witnessing a thousand instances of compassion, would remain equally ignorant of its nature, as Lessing of music, or the blind of light. Making exception, then, for merely external conceptions, the statement of Dugald Stewart remains indisputable, that "as, to the blind or deaf, no words can convey the idea of particular colours or particular sounds; so, to a being who had never been conscious of sensation, harmony, hope, love, fear, hatred, no intelligible description could be given of the import of those terms."* And here I may offer a remark which, important as it is, seems to have been reserved for me to make—namely, that our knowledge of the phenomena of the mind is higher, not only in degree, but in kind, than the phenomena of the external world. It has been frequently repeated, that we can only know the *attributes* of mind and matter, but that of the essence of both we must remain equally ignorant. In some senses this assertion *may* be as true with regard to mind as it is with regard to matter; but in so far as it puts both knowledges on a level, it is unquestionably er-

* D. Stewart, Philosophical Essays, p. 72.

roneous. With regard to the phenomena of the physical world, we can have merely external means of information; we may observe phenomena, trace sequences, and connect them by the idea of power or causation; but in the moral world, were we limited to such means of investigation, the sources, the amount, and the stores of our knowledge would indeed be materially abridged. We possess, however, in addition to the operations of our understanding on external phenomena, an internal key in our own feelings, by which we are enabled to understand modes of action and the relation of cause and effect, in a way very greatly more perfect than what can be predicated of our physical researches.

In the judicious combination of the two modes of investigation lies the advancement of mental philosophy; but even the phrenological inquirer owes a larger share of his knowledge of human nature to the second source than to the first. In all that relates to the *intimate* knowledge of *individual character*, the internal key is by far the most important.

In the cases of the actor, the artist, the dramatic author, it is more especially obvious that it is on this method that their power of conceiving and embodying character depends. Gall has recognised that an actor cannot well represent feelings which he himself possesses but feebly—in other words, that his representations cannot go beyond the sphere of his own consciousness. But he must not only have the feelings, but, further, be capable of calling forth those feelings without the presentation of an external stimulus, while other emotions lie dormant which may be equally strong in his own breast, but which are unsuitable to the character he would represent. What plays the main part in this? Scarcely calculation.

"It is feeling, or it is hope and fear, joy and sorrow, love and hatred, that is the original source of the effects in nature which are brought forward on the stage; and assuredly it is a *sympathy* with this feeling that must dictate the truest and most rational imitations of them."* "When Mrs Siddons

* Hazlitt, Plain Speaker, p. 247.—He adds, "To suppose that a person altogether dead to those primary passions of the human breast can make a great actor or feign the effects while he is ignorant of the cause, is no less absurd than to suppose that I can describe a place which I never saw, or mimic a voice which I never heard, or speak a language which I never learned." It may be well further to subjoin the commencement of the remarks which extend from p. 246 to p. 251. "I will here take occasion to suggest what appears to me the true state of the question, whether a great actor is enabled to embody his part from feeling or from study. I think, at the time, from neither, but merely (or chiefly at least) from habit. But I think he must have felt the character, in the first instance, with all the enthusiasm of nature and genius, or he would never have distinguished himself in it. To say that the intellect alone can supply the movements or the language of passion is little short of a contradiction in terms."—P. 246.

played the part of Mrs Beverley in the Gamester, and on Stukely's abrupt declaration of his unprincipled passion at the moment of her husband's imprisonment, threw into her face that noble succession of various emotions; first seeming not to understand him, then, as her doubt is removed, rising into sudden indignation, then turning to pity, and ending in a burst of hysteric scorn and laughter; was this the effect of stratagem or forethought, as a painter arranges a number of colours on his palette? No;—but by placing herself amply in the situation of her heroine, and entering into all the circumstances, and feeling the dignity of insulted virtue and misfortune, that wonderful display of keen and high-wrought expressions burst from her involuntarily at the same moment, and kindled her face almost into a blaze of lightning." That this explanation is incompatible with the exercise of a suppressing influence on faculties the expression of which would mar the representation cannot be maintained, though, in proportion as the sympathy of the actor with his imaginary personage is real, this influence may be less needed. One condoling with a friend in affliction may feel real sympathy with him, and yet may sometimes be intruded on by cares or reflections interesting only to himself, the expression of which he, from consideration to that friend, may strive to repress. That sympathy with imaginary persons may be as strong as with really existing beings, none who are or have been capable of being deeply interested in a novel or drama can doubt. Nor is this sympathy subject to different laws: if in the case of the actor it is necessary that he should possess the capacity of entering into his part, of feeling the passions which it embodies, so is it necessary to sympathy that there should be some resemblance of character. It is not from an individual deficient in Ideality and Wonder that we should look for sympathy with the enthusiasm of the poet, nor from one wanting the last-named faculty and Veneration that we should expect it with the aspirations of a devout mind. Carry the deficiency to an extreme degree, and you will not only have an absence of sympathy but absence of understanding; there will be no more capacity for comprehending enthusiasm for beauty or religious fervour, than the blind man possesses for judging of colours, or the deaf of sounds.

But to sympathy, whether that of understanding or that of fellow-feeling, there is certainly something more necessary than a mere capacity of experiencing the same emotions. We are all alike capable of experiencing hunger or bodily pain, but our power of sympathizing with them is very various. Those whom a little annoyance of any kind affecting themselves may discom-

pose, may be exceedingly stoical when the heaviest of a similar kind falls on the heads of others. Mothers who are extremely fond of their own children, are often very loth to listen to the panegyrics, or to witness the caresses, bestowed on foreign offspring. The sympathetic disposition, the power of transposing ourselves into the states and feelings of others, however it may be connected with similarity of character, and, in the same individual, become more perfect as this increases, forms an independent principle in human nature, performing the highest objects and acting in connection with the highest faculties. This principle acts in connection with benevolence, at once producing and resulting from it, since we not only feel benevolence to those with whom we sympathize, but most readily sympathize with those to whom we feel goodwill; with the imagination, since our sympathies are always far stronger where we portray vividly to ourselves the situation of others, than where their remoteness or our dulness dims the picture; with the intellectual faculties, since without this power none of those inward glimpses into character could be obtained, on which an intimate knowledge of it depends. The whole field of human sympathy, vast as it is, is pervaded, I conceive, by one *leading* principle; and this principle, again, I conceive to have a circle of operations even beyond what is generally included in this sphere, namely, as a leading agent in the production of what, in the most extended sense, we understand by the plastic and dramatic arts.

To develope this proposition, and to trace through some of its modes of operation the sympathetic principle, to shew more fully its necessity and influence in man's intellectual and moral constitution, and the forms in which this unfolds itself, I now proceed, while I reserve to the conclusion of my paper the evidence in support of its connexion with the organ No. 21.

"When we rejoice in the prosperity of others and compassionate their distresses, we, as it were, substitute them for ourselves, their interest for our own, and have the same kind of pleasure in their prosperity, and sorrow in their distress, as we have from reflection upon our own."* Without some degree of this power of substitution or of transposition, we should be incapable of understanding, nay, much less of compassionating their distress. "As we have no immediate experience," says Adam Smith,† "of what other men feel, we can form no idea of the manner in which they are affected, but by conceiving what we ourselves should feel in the like situation. Though our brother

* Bishop Butler's Sermons preached at the Rolls Chapel. Sermon v. On Compassion.

† Theory of Moral Sentiments, chap. i. sect. 1.

is upon the rack, as long as we are at our ease, our senses will never inform us of what he suffers. They never did, and never can, carry us beyond our own person, and it is by the imagination only that we can form any conception of what are his sensations. Neither can that faculty help us to this any other way than by representing to us what would be our own if we were in his case. It is the impressions of our own senses, not those of his, which our imaginations copy. By the imagination we place ourselves in his situation, we conceive ourselves enduring the same torments, we enter, as it were, into his body, and become in some measure the same person with him, and thence form some idea of his sensations, and even feel something which, though weaker in degree, is not altogether unlike them. His agonies, when they are thus brought home to ourselves, when we have adopted and made them our own, begin at last to affect us, and we then tremble and shudder at the thought of what he feels. For as to be in pain or distress of any kind excites the severest sorrow, so to conceive or imagine we are in it excites some degree of the same emotion, in proportion to the vivacity or the dulness of the conceptions. That this is the source of our fellow-feeling for the misery of others, that it is by changing places in fancy with the sufferer, that we come either to conceive or to be affected by what he feels, may be demonstrated by many obvious observations, if it should not be thought sufficiently evident of itself. When we see a stroke aimed and just ready to fall upon the leg or arm of another person, we naturally shrink and draw back our own leg or our own arm; and when it does fall we feel it in some measure and are hurt by it as well as the sufferer. The mob, when they are gazing at a dancer on the slack rope, naturally twist and writhe and balance their own bodies, as they see him do, and as they feel that they themselves must do if in his situation. Persons of delicate fibres and a weak constitution, complain that in looking on the sores and ulcers which are exposed by beggars in the streets, they are apt to feel an itching or uneasy sensation in the correspondent parts of their own bodies. The horror they conceive at the misery of those wretches affects that particular part in themselves more than any other, because that horror arises from conceiving what they themselves would suffer if they really were the wretches whom they are looking upon, and if that particular part in themselves were actually affected in the same miserable manner. The very force of this conception is sufficient in their feeble frames to produce that itching or uneasy sensation complained of. Men of the most robust make, observe that, in

looking upon sore eyes, they often feel a very sensible soreness in their own, which proceeds from the same reason; that organ being in the strongest man more delicate than any other part of the body is in the weakest. Neither is it those circumstances only which create pain or sorrow that call forth our fellow-feeling. Whatever is the passion which arises from any object in the person principally concerned, an analogous emotion springs up at the thought of his situation in the breast of every attentive spectator. Our joy for the deliverance of those heroes of tragedy or romance who interest us is as sincere as our grief for their distress, and our fellow-feeling with their misery is not more real than that with their happiness. We enter into their gratitude towards those faithful friends who did not desert them in their difficulties; and we heartily go along with their resentment against those perfidious traitors who injured, abandoned, or deceived them. In every passion of which the mind is susceptible, the emotions of the bystander always correspond to what, by bringing the case home to himself, he imagines should be the sentiments of the sufferer."

This passage, displaying great variety of mental power, is above all remarkable for the keen sense of analogy indicated in tracing to one common principle the various kinds of sympathy. It will probably be admitted that Adam Smith has been correct in his generalization; and if so, it will be equally obvious that many phenomena included under the functions of the organ No. 21 are in their nature strictly sympathetic. Such, for instance, are the cases of the man described by Cabanis, and cited by Gall in his section on this organ, who laboured under an invincible disposition to imitate every one he saw—of the young idiot described by M. Pinel, who manifested a similarly irresistible automatic inclination*—of a gentleman possessing a large organ of Imitation, who (not an uncommon case) insensibly and unconsciously fell into the voice and tone of those with whom he was conversing.† Such also must be considered the cases of those patients of a lunatic asylum mentioned by Boerhaave, among whom, one of their number having been seized with epilepsy, the disorder raged like an epidemic until Boerhaave stopped it by threatening to cauterize with a red-hot iron any patient who should in future have a fit. This case, which is mentioned by Dr Combe in his Treatise on Mental Derangement, under the head of

* See for both t. v. p. 334 of the Fonctions du Cerveau, or part i. of my Essay, p. 141 of the present volume of this Journal.

† See vol. ii. of this Journal, p. 589.

Imitation, is an extreme case of those physical sympathies spoken of by Adam Smith. The horrible spectacle of the epileptic patient had possessed their imaginations, had taken possession of their senses, their sympathies, and their fears; the bodily symptoms appear to have followed by the same law, as in the instances just alluded to; and not until the powerful impression which the convulsions of the sick man had left on their minds, was effaced by another more recent and equally powerful, did the disorder cease. Nor does the case of the production of this disorder by such means appear singular. "Epileptics," says M. Esquirol, "should not dwell pell-mell with the insane, as is the practice in almost all the hospitals where epileptics and the insane are received. The sight of an epileptic fit is sufficient to render epileptic a person in a good state of health. How much greater is the danger for insane persons, frequently so much more liable to strong impressions."* Marvellous do such instances appear. And the reflection that they are but extreme cases of the operation of mind on body, varying only in degree from those of ordinary occurrence, serves but to make us more deeply reflect on the mystery (around us and within us) in which that connection is involved. How belief, and fear, and anger, should have so intense a corporeal influence; how a fit of irritation should convert the nourishment of a woman's breast into an active and instant poison;† how a young man in the prime and flush of life, from receiving a conviction that he should die within the twenty-four hours, should begin rapidly to exhibit all the symptoms of approaching decay, and be only saved by a medicine which wrapped his brain in oblivion; how a patient sick of the palsy,‡ on whom it was proposed to try the effect of inhaling nitrous oxide, should, mistaking a thermometer for the virtue-giving tube, be cured by *faith* in a remedy which he had never used, must, to our understanding, appear little less than miraculous. If, indeed, there be any way by which these instances may seem to fall in more with the general laws of nature, it would be but by rising into a theory which would remove the wonder in the individual case, only to substitute for it a general explanation still more at variance with our present notions. To me, indeed, such facts, the wonderful phenomena of Mesmerism, more especially the "clairvoyance" of which so many authentic instances are on record, and even the strange

* Esquirol, ed. 1838, tom. ii. p. 164, Brussels edition.
† Elliotson's Physiology, part 3.
‡ Paris's Life of Davy.

and thickly recurring cases of prophetic dreams, and the yet unexplained prodigies of Egyptian magic, seem all to point to a future day when our theories of the universe will bear a far more spiritual character, when the vital and mental principles which now lie buried under, and are even supposed to result from, these instruments, will assume a far more important part in our views of life; and when, even though their power of explaining be greatly extended, men of science may be less peremptory in denying all that they cannot reduce under the abstract rules framed by the critical understanding, more ready to admit that, immense and indefinitely enlarging as is the sphere opened to its power, there is still much beyond, which its formulas might vainly be stretched to envelope.

While, however, the physical sympathies, to the operation of which we have just been referring, are manifestly nearly allied to the principle of moral sympathy, and while it might be difficult to trace any *demarcation* between them, yet we should do wrong to remain unconscious of the existence of a *distinction*. Generally speaking, demarcations are not to be traced in nature; what Professor Whewell, with such admirable clearness and concision, says concerning a natural group,* "that it is steadily fixed, though not precisely limited; it is given in position, though not circumscribed; it is determined not by a boundary without, but by a central point within; not by what it strictly excludes, but what it eminently includes; by a type, not by a definition," is not without its application to the analysis of our physical and mental constitution. In the consideration of this question of sympathy we find moral and physical sympathy most intimately connected, acting in the closest union, more especially in the interesting experiments of Animal Magnetism, and we find it hard to see the distinction; yet might it not be equally difficult to divide physical sympathy from cases of mere idiosyncrasy in taste and constitution, such as the longing for particular kinds of food in pregnant women, or the disagreeable effects produced on persons even of generally robust health by particular sights or smells? The laws of sympathy might almost be said to form a link in a chain of laws pervading the entire universe, animate and inanimate. Magnetic attraction, chemical affinity, the attraction of cohesion and of gravitation, all bear a strong analogy to the principles we have been considering; all might, without a strained metaphor, be termed laws of sympathy. The first has already

* Philosophy of the Inductive Sciences, Aphorisms concerning Ideas, 93.

given its name, perhaps rather unfortunately, to the series of remarkable observations and experiments on the human sympathies commenced by Mesmer. Such analogies are not yet matter for *precise science*, but they have a philosophic character. They are among those cases which Bacon mentions as being "not only similitudes, as men of narrow observation may conceive them to be, but the same footsteps of nature reading or printing upon several subjects or matters."*

While the sympathetic principle of our mental constitution is linked, on the one hand, to the sympathies of the physical frame, it has, on the other, an especially close connection with various mental principles. That with the feeling of Benevolence more particularly demands our consideration. The text which Butler has chosen for his sermon already quoted, "Rejoice with them that do rejoice, and weep with them that weep" (Rom. xii., 13), one embodying much of Christian morality, addresses itself specially to the action of the sympathetic principle. This principle Butler appears to have conceived to constitute the whole of compassion. He draws the distinction not between sympathy and benevolence or good will, but between good will and compassion. Speaking of the difference in warmth between our congratulations and condolences, he says,—"This difference or inequality is so remarkable, that we plainly consider compassion as itself an ordinary, distinct, particular affection in human nature; whereas to rejoice in the good of others is only a consequence of the general affections of love and good will to them." His view of the origin of compassion is entirely embodied in the short extract I have made a few pages back; and it is obvious that, in so far as this is a full account of this state of mind, it is a manifestation of the sympathetic principle, of which the workings were afterwards so ably developed by Adam Smith. Smith himself considers all good will as a result of sympathy. Yet I do not think it will be difficult to establish a distinction between the sympathetic principle and the principle of benevolence. Benevolence is a disinterested regard for the happiness of others; sympathy, a disposition to enter into their feelings.† The connection of the faculties is undoubtedly close, the reciprocation of their manifestation constant; but is there any necessary or demonstrable connection between them? I think not. The one appears to me more especially an affection of the will, the other of the imagination—words which could not have been used so long without definite meaning, and which I cannot consider as

* Advancement of Learning.

† Συμπάθεια, from συν *with*, and πάθος *feeling*.

superseded and rendered obsolete by the discoveries of Phrenology, though their meaning may be narrowed by the habit of never looking into consciousness. The following short extract from Butler's note against Hobbes will furnish me with a text for my remarks:*—"There being manifestly this appearance of men substituting others for themselves, and being carried out and affected towards them as towards themselves; some persons who have a system which excludes every affection of this sort, have taken a pleasant method to solve it, and tell you it is not another you are at all concerned about, but yourself only, when you feel the affection called compassion; *i.e.* here is a plain matter of fact which men cannot reconcile with the general account they think fit to give of things; they therefore, instead of that manifest fact, substitute another which is reconcilable to their own scheme. For does not every body by compassion mean an affection, the object of which is another in distress? Instead of this, but designing to have it mistaken for this, they speak of an affection, a passion, the object of which is ourselves, or danger to ourselves. Hobbes defines pity, imagination or fiction of future calamity to ourselves, proceeding from the sense, he means sight or knowledge, of another man's calamity. Thus fear and compassion would be the same idea, and a fearful and compassionate man the same character, which every one immediately sees are totally different."

The point round which this controversy really turns, putting aside the desire of Hobbes to establish his selfish theory in morals, is the distinction between the principle of sympathy and that of benevolence. Good will or benevolence towards an object will be proportioned in the same mind to the extent of sympathy for it. But the proportion of the two principles may and does vary in different minds. We may conceive a person destitute of any disinterested desire to relieve distress, and yet painfully affected by the sight of suffering. In this case the means of removing this painful impression would be to him a matter of indifference. If the relief of the sufferer were that which most readily presented itself, the bestowal of that relief might truly be said to have an alloy of selfishness in it, although its original cause, the affection of sympathy, be far from a selfish principle.† But in cases in which the delight of seeing renewed

* Sermon on Compassion, *ut supra*.

† "What would be your feeling if you were brought to this condition?" is a popular argument to Compassion addressing itself to Cautiousness, Wonder, and the Sympathetic Principle; not to Benevolence. The definition of Hobbes has a close affinity to this argument. Cautiousness was a leading element in his character; obvious in the actions of his life. In his portraits the part of the head immediately above the reflective faculties is flat in the

happiness sparkle in the eyes of those who long had not known its beams, was denied, or not proportioned to the painful scenes to be gone through to obtain it, the abstract idea of misery, to which I consider benevolence as specially affected, would not be sufficient to urge him to exertion. Such a character would be apt to lapse into one of the "phantom pities, vision-weaving tribe,"* and shun cases which jarred too harshly on his sensibilities, or demanded too strenuous exertions for their relief. Benevolence is an active principle related to the abstract ideas of happiness and misery, and urging to the propagation of the first, and the relief of the second; finding its gratification not in the reflected joy of those whom it has succoured (which I conceive addresses itself to sympathy), but in the consciousness of having effected good. Sympathy basks in the beams of that happiness which is reflected from another's face, but it does not urge directly to beneficent action. Nor must it be left out of sight, that its sphere is not confined to such objects; that it may find its gratification as much in the delights of social converse, or in following the vicissitudes of history or fiction, as in the pursuit of philanthropic objects. In many cases, benevolence may find its gratification in cases where sympathy would be revolted, or where it would be injurious and mischievous, as in matters regarding the management and reformation of the criminal and the vicious. We admire a Mrs Fry and a Howard, because they conquer their sympathies from a principle of benevolence.

Too *overpowering* sympathy may interfere with the exercise of benevolence. Benevolence nerves the arm of the surgeon; sympathy makes him shrink back in distress: or, to recall our epileptic patient, sympathy falls down in a fit, benevolence runs for the doctor.

Sympathy, again, while in the vast majority of cases it tends to act in concert with benevolence, may in some act in a sense decidedly antagonistic, as where party spirit or patriotism, both eminently sympathetic affections, though the first a very corrupt one, are opposed to our wishes for the welfare of our country or our species. But sympathy, though it may be

median line at Benevolence, but much larger at the sides or in the localities of the organ numbered 21, and that of Wonder. The absence of benevolence in the writings of Hobbes has often been made the subject of indignant comment, but towards the poor he was charitable.† Both these anomalies in his conduct, and the strangeness of his definition, are explicable on my view, which they scarcely are on any other principle: To suppose a profound thinker capable of writing down what appears to many an arrant absurdity, without some peculiarity in his own consciousness which made it appear probable or plausible to him, seems scarcely an explanation of the last.

† Bayle, Dict. Hist. Art. Hobbes. Note M.

* Coleridge.

limited in individuals, is not so of necessity; it may extend not only to the whole human race (the oft-repeated quotation —"Homo sum, nihil humani a me alienum puto," is a strict expression of this feeling), but further, over the whole sentient creation. But the godlike principle of benevolence is by its very nature universally diffused, and has in it an impartiality which is not of the nature of sympathy. Both are principles of nature bearing, as it were, the seal of divinity, and which, the more fully we open our minds to admire, the more fully, perhaps, shall we comprehend. To contemplate them without feeling some elevation of mind, would argue a mean and vulgar nature.

I consider it advisable to enter here on the cranioscopical* facts in relation to that portion of my views which I have just developed. If this is correct; that is to say, if I have not exaggerated the influence of the sympathetic principle in compassion; and if I am *not* in error as to the connection between this principle and the portion of the brain lying between the organs of Benevolence and Wonder—we should look to find a deficiency in this direction in the heads of men of obdurate and cruel minds, who are careless of the infliction of suffering and the shedding of blood. As far as my observations have gone, this is as generally the case as may be looked for in the confirmations to any organ. In the heads of murderers this organ is generally deficient, and in proportion, for the most part, to the atrocity of their crimes. In the head of Lacénaire, who committed seventeen murders, which presents a moderate endowment of Benevolence, the organ is small. In the head of Avril, his fellow-trader in assassination, who has full Benevolence and large Veneration, it is very, or even exceedingly, small. In the head of Lefeu, *alias* Lelièvre,† who poisoned a mistress and three wives in succession, and was at last apprehended for the murder of a child, it is very small. It is small in the heads of Bishop, Williams, *alias* Head, and Hare, and deficient in that of Burke. It is rather small in Marchant (with rather large Benevolence); small in Wood,

* I use the term "cranioscopical," because the word "phrenological," in this place, would seem to exclude from that term the facts of consciousness, and would thus at once violate the meaning of the word, and be inconsistent with the most desirable view of Phrenology, which regards it as aiming to become a complete science of the mental manifestations, not as limiting its inquiries to the connection of certain acts with certain portions of brain.

† There was a cast of this head under the first name, with "Chevalier" prefixed, in Mr Bally's Museum. Another copy I have seen at Mr Deville's. He is mentioned by Gall in *Les Fonctions du Cerveau* (Paris, 1825, vol. iv. p. 180), who, by some singular oversight, describes him as having a large organ "de la mimique;" yet directly the reverse is the case. See also the Catalogue of Gall's Collection, Phren. Jour. vi. 492.

executed for the murder of his wife at Nottingham; in Steventon, the murderer of an old woman for a wretched trifle in money; in Nisbett, Pallet, and Luscombe. Lastly, it is small, or very small, in the heads of Greenacre and Courvoisier, and also in that of Thom of Canterbury, whose development of Benevolence was very large, and who appears in his wild brain to have entertained some beneficent projects, while reckless of suffering in their execution. In the heads, further, of tribes remarkable for cruelty and ferocity, this organ is deficient. No feature is more remarkable in the New Zealand skulls, frequently high and well developed in the median line, than the rapid manner in which they slope down at the sides; this and all the other lateral organs in the coronal region presenting a miserable deficiency. In the heads of the natives of New Holland also, as far as I am acquainted with them, this organ is very deficient: the heads do not offer to the same extent the feature I have described. In such skulls of African tribes as I have seen, the lateral coronal surface, both at this and other regions, is very poorly developed. These heads are very narrow at the sides, and not defective in the median line. Their development would otherwise harmonise ill with the atrocity and inhumanity which is just as characteristic of the natives of this continent as of other tribes of barbarians.* The skulls to which I refer are those of Ashantees, Caffres, and natives of Mozambique.† In the heads of the North American Indians, judging principally by the graphic and obviously faithful representations of Mr Catlin, this organ is as much or more deficient than any other portion of the generally poor anterior moral surface.‡ I here leave the subject, proposing, if space is allowed me, to resume it at a future opportunity, and to enter on the other confirmations of my theory, its superiority as an evidence of received facts, and the decisive support it receives from the analogies of position.

* Dr Elliotson has for some time remarked, that, in the heads of criminals, this shelving surface is very common. He endeavours to build upon it a subversion of the special organ of Conscientiousness, which it is quite incapable of bearing. Before being aware of this fact, the *extreme* deficiency of the organ of Hope in the skull of a murderer, who, during his life, had exhibited much gloom and despondency, led me to reflect on the influence which a deficiency of that organ might have on the moral character; I thought I could perceive many ways in which it would operate for ill. At present I am engaged in shewing the ill effects of the deficiency of another portion of the brain.

† In the last, Benevolence was large and Destructiveness small. The number of specimens I have seen of these tribes is inconsiderable; but the feature, as far as I have observed, is uniform.

‡ The Esquimaux, whose skulls slope rapidly from the sides of Benevolence, though not a cruel race, are extremely deficient in sympathy for persons in distress. See details in our eighth volume, p. 432.—Ed.

SECT. II. CASES AND FACTS.

I. *Case of Exposure of the Brain and its Movements during functional Activity.* By GEORGE COMBE.*

On 15th May 1839, I was introduced to James J. Mapes, Esq., a scientific gentleman, residing in 461 Broadway, New York. His daughter fell from a window when she was about four years of age; her head struck against the iron-bar which extended from the railing to the wall, and the skull was extensively fractured, but without rupturing the pia mater or doing any serious injury to the brain. She was attended by Dr Mott; a part of the skull was removed from the superior-posterior portion of the head, the integuments were drawn over the wound, and the child recovered. The part of the skull removed was that which covers the organs of Self-Esteem and Love of Approbation. She does not wear any plate over the wound; but the hair over it, like that on the other parts of the head, is fine, and is kept short. Immediately after the wound was closed, her father was struck with the variety of movements in the brain, and its great mobility during mental excitement, producing, as he said, a sensation in the hand when placed on the integuments, as if one were feeling, through a silk handkerchief, the motions of a confined leech. He felt as if there was a drawing together, swelling out, and a vermicular kind of motion in the brain; and this motion was felt in one place and became imperceptible in another, according as different impressions were made on the child's mind: but not being minutely acquainted with phrenology, he could not describe either the feelings or the precise localities in which the movements occurred. He observed also, that when the child's intellectual faculties were exerted, the brain under the wound was drawn inwards.

The child was introduced to me; she is now eight years of age, healthy and intelligent; and no external trace of the injury is visible to the eye. The form of her head is that of a superior female child: It is long, and moderately broad at the base; Secretiveness, Love of Approbation, Self-Esteem, Cautiousness, and Firmness, are all large; Benevolence and Veneration are well developed, and the anterior lobe is large. I saw the pieces of the skull which had been removed. They

* A brief notice of this case was copied from Dr Boardman's Reports of Mr Combe's Lectures in America, into Vol. xiii. of this Journal, p. 161. The particulars have since been published by Mr Combe in his Notes on the United States, from which (Vol. ii. p. 279) the present article is extracted. —EDITOR.

may be three and a half by three inches in superficial extent. The skull has not been replaced. On applying my hand, I felt the brain rising and falling with the respiration, and distinctly ascertained that the organs of Self-Esteem and Love of Approbation were denuded of the skull; also a small part of Conscientiousness, and the posterior margin of Firmness. Her father mentioned that, before the accident, he considered her rather dull; but her mother (whom also I had the pleasure of seeing) did not concur in this opinion; both, however, agreed that since her recovery she had been acute, and fully equal to children of her own age in point of ability.

With the permission of her father and mother, I kept my hand for some minutes gently pressing on the external integuments over the site of the injury, and distinctly felt a considerable movement, a swelling up and pulsation, in the organs of Self-Esteem; and the same movements, but in a less degree, in those of Love of Approbation. When I began to talk to the child, she was shy and bashful, and at first would scarcely speak.* The vivid movements in Self-Esteem indicated that amidst her extreme bashfulness this organ was active. As I continued to converse with her, and succeeded in putting her at her ease, the movements in Self-Esteem decreased, while those in Love of Approbation continued. I spoke to her about her lessons and attainments, not in flattering terms, but with the design of exciting Self-Esteem; and the movements increased. Again I soothed her, and they diminished. This was repeated, and the same results ensued. Her father gave her several questions in mental arithmetic to solve; she was puzzled and made an intellectual effort, and the peculiar movements in the organs of Self-Esteem and Love of Approbation ceased; only a gentle and equal pulsation was felt. She solved the question, and we praised her: the peculiar movements in Self-Esteem and Love of Approbation returned and increased. This experiment was repeated at least four times, with the same results. I took out a piece of paper and began to write down notes, in pencil, of what had occurred. She looked at my writing; and as all attention was now withdrawn from herself, and her mind was occupied intellectually in observing what I was doing, I placed my hand on the integuments, and only the gentle and regular pulsations of the arterial system were perceptible.

I am much indebted to Mr Mapes, the father of the child, for permitting me not only to see this very interesting case,

* "Bashfulness is the result of the fear of not acquitting one's self to advantage, and of thereby compromising one's personal dignity." System of Phrenology, 4th edition, p. 702.

but to publish his name and residence, so that my remarks may be verified, or corrected if I have erred.

This case is replete with instruction in practical education. It tends, so far as one example can go, to prove that, by exercising the intellectual faculties, we do not necessarily excite the feelings; and also that each feeling must be addressed by objects related to itself before it can be called into action.*

II. *Case of Inability to distinguish certain Colours.*

At a meeting of the American Philosophical Society, on 21st August 1840, Dr Isaac Hays of Philadelphia communicated the particulars of a case of inability to distinguish certain colours, occurring in a man, a patient in Wills's Hospital, under the care of Dr Fox. We extract the following particulars from the Report of the Society's Proceedings in Silliman's Journal for January 1841, p. 54.

This case, Dr Hays remarked, presented the following points of interest.

1*st*, It confirmed the correctness of the observation made by Dr Hays, in a former communication, that no reliance can be placed on the account of their own cases, given by those who labour under this defect; and that their statements should never be received as accurate, until after careful and repeated examination.

The subject of the case under notice had been admitted into the hospital with partial amaurosis, and was not aware of his inability to distinguish colours until he was informed of the defect by Dr Fox. He then maintained, very confidently, that it had come on since his loss of the power of seeing objects, and mentioned several circumstances to prove that it was of recent occurrence. Nevertheless, on being minutely and closely

* Some years ago a similar case was reported by Mr John Grattan of Belfast in the Phrenological Journal, vol. ix. p. 473, and vol. x. p. 11. Two fissures, having the appearance of the fontanels in children, and which looked as if there had been an absorption of the bone, had existed for at least six years in the head of a gentleman aged fifty-six. So far as Mr Grattan could learn from mere description, they were situate,—the one on the left nearly over Veneration and part of Firmness, and that on the right across part of Conscientiousness and Hope; "and I am positively assured," says Mr G., "by his daughter, that his clerks could at any time tell when he was angry, without hearing him speak or seeing his face, but simply from the great *depression* which on such occasions occurred in those fissures, or, as they termed it, 'the holes that would appear in his head;' and that she has at different times observed the same phenomenon herself." The lady states farther, that "the depressions remained so long as he was under the influence of passion; and, as it subsided, the depressions gradually disappeared." See other cases in my System of Phrenology, 4th edit. p. 16.

questioned, it appeared beyond all doubt, and even the patient himself had to admit the fact, that the defect must have always existed.

Again, after being shewn various coloured papers, which he was requested to name, and satisfying all who witnessed the experiment, that he could distinguish but two colours, viz., yellow and blue, he named correctly the colours of a red strawberry and green leaf, which were presented to him. This surprised all present. It occurred, however, to Dr Hays, that the patient had learned the usual colours of these objects, and that his answers were dictated by this knowledge, and not from a real perception of colour. Experiments made with a view of determining this point most conclusively established the correctness of Dr Hays's suspicion.

2*d*, The case tends to confirm the accuracy of the laws announced by Dr Hays on a former occasion, as governing the defect of vision under notice. This patient could perceive but two colours, yellow and blue. His perception of the former was perfect, of the latter somewhat less so.

Dr Hays stated, that the laws just alluded to, so far as ascertained by his investigations, were the following :—

1*st*, *Entire inability of distinguishing colours may co-exist with a perfect ability of perceiving the forms of objects.*

This constitutes the highest grade of the defect. Individuals who labour under it can recognise differences of intensity of colour, so that whilst a diversity of colours of the same intensity appears to them to be a uniform colour, they accurately designate, as lighter or darker, different shades of the same colour, or of various colours. The rainbow appears to them as a band of a uniform colour, darker at one side, and gradually becoming lighter towards the other.

2*d*, *The defect may extend to all but one colour, and in such case the colour recognised is always* YELLOW.

The perception of this colour may be perfect, or limited to some shades.

3*d*, *The defect may extend to all but two colours, and in such case the colours recognised are always* YELLOW *and* BLUE.

In some of these cases, the perception of the latter colour is less perfect than of the former. Individuals who labour under this grade of the defect, though able to recognise perfectly yellow and blue, cannot distinguish them when combined, and forming green.

The laws which govern the other grades of this defect, Dr Hays remarked, remain to be determined.

There are certain persons who can accurately recognise yellow and blue, and some who can recognise red, who cannot

distinguish green; but whether or not there are individuals who can recognise the three primitive colours accurately, and are yet unable to distinguish the secondary colours, must be left, Dr Hays remarked, to further observation to determine.

It also remains to be ascertained, whether any person having an imperfect perception of yellow, can recognise blue; or with an imperfect perception of yellow and blue, or of the latter alone, can distinguish red.

III. *Memoir of the Case of a Gentleman born Blind, and successfully operated upon in the eighteenth year of his age; with Physiological Observations and Experiments.* By J. C. August Franz, M.D., M.R.C.S. (Communicated to the Royal Society by Sir Benjamin C. Brodie, Bart. F.R.S.)

The young gentleman who is the subject of this memoir had been affected from birth with strabismus of both eyes: the right eye was amaurotic, and the left deprived of sight by the opacity both of the crystalline lens and of its capsule. At the age of seventeen, an operation for the removal of the cataract of the left eye was performed by the author with complete success. On opening the eye for the first time, on the third day after the operation, the patient described his visual perception as being that of an extensive field of light, in which every thing appeared dull, confused, and in motion, and in which no object was distinguishable. On repeating the experiment two days afterwards, he described what he saw as a number of opaque watery spheres, which moved with the movements of the eye, but when the eye was at rest remained stationary, and their margins partially covered one another. Two days after this the same phenomena were observed, but the spheres were less opaque and somewhat transparent; their movements were more steady, and they appeared to cover each other more than before. He was now for the first time capable, as he said, of looking through these spheres, and of perceiving a difference, but merely a difference, in the surrounding objects. The appearance of spheres diminished daily; they became smaller, clearer, and more pellucid, allowed objects to be seen more distinctly, and disappeared entirely after two weeks. As soon as the sensibility of the retina had so far diminished as to allow the patient to view objects deliberately

[illegible] pa[illegible] ribands differently coloured were presented to

[illegible]ent colours he could recognise, with the

Greenacre

Rev. M'M —

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Greenacre

Rev. Mr. M—

Drawn by R. Beamish Esq.

Printed by G. Rowe Cheltenham

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Rev. Mr M.

exception of yellow and green, which he frequently confounded when apart, but could distinguish when both were before him at the same time. Of all colours, grey produced the most grateful sensation; red, orange, and yellow, though they excited pain, were not in themselves disagreeable; while the effect of violet and of brown was exactly the reverse, being very disagreeable, though not painful. Brown he called an ugly colour; black produced subjective colours; and white gave rise to a profusion of *muscæ volitantes*. When geometrical figures of different kinds were offered to his view, he succeeded in pointing them out correctly, although he never moved his hand directly and decidedly, but always as if feeling with the greatest caution. When a cube and a sphere were presented to him, after examining these bodies with great attention, he said that he saw a quadrangular and a circular figure; and, after further consideration, described the one as being a square and the other a disc, but confessed that he had not been able to form these ideas until he perceived a sensation of what he saw in the points of his fingers, as if he really touched the objects. Subsequent experience shewed that he could not discriminate a solid body from a plane surface of a similar shape. Thus a pyramid placed before him, with one of its sides towards his eye, appeared as a plane triangle.

Two months after the above-mentioned operation, another was performed on both eyes, for the cure of the congenital strabismus, by the division of the tendons of the recti interni muscles, which produced a very beneficial effect on the vision of the left eye; and even the right eye, which had been amaurotic, gained some power of perceiving light, and, from being atrophied, became more prominent. Still, it was only by slow degrees that the power of recognising the true forms, magnitudes, and situation of external objects, was acquired. In course of time, the eye gained greater power of converging the rays of light, as was shewn by the continually increasing capacity of distinct vision by the aid of spectacles of given powers.—(*Lancet, Aug.* 14. 1840.)

IV. *Two Cases of Acquisitiveness contrasted.* By Richard Beamish, Esq., F.R.S. With Illustrative Drawings.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

Sans Souci, Prestbury, Cheltenham,
July 1841.

My Dear Sir,—In offering the accompanying drawings to the Phrenological Journal, I do so rather as a suggestion to

more experienced and competent hands to carry out the views which they are designed to embody, than as works in any way worthy of your acceptance, being literally my first attempts in the lithographic art.

I have been urged to the undertaking by observing the difficulty which many experience in the examination of casts and skulls, and from the manner in which phrenologists call on the uninformed to examine Nature for themselves, without remembering that all are not prepared to enter her temple and worship at her shrine; that previous study is as necessary to enable an individual to discriminate between various forms of cerebral organization, as between the physical characters of minerals or plants. Indeed, from our present systems of education, and of conventional feelings and habits, impediments are accumulated in this department of observation more difficult to be overcome than those presented by Nature herself; and, as a consequence, I have known highly gifted minds shrink from a direct intercourse with Nature, and turn with something like disgust from the casts and skulls to which phrenologists referred them as the best evidences of their science.

The botanist, the mineralogist, the anatomist, the zoologist, &c., have felt the necessity of delineations, in which the attention is limited to specific parts, to enable the learner the more readily to appreciate the delicate lineaments by which each form is individualized; and society has recognised this mode of instruction by the encouragement which it has afforded to able hands to minister to its wants. But while art has thus been invited to put forth her strength in the portraiture of the humblest herb and simplest flower of the field,—while, in short, the mineral, vegetable, and animal kingdoms have been amply illustrated and exalted,—that portion of the Creator's works, the most elevated and important, on which are traced, in lines indelible, the magnitude of the instruments by which the affections and the passions, the intellectual powers and the moral sentiments, operate in this world, and from which the measure of responsibility may be deduced,—that portion, I say, is passed by as unworthy the employment of time or the exercise of talent.

When M. Vimont's valuable work appeared, I was sanguine enough to hope that so admirable an example would have been quickly followed in this country, and that some qualified phrenologist would have been found, who would have drawn his illustrations more particularly from humanity. In this I have been disappointed. I therefore venture to offer the result of my unclaimed hours with the view of calling attention to the subject, and of offering an humble testimony to the value of the science.

To secure accuracy, the drawings have been made directly on the stone, with the aid of the camera lucida; the distances being adjusted to *one-third* of the original.

The casts were placed between two sliding pointers set in a frame; the line of section of the side view and crown passing through the medial line, and that of the front and back through the opening of the ears, with the centre ray in a plane passing through the upper part of Eventuality and Concentration.

Notwithstanding my efforts to secure accuracy, I find that an error has occurred in the general size of the side view; but which, as it applies equally to the drawing of both heads, does not affect the relative proportion.

The object of the present example is to exhibit a contrast in all parts of the crania, with *one* exception, viz. Acquisitiveness; and thus to shew the action of that faculty under the several modifications of the antagonizing and controlling powers.

In the character of the Rev. Mr M., Acquisitiveness formed a distinguishing feature; but so controlled by the moral sentiments and intellect, as to have prevented any manifestation of its function to the injury of society.

In Greenacre, on the contrary, it appeared in all the unmitigated energy of a passion, regardless of the feeble voice of conscience, and of ulterior consequences.

If we compare the basilar and superbasilar regions we find a far greater resemblance than in the superior and coronal.

The full well-defined oval of the one, marking the ample development of the moral sentiments and intellect, contrasts strongly with the contracted, conical, inverted-pear-like appearance of the other.*

For the histories of the two individuals the reader is referred to p. 310 of the Transactions of the Phrenological Society,† vol. xi. p. 135 of your Journal.

Permit me to remain, with sentiments of respect, yours, very faithfully,

RICHARD BEAMISH.

* In the cast of the Rev. Mr M., the ear shewn in the profile is lower than the opposite one, and seems to have been misplaced by the artist who made the original cast. In consequence, the basilar region of the brain is represented in the profile as extending farther down than it actually did in the head of the individual.—ED.

† The following inference, drawn by Mr Combe from the cast of Mr M., proved correct:—"He would not worship wealth, but he would have a prudent regard for property, and would calculate his expenses and his income, so as to keep the former considerably within the latter"—"would be scrupulous and honourable in the extreme, with a great aversion to debt."—ED.

V. *Cases illustrative of the Pathology of the Brain.* By SAMUEL SOLLY, F.R.S., Lecturer on Surgery, and Assistant-Surgeon to St Thomas's Hospital.

Some years ago, in my treatise on the Human Brain, I adverted to the fact that reports were frequently given of cases which, during life, had exhibited symptoms of disease of the cerebro-spinal axis, without any corresponding lesion being discovered after death. I added, that I thought the circumstance arose, not from the real absence of morbid changes cognisable to our senses, but from want of sufficient attention to *minute* alterations of structure, either in the bones of the skull, the membranes, or the brain.

Still more extended observations have confirmed the opinion, that there is a post-mortem appearance corresponding to the symptoms of disease exhibited during life. I am also convinced that in the colour of the cineritious neurine of the hemispherical ganglia, and the state of the membranes in contact with those ganglia after death, will be found some indication of the state of the intellectual faculties previous to its occurrence. Paleness or absence of colour, indicating atrophy of these important instruments of the mental operations, is to be found in old standing cases of mental imbecility unaccompanied with maniacal excitement; while, on the other hand, a deep purple mottled appearance, indicating increased vascular action of the ganglia, is to be found in cases of mania, where the intellectual powers have been worked up to their highest pitch: the increased quantity of blood acting, as in the first stage of intoxication, so as to produce an exaltation of the function of the part, though the subsequent effect is, that the instrument of mind is broken by an over-degree of exertion. The following case ought to encourage the pathologist never to weary in his search for the cause of disordered function:—

Edward Brown, ætat. 42, working jeweller, intemperate habits, both in regard to intoxicating liquors and venereal excitement, but more especially the latter, applied to me for the relief of pain in the nape of the neck, extending partly up over the head. From the character of the pain, and other circumstances connected with the case, I conceived that there was a slow inflammatory action going on in the dura mater and membranes surrounding the cerebellum. By the means of local depletion, and the free use of the vinum Colchici, I entirely removed the pains for a short time; but they soon returned, when, finding that he had not abandoned his dissolute habits, I declined giving him any further advice.

In January 1841, he was admitted into St Thomas's Hospital

with symptoms of disease of the lungs and heart, and on the sixth day after his admission he had a convulsive fit, which lasted about a quarter of an hour, after which he remained tranquil for about an hour, and then suddenly died.

In our post-mortem examination we readily found thoracic disease sufficient to account for the thoracic symptoms; and the immediate cause of death was equally evident from the presence of effused blood in the motor tract as it passes through the pons varolii; but there appeared to be nothing to account for his venereal tendency and the morbid pain in the region of the cerebellum, for this organ presented no morbid appearance, nor did the membranes covering it, as examined *in situ*. But feeling satisfied that a cause for such an effect must have existed, I carefully stripped off the dura mater from the occipital bone, and then discovered a thin layer of very firm lymph, clearly the effect of old-standing inflammation.

Through the kindness of a physician, whose knowledge of the pathology and medical treatment of insanity is only equalled by the humanity and determination with which he is carrying out his plan of soothing, instead of irritating by restraint, the poor creatures entrusted to his care (I need not say that I allude to Dr Conolly of Hanwell), I have had the opportunity of observing many post-mortem appearances following mental derangement, from which I shall select two in illustration of my views.

The first case was one of melancholia of some years' standing, and the immediate cause of death was fever. At first sight, neither the brain nor the membranes exhibited any morbid appearance, and the absence of that serous effusion and opacity of the arachnoid, which is almost always met with in the insane, arrested our attention; and the fact was peculiarly interesting to me, as there had been no exhibition during life of maniacal excitement, which is, I believe, the invariable effect of acute inflammation of the hemispherical ganglion, usually designated inflammation of the membranes of the brain; the fact being overlooked that the symptoms of inflammation of the membranes, such as mania, &c. result, not from the inflammation of a serous or a vascular membrane, no such effect being produced by inflammation of a similar membrane in other regions of the body, but from the effect of the inflammatory action on that portion of the brain which is in contact with them.

The examination of the brain not having afforded a satisfactory explanation of the cause of the melancholia, we directed our attention to the cranium, and its appearance in my opinion was quite sufficient to account for the mental depression. It was enormously thickened, especially in the frontal region:

the greatest thickness was nearly half an inch, as shewn by perforating it with a gimblet, and all the arterial fossæ were deepened.

In this case, I consider that the disease must have commenced with subacute inflammation of the dura mater, producing, as in ordinary cases of chronic periostitis, thickening of bone, which, from its slow progress, gradually altered the texture of the hemispherical ganglia, and thus smothered the intellectual faculties without exciting them. The cineritious neurine of the anterior convolutions was of rather a darker colour than natural, and much darker than the posterior, which colour, as it must have arisen from some increase in the quantity of blood flowing through the vessels of this part during life, seemed at first at variance with the previous mental imbecility; but this is perfectly accounted for by the fact that during the febrile excitement preceding her death she answered questions distinctly, and protruded her tongue when desired, not having exhibited so much intelligence for a long period before: inasmuch as the improvement in the intellectual faculties was occasioned by the increased vascular action consequent upon the fever. The following case supports this view; for here the symptoms during life were very similar, and were not broken in upon by any improvement immediately preceding death:—

John Buckingham, æt. 48; insane 10 years; mental imbecility supervening on anxiety.

Death from ascites and hydrothorax. Post-mortem 39 *hours.* —*Head:* Skull generally thick at the anterior part; arterial fossæ numerous, and rather deep; thickness in the centre of the frontal bone, 4 French lines (8-20ths of an English inch); dura mater strongly adherent to the skull.—*Brain:* Cortical substance of hemispherical ganglion pale; softening of that portion of longitudinal commissure which is called the septum lucidum.—*Thorax:* Hydrothorax; atrophy of the right ventricle of the heart.—*Abdomen:* Ascites; chronic disease of liver.

The last case is one of mania, shewing the effect of inflammatory action of the hemispherical ganglion:—

Joseph Smith, insane four months. Alleged causes—intemperance, abuse of mercury, and venereal excitement. Fifty hours before death he became comatose, and gradually sunk.

Post-mortem: Head.—Considerable effusion of blood and serum on the surface of the brain; the pia mater greatly congested; the hemispherical ganglion exhibited a deep pink colour, mottled with red spots.

Without lengthening this communication further by the de-

tail of more cases, I will merely add, that I have not unfrequently found small rough ossific deposits on the internal surface of the dura mater by passing the finger carefully over the whole, when they had previously escaped the eye; also a lengthening of the clinoid processes into complete spines, which perforated the substance of the brain.—(*London Medical Gazette, June* 25. 1841.)

III. NOTICES OF BOOKS.

I. *Illustrations of Phrenology: comprising Accounts of the Lives of Persons remarkable in some Mental Respect, whether of Intellect or Feeling, and accurate Delineations of their Heads; together with a Statement of the various Measurements, and the Development of the Individual Organs.* By GEORGE R. LEWIS. London, Highley, Fleet Street, 1841. 8vo, pp. 43. No. I. COURVOISIER.

The object of this periodical is fully explained in its title. If well conducted, it will be both popular and useful. Its first subject is Courvoisier, the assassin of Lord William Russell. The contribution is from Dr Elliotson. It details the conduct of Courvoisier on the discovery of the murder, during and after his trial, and at the place of execution; then, referring to three remarkably good lithographed views of the criminal's head, and comparing the development with the history, shews their coincidence. "It (the head) presents," says Dr Elliotson, "one of the worst cerebral developments.* The cast is that of a large and powerful head, being 23¾ inches in circumference. But its magnitude arises from the great size of the sides and back, and of the posterior central part of the summit, and from the length of the lowest central part of the forehead. The forehead is very narrow, and its upper portion retreating, while the lateral portions of the crown slope down gently, rendering it keel-shaped."

* No phrenologist of ordinary skill would have taken Courvoisier into his service. To Lord John Russell, if he shared, as it is believed he did, in the contempt with which Lord Glenelg treated the offer made by Sir George Mackenzie to point out dangerous criminals by their heads, (an experiment recommended by seventy-nine gentlemen, many of them of philosophical and professional celebrity), the murder of his venerable kinsman by a midnight assassin, who, were phrenology applied in choosing domestics, would never have entered his dwelling, should afford matter of serious reflection.

The remainder of the number is filled up with twenty-five pages in small type, being a translation of the chapter in Dr Gall's large work, which treats of "The application of his Principles to Man, considered as an object of Education and Punishment." With much that is sound, that chapter contains some views of criminal jurisprudence greatly short of what phrenologists are now generally agreed upon. Dr Elliotson disapproves of the punishment of death, as we do, and differs from Dr Gall, who not only holds it to be a legitimate mode of punishment, but actually proposes to aggravate it in atrocious cases, as too mild when simply inflicted,—to render it "*a slow and painful death.*" In the excuse Dr E. offers for Dr Gall, we cannot, however, concur. "Gall," he says, "would have condemned the punishment of death had his discoveries and doctrines not been bitterly, though absurdly, censured as favouring crime. He was charged with atheism, deism, fatalism, materialism, and all the other isms which malice suggests; and if we consider the time of his career, and the bigotry and priestly domination of most continental countries, we cannot be surprised that, in many parts of his works, he declines resistance to the prevalent views." Our opinion of Gall is, that he was little disposed to make his doctrines bend to either power or prejudice; and that his errors, greatly more to his honour, were *bona fide* errors, and not compromises. He would never have proposed *aggravated* infliction of the punishment of death as a homage to existing prejudices, and assuredly would not have *argued* for it strenuously, answering objections against it, with every appearance of earnestness and sincerity. He was sufficiently illustrious in his discoveries, without being perfect in all the details of their applications to human affairs. In criminal jurisprudence, he had not divested his mind of belief in the necessity, justice, and efficacy, of retributive punishment, or attained to clear views of the then perplexing question of responsibility. As, however, the periodical before us has given Dr Gall's views of the philosophy of crime, we trust it will not rest there; but, when it treats of another great criminal, continue the subject, by bringing forward the more advanced opinions of later writers on the subject.

The work is of large octavo size, well printed, and handsomely got up. We wish it success.

II. *Report to the Secretary of State for the Home Department, from the Poor-Law Commissioners, on the Training of Pauper Children.* London, 1841.

We notice this valuable and important publication merely for the purpose of referring to the first document which it contains, namely, "Evidence of the employers of labourers, on the influence of training and education on the value of workmen, and on the comparative eligibility of educated and uneducated workmen for employment; taken by Edwin Chadwick, Esq. Secretary to the Poor-Law Commission." The persons examined by Mr Chadwick were Messrs A. G. Escher, engineer, Zurich; James Kempson, cotton manufacturer, Philadelphia; William Fairbairn, engineer, Manchester; Thomas Ashton, of Hyde, Cheshire; and James Smith, cotton manufacturer, Deanston, Perthshire. These gentlemen are at the head of very extensive establishments, and otherwise well qualified to give evidence on the subject of inquiry. They unanimously and strongly declare the inferiority of uneducated to educated workmen, not only in operative ability, but in steadiness, peaceableness, reasonableness, sobriety, economy, and general respectability of character. Convinced of this by experience, they have, to the utmost of their power, promoted education among the working classes. Mr Smith of Deanston, for instance, provides schooling at his own expense for 200 children; and it was stated by another employer, whose name is not published, and who has provided for the schooling of upwards of that number, that at first the expenditure was given chiefly from a desire to make the work-people happy; but, said he, we have found that, had it all been done simply as an investment of capital, it would have been a highly profitable one. "I would not, as a pecuniary speculation, consent to take less than L.7000 for my set of workmen, upwards of eight hundred, in exchange for the uneducated and uncultivated workmen of another manufacturer opposite. We find the steadiness of the men induces steadiness of work, and comparative certainty in the quantity and quality of the produce." Speaking of the recreations which he had provided for the work-people, he said, "Thou mayest think it strange for one of my persuasion" (he is one of the Society of Friends), "but is true—I have paid for a big drum and some horns, to give them mirth after their hours of labour." Mr Smith stated, that, as a master, he thought it right to exercise his influence in preventing drunkenness, &c.; his best workmen are the soberest men; he has 350 tee-totallers among them; he has all

the workmen residing in habitations built with a view to comfort, cleanliness, warmth, economy, and respectability of appearance; drainage is particularly attended to. He makes it a point also to encourage their rational amusements; at the end of each division of houses there is a white blank for playing tennis; he encourages quoits and foot-ball. Some of his cotton-spinners were tried at foot-ball with some picked men from the agricultural parts, whom they beat. Music also is encouraged, and they have amongst them about fifteen or sixteen performers. They have also a library. There has not been, with the exception of a small number, any disturbance, and not a strike, for the last thirty years; nor has he now a man that has lost a day's work from insobriety. Such are the gratifying statements of Mr Smith, who is obviously one of those who act on the glorious maxim that "property has its duties as well as its rights." *O si sic omnes!*

III. *The British Medical Journals.*

A superfluity of materials has caused us to fall somewhat behind in our notices of those portions of the contents of the medical journals which have a bearing on phrenology. In the present article we propose to take a rapid survey of the journals published during the earlier half of the current year.

The Medico-Chirurgical Review for January, contains (p. 25) an instructive notice of Dr Marshall Hall's "Memoirs on some Principles of the Pathology of the Nervous System," published in the Medico-Chirurgical Transactions, vol. xxiii. Four pages (289–292) are occupied by a selection from the Proceedings of the Phrenological Association at Glasgow, in September 1840. A case of inability to distinguish certain colours, given at p. 275, is copied at full length into our April number, p. 149.

In the same periodical for April (p. 343), is a review of M. Leuret's work on the Moral Treatment of Insanity, which was briefly noticed by ourselves at p. 261 of this volume. The principles maintained by M. Leuret, are as follows:—1. If it be true that insanity always depends upon, or is connected with, some lesion of the encephalon, it must surely be admitted, that as yet we are completely ignorant both of the nature, and of the exact seat, of the lesion. 2. The moral treatment of insanity, as recommended and practised by the best writers on the subject, has been viewed by them only as an

auxiliary or adjunct to the more important remedial means—the physical treatment. 3. In M. Leuret's opinion, on the contrary, insanity, when it is not associated with corporeal disease or suffering, is most efficaciously relieved, or even cured, by appropriate moral treatment; whereas physical means, under such circumstances, are of little or no avail. M. Leuret proceeds to adduce numerous arguments and illustrations in proof of these three positions; premising, however, this important caution to his readers, that these positions are meant to apply only to insanity, or disturbance of the intellectual and moral faculties, when it is uncomplicated, or, in other words, unattended with symptoms of corporeal disease. For, says he, if there be present at the same time paralysis, apathy, agitation, loquacity, fever, &c. we have reason to infer that there is a physical lesion somewhere, and we must therefore have recourse to physical means to relieve it; but in simple derangements of the reason or passions, on the contrary—in cases where the insanity exists alone and without complication—it is moral treatment that is most required. He sums up his remarks on the pathology of insanity with the following observations:—1. That physicians have, without any spirit of discrimination, accumulated or huddled together all the morbid changes which they have found, or believed to have found, in the brains of persons who have died insane; 2. that they have been in the habit of much too hastily attributing the disturbance of the intellectual and moral faculties to these real or supposed changes of structure; 3. that they have too much neglected to take account of the changes which are compatible with the integrity of the mental faculties; and 4. that, as regards the changes said to be peculiar to the insane, the distinction between the symptoms which are of a physical and those of a psychical or mental nature, during the life of the patient, has not been duly attended to. "I do not wish it to be concluded," says he, "from these observations, that in my opinion the brain does not experience any alteration in the insane, even in cases where the mental alienation appears to be free from any other morbid complication. I admit, in the production of insanity, the influence of certain physical causes; and I also admit that organic lesions of the brain are more frequent in the insane than in any other sort of patients. But then, as to the nature of the alteration which is the immediate cause of insanity, I assert that hitherto no one has been able to point it out. If it really exist, it must be similar to that which gives rise to dreams, which suggests false convictions in persons of otherwise sound minds, and which excites the instincts and passions. On no occasion does it re-

veal itself by physical characters and its nature is completely unknown."

M. Leuret, as we formerly stated, ascribes much efficacy to working on the fears of his patients: he is, however, far from trusting to this alone. "He recommends that every means should be employed to divert and amuse their minds, and to withdraw their thoughts from their delusions by keeping both their mental and their bodily powers engaged. The value of out-door exercise, of walking, riding, or driving, of working in the garden, of engaging in various sports, and also of in-door amusements, such as music, billiards, the acting of plays, &c. is much dwelt upon. It is unnecessary to say more: as every one is now aware of the hurtful effects of long seclusion and silence even to people of sound minds:—what then must be their influence on the insane? M. Leuret recommends that the invalids should dine together. It is always well to keep up the rules strict of etiquette during every repast:—the attention is thus to a certain degree maintained, and, by the performance of the little courtesies to each other, the patients are accustomed to exercise a certain degree of control over their own feelings. In large establishments, it is often useful, as well as very convenient, to divide the patients into several *messes*—giving to one the superintendence and preparation of the food for his division, after the manner practised on ship-board."

In commenting on one of the cases quoted by the reviewer, M. Leuret impresses on his readers the importance of the physician accommodating his manners and mode of treatment to the peculiarities of each case. "He must strive to make himself master of all his patients; but this he cannot do unless he varies and multiplies his means of action in innumerable ways. According as need be, he should employ either a firm and even a rude, or a conciliating manner, either condescendence or despotism; he must flatter in one instance, and check in another, certain passions; now lay a little stratagem, and now act with the utmost candour and seeming confidence: in one word, seek in the minds and tempers of those he wishes to cure, for some spring or lever, which, once set in motion, may restore to the mental faculties the energy or the rectitude which they have lost."

A review of a work by Dr J. H. Reveillé-Parisæ, entitled, "Physiology and Hygiene of persons who devote themselves to Intellectual Toil," contains some interesting observations on the connection of the mind with the body, on the temperament, constitution, and health of men of genius, and on the prejudicial effects of excessive labour of the brain. Among

a variety of extracts given by the reviewer, we have room to transcribe only these few lines: "Notwithstanding the contrary opinion of several physiologists, both ancient and modern, the nervous apparatus may possess great activity, at the same time that the muscular system may have acquired very marked development. It is well known that that prince of philosophers Plato was famous for his square shoulders, and a vigorous constitution. Similar instances of active sensibility and muscular vigour combined, may be found among the moderns; for instance, Leonardo da Vinci, Buffon, Gluck, and Mirabeau. It must be admitted, however, that this happy coincidence very rarely occurs."

A Treatise on the Sympathetic Relation between the Stomach and the Brain, by Dr Charles Wightman of Newcastle-upon-Tyne, is reviewed in the same number. Its contents are shewn by the critic to be less novel than is imagined by the author, whose talent and industry are, however, favourably spoken of.

An extract from Ammon's *Monatschrift* for June 1840, on the microscopical distinction between the sensory and the motory nerves, is inserted at p. 498. "Every nervous bundle," says Dr Remak, the writer quoted, "is composed of an assemblage of primary filaments, which do not communicate together, but are only in juxtaposition, even in the most intimate plexuses." "Ehrenberg was the first to demonstrate by microscopical examinations that in every nervous bundle we may distinguish the motory from the sensory filaments; the former remaining after death quite cylindrical, and presenting only a slightly rugous surface, whereas the latter exhibit a distinctly varicose or nodulated appearance." "Not only may we distinguish the sensory from the motory filaments, but we may also distinguish the filaments of those nerves belonging to organic life from those which belong to animal life: the former are of a red colour and extremely slender, whereas the latter are white and much more distinct. A notice of the recent additions made to our knowledge of the anatomy of the nervous system by the labours of MM. Bazin, Baillarger, and Foville, is quoted on p. 531 from the *Gazette Medicale.*

In an obituary notice of Sir Astley Cooper, p. 592, it is mentioned that, "till the very last illness, Sir Astley was eager after practice, and scarcely ever declined it, even when the case was purely medical; but it was not the thirst for fees—it was the love of avocation that led him to die with harness on his back. It is quite evident that the early habits and active life of this eminent practitioner disqualified him for literary leisure in advanced age. Even the salutary and amusing exer-

cise of travelling, which his fortune enabled him to pursue, was not an equivalent for the professional avocation which had become a part and parcel of this gifted individual's constitution."

We now turn to the *British and Foreign Medical Review*, a work which continues to be conducted with eminent ability and care. An article on Instinct, in the January number (p. 90), contains some acute and striking observations on that obscure subject. It is a review of Dr Alison's article on Instinct in part xix. of the Cyclopædia of Anatomy, Dr J. S. Bushnan's Philosophy of Instinct and Reason, and Mr Swainson on the Habits and Instincts of Animals. The reviewer thinks that Dr Alison has not given the lower animals quite as much credit for reasoning powers as some of them deserve; and in support of this opinion, he narrates the following circumstance, communicated to him by several eye-witnesses:—"Some horses kept in a paddock were supplied with water by a trough, which was occasionally filled from a pump—not, however, as often as the horses seemed to have wished; for one of them learned (*sua sponte*) to supply himself and his companions by taking the pump-handle between his teeth and working it with his head. The others, however, appear to have been less clever or more lazy, and finding that this one had the power of supplying their wants, they would teaze him, by biting, kicking, &c., until he had pumped for them, and would not allow him to drink until they were satisfied. Now it may be said that this was a mere act of imitation: but we think the contrary. When brutes *imitate* the actions of man, it is by a movement of the corresponding parts of the body, as when a monkey plays a knife and fork, and takes his glass of wine like 'any chrisom child.' We can scarcely avoid the belief that this clever horse had formed a *general notion* that the action of working the pump-handle up and down would cause the flow of water into the trough, and that he adapted his means to the end in view with a sagacity which would have done credit to many a human being. If, following him, the other horses had done the same, we should have ascribed it to imitation *in them*; just as when sheep follow their leader through a gap he has discovered in a hedge." Other remarkable cases are given, and the reviewer adds—"We are disposed to believe, then, that in the higher classes of those commonly denominated the lower animals, reasoning powers exist rather inferior to those of men in degree than differing in kind; and that, as we ascend in the scale, the instincts are gradually subordinated to them; so that in the highest among them in point of intelligence, the general conduct is rather governed by

the will, acting in obedience to intellectual operations (which may be originally stimulated by the instinctive propensity) than in direct respondence to the stimulus of sensation." With respect to the *moral feelings* of animals, the reviewer says: "We have always regarded it as difficult to distinguish those exhibited by the highest among them from those of man; and have been accustomed to consider *his* possession of a notion of a spiritual being, in the light of an intuitive perception, immediately suggested to his mind by external occurrences, without any act of reasoning, as the peculiar characteristic of his moral faculties, as the power of directing his current of thought is of his intellect. We are much pleased to find Dr Alison entertaining a similar view. 'Although,' says he, 'many of the lower animals are susceptible of the emotions of joy, and to a certain degree of gratitude and attachment, founded on the sense and recollection of benefits, none of them seem capable of forming the slightest notion of that Divine Power which has suggested itself to the human intellect in all ages, and even in the rudest conditions of human existence; we should regard any act of praise or prayer as an infallible indication of a mental capacity of the same rank as our own.' (P. 2.) The attachment of the dog to man, however, is evidently influenced by feelings of parallel character; but, like those of the young child, they are not susceptible of relation with any being not the object of sense,—'Man,' it was expressively said by Burns, 'is the god of the dog.'" The reviewer observes that a closer analysis of the higher moral feelings, distinguishing the different parts of the *morale* according as they have or have not any immediate influence on the nerves, is much wanting; and adds,—"The deficiency will not long, we hope, remain unsupplied. The physician and metaphysician have worked in too great ignorance of each other's researches; and we do not regard it as a trifling benefit of the study of phrenology that it has tended to bring them together. But we are compelled to remark that, among the professed cultivators of the latter science, there are very few who give due weight to the results obtained by recent physiological investigations on the nervous system at large; and most of them seem to take it for granted that the brain does many things which are the real province of the spinal cord." What these "many things" are, the reviewer does not say.

The next article is headed, "Treatment of Lunatics—Restraint or Non-restraint?"—a subject on which an incessant war has been carried on in medical journals and pamphlets during the last twelve months. The reviewer ably defends

the position of the non-restrainers. We cannot here enter into a subject so extensive, and shall content ourselves with borrowing from the reviewer an affecting statement by the celebrated Robert Hall, when complimented on a sermon preached soon after his recovery. "O do not say anything about it, sir: I shall never be the preacher I was. I find I have lost the principal faculty that distinguished my preaching, which was imagination; you know that was my forte, sir; all my imagination has been overstretched. You, with the rest of my friends, tell me that I was only seven weeks in confinement, and the date of the year corresponds, so that I am bound to believe you: but they have appeared to me like seven years. My mind was so excited, and my imagination so lively and active, that more ideas passed through my mind during those seven weeks than in any seven years of my life. Whatever I had obtained from reading or reflection was present to me; I had all my ideas at my fingers' ends, and could bring them to bear upon any subject." At p. 271 is given an account of the Queen Adelaide Fund of the Hanwell Lunatic Asylum; a highly useful source of relief to destitute patients at the time of their recovery, and which is calculated to protect those who partake of it from the operation of many causes most likely to produce a relapse. The good which has resulted from this fund makes its limited extent deeply to be regretted.

The April number of this Review commences with an analysis of Valentin's work on the Functions of the Cerebral Nerves and the Sympathetic, published at Berne in 1839. The work is lauded by the reviewer as presenting a systematic and harmonious view of what has been *positively ascertained* on the subject of the functions of the nerves. One remark of M. Valentin we quote as coincident with what has frequently been urged by phrenologists. "Where pathological phenomena coincide with the facts ascertained by physiological investigation, they may be accepted as confirmatory of these; but if they should seem to run counter to them, they are not to be set down as altogether disproving them, since a more complete knowledge of their conditions would probably enable us to account for what seems anomalous. We are not yet in a condition to say, for example, what amount of integrity of the nervous tissue is compatible with the performance of its functions; and a mere statement that it is indurated or softened is by no means sufficient to establish its loss of power." With these remarks, says the reviewer, we pretty much agree.

From a notice (p. 425) of the "Second Annual Report of the Registrar-General of Births, Deaths, and Marriages in

England," it appears that pulmonary consumption is 8 per cent. more fatal to females than to males. This fact is ascribed by Mr Farr partly to the in-door life which English women lead, and partly to compression of the chest by costume. "In both ways," says he, "they are deprived of free draughts of vital air, and the altered blood deposits tubercular matter with a fatal, unnatural facility. 31,090 English women died in one year of the incurable malady! Will not this impressive fact induce persons of rank and influence to set their countrywomen right in the article of dress, and lead them to abandon a practice which disfigures the body, strangles the chest, produces nervous or other disorders, and has an unquestionable tendency to implant an incurable hectic malady in the frame? Girls have no more need of artificial bones and bandages than boys." (Letter to the Registrar-General, p. 73.) On this the reviewer observes—"We entirely concur in the reprobation of this unhealthy and disfiguring practice; but the other faulty arrangement pointed out by Mr Farr is equally deserving of censure. The daughters of the poorer class are 'deprived of free draughts of vital air,' and, what we think equally important, of that free exercise, without which the circulation is languid and the blood vitiated, when as dress-makers they are confined all day and a portion of the night in crowded and noisome apartments, ministering to the vanity and, by the tight garments they fashion, to the deterioration of the health of the upper class. Of the daughters of this latter class the health is sacrificed to those external *accomplishments* which, with small benefit to the intellect, and none to the feelings, inevitably dwarf and dwindle the body, and too often lay the beauteous fabric in the dust. Many hours to music, many to drawing, many to fancy-work, some to languages, and few—but very few—to exercise in the open air, 'wear through the longest day.' When exercise is taken, it is often in some public walk, under the superintendence of some silly and ignorant governess, by whom every ebullition natural and healthful to youth—the jocund laugh, the run, and the leap—are repressed as ungenteel—that stupid and vulgar word to which so much of the health and happiness of youth is sacrificed. In an education calculated to draw forth the powers of the mind and body, all should be vigorously done. But this is overlooked in female education. During the long hours of lessons in drawing, music, &c., the attention becomes languid, the mind weary, objects impress it feebly, and much of the time that is thus literally wasted would be infinitely much more usefully spent in play. A shorter period of vigorous study, and a longer one of bodily exertion of a different kind from what we have

witnessed and endeavoured to describe, would send young ladies forth to the world from their homes or seminaries of education, at once better instructed and more healthful than we now see them."—(P. 426.)

It appears from tables in the Report, that the tendency to suicide increases till the age of 60, the rate of increase from 30 to 60 being 49.6 per cent. every ten years. The smallest number of suicides occurs in the cold season of the year. The tendency to it is the highest in the metropolis, the least in Wales and the conterminous counties, and at a middle rate in the south-eastern and northern counties. "It is not difficult," says another medical contemporary, "to understand the reason of the frequency of this accident in the metropolis. The mental powers and emotions are there kept in a state of almost constant fervent commotion, or what is named violent excitement. All those objects which rouse men to great and excessive exertions, intellectual and corporeal, are incessantly operating upon the mind at the same time: the chances of great success or of total ruin, of boundless wealth or extreme poverty, the most brilliant prosperity or the most calamitous adversity, are there all so closely connected, that the mind is exactly placed in the position calculated to create the most sanguine expectations, or to engender despair and extinguish hope, especially in persons whose passions, either of avarice or of ambition, tempt them to stake largely either in commerce or in similar pursuits."* Another cause, we imagine, is, that London is the great resort of persons of ardent and ill-balanced minds, and of the disappointed of every class.

As almost every marriage is duly registered, and every register of marriage is signed by the parties married—those who are able writing their names, and the others making their marks—a key is found to the proportion among those married who either cannot write at all, or write very imperfectly. Making allowance for accidental circumstances, the Registrar-General presents the following educational results of the returns for the year ending June 30, 1839:—"In the metropolis, the proportion per cent. of those who, on marrying, signed with a mark was, men 12, women 24, mean 18; in the south-eastern counties, men 32, women 40, mean 36; in the south midland counties, men 43, women 53, mean 48; in the eastern counties, men 45, women 52, mean 48; in the south-western counties, men 31, women 47, mean 38; in the western counties, men 40, women 54, mean 47; in the north mid-

* Edin. Med. and Surg. Jour., Jan. 1841, p. 187. The same number of this publication contains an article by Dr John Reid, "On some points in the Anatomy of the Medulla Oblongata." P. 12.

land counties, men 32, women 50, mean 36; in the north-western counties, men 39, women 63, mean 51; in Yorkshire, men 34, women 49, mean 41; in the northern counties, men 21, women 42, mean 31; in Monmouthshire and Wales, men 48, women 70, mean 59. The main points of the whole case are, that the state of education, at least among the adult population, is most deplorable for a country professedly the most civilized in the world, for that, in the whole of England and Wales, out of 121,083 couples married, there were 40,587 men and 58,959 women who could not write; that the metropolis stands decidedly superior to the rest of England in respect of education; that, next to the metropolis, the north of England (Durham, Northumberland, Cumberland, and Westmoreland) is superior; that the principal deficiency is in Lancashire, Bedfordshire, Monmouthshire, and Wales; and that the men are superior to the women throughout the country in the proportion of 33 to 49."

In *The Edinburgh Monthly Journal of Medical Science*, No. I., a case of cerebral disease is reported by Dr John Reid. He remarks, that it is "interesting in a physiological point of view, as the patient manifested a tendency to perform the rotatory motions observed by Magendie after direct injury of one of the crura cerebelli, and also from vertical sections of the cerebellum, including one of its crura. This case, however, like others we could mention, afforded no evidence in favour of Magendie's views on this subject; for the crura cerebelli and cerebellum were very carefully examined with a reference to this question, and no anormal appearances could be there detected." (P. 22.) No. II. contains an article on "Bleeding in Mania," by Dr W. A. F. Browne, superintendent of the Crichton Lunatic Asylum, Dumfries. He justly condemns the indiscriminate employment of depletion as a remedy for that disease. In the Proceedings of the Royal Medical Society, published in No. III., is the following notice of a paper read on 29th January by Dr Lowe, resident medical officer of Saughtonhall Private Lunatic Asylum, on the Use of Mechanical Restraint in the Treatment of the Insane. We quote it because the views stated appear to us to be sound. "After some remarks on the conflicting opinions at present entertained by the profession on the subject, he expressed his conviction, that, while the total abolition of mechanical restraint was certainly possible in all cases, there were at the same time patients who were likely to be benefited by its judicious use. Dr Lowe then proceeded to point out the class of cases in which he conceived it would be of advantage, supporting his opinion

by various cases which he adduced. He concluded by remarking, that in no asylum should the use of mechanical restraint form a prominent feature in the system of treatment pursued; but that the cases requiring its aid should ever be regarded as exceptions to the general practice, and that, in proportion as the moral treatment was brought to perfection, the use of mechanical restraint would be diminished."—In No. V. Dr John Reid treats of the Relation between Muscular Contractility and the Nervous System.—No. VIII. contains a notice of Gluege's Microscopic Examination of Softening of the Brain; and a case, by Dr Bennet, of Nerves abnormally developed on the surface of the Cerebellum.—No. IX. (in which the work assumes the title of The London and Edinburgh Monthly Journal of Medical Science) contains an abridgment of a paper by Dr Hughes on the Cerebral Affections of Children.

The London Medical Gazette of 18th December 1840, has a report, by Mr Long of Liverpool, of a case of disease in the cerebellum. The patient was a female servant, in whom, after death, the pia mater investing the cerebellum was found more minutely injected than that investing the posterior lobes of the brain. The external configuration of the cerebellum was natural, but its whole substance and surface were rather softer than usual. The inferior vermiform process was occupied by a tubercle the size of a common marble, of a somewhat irregular figure, extending about a quarter of an inch into the right lobe. The nervous tissue immediately surrounding it was softer than the rest of the cerebellum. The tubercle was hard, and when cut into presented granules of concrete pus, and appeared to be contained in a fine cyst. Among other particulars, Mr Long remarks "the want of accordance between this case and the case related by M. Serres, which induced him to place the seat of sexual impulse in the middle portion of the cerebellum (on this point I was particularly anxious, and purposely delayed its consideration for this place). Eighteen years ago she had a son, who is now alive; since that period, she has had no intimate male acquaintance, although she has not shunned their society; and during the whole of my attendance I did not perceive the least symptom of any amorous propensity, and her sister assured me that since her mishap she is certain she had none." This case, it seems to us, confirms instead of militating against the phrenological view of the function of the cerebellum. From one of the circumstances stated, it appears that the patient was at one time under the influence of the propensity, although latterly its action ceased; and the disease in the organ (the chronic nature of which was indicated

by "periodical headach, extending from the occiput to the vertex, of twelve years standing,") seems to have occasioned the change.

From a report of one of Dr Watson's lectures on the Principles and Practice of Physic, at King's College, published in the Medical Gazette of 12th February, we extract the following observations on the brain and nerves:—

"I adopt the belief that the grey (which are much the more vascular) portions of these nervous centres, form the part in which their peculiar powers reside, or are generated; and that their white or fibrous portions are, like the white and fibrous nerves, mere conductors of the nervous influence. I incline also to the opinion (recollect, if you please, that I do not press these opinions of mine upon you as being necessarily correct), that the influence which originates in the grey matter and is transmitted by the white, will at last be found to consist in, or be closely connected with, some modification of electricity. We know that some of the effects of this influence may be very exactly imitated, in animals recently dead, by Galvanism.

"The functions of the brain and nerves are sensation, thought, volition, and the power of originating motion. There may be others; but these four are all that we need, at present, concern ourselves with. Now, it is a part of my creed that the faculties of sensation, of thought, and of the will, belong to the brain; perhaps to the cerebrum alone. The precise office of the cerebellum is involved in much obscurity and dispute. Some of the opinions that have been formed respecting it I shall notice hereafter.

"The chief grounds for believing that the brain proper is, exclusively, the instrument of the mind, are these:—1. Because this portion of the nervous centres is superadded to the cranio-spinal axis, in the greatest bulk and most complicated form, in man; and, after him, in those of the inferior animals which shew the largest share of reason. 2. Because, in inferior animals which evince a certain amount of mental endowment, all manifestation of intellect ceases upon the gentle and gradual removal of the cerebrum and cerebellum; the animals continuing to live, for a long time, notwithstanding this mutilation. Again, it forms a part of my creed on these subjects that the motive power resides in the spinal cord." (P. 738.)

The celebrated Esquirol died on 12th December 1840, in the 68th year of his age; and the Medical Gazette of 5th February contains an abridgment of his Life by M. Leuret in the *Gazette Medicale*. A general account of his writings on insanity is introduced.—In the No. for 19th February, is com-

menced a series of reports of lectures on the Functions of the Nervous System, by Dr W. B. Carpenter, in the Bristol Medical School.

From the *Lancet* of 1st May, we learn that, at a meeting of the Medical Society of London on 19th April, "Mr Roberts read a paper on hypochondriasis, chiefly with the view of shewing that the *fons et origo* of the affection is situated in the brain and nervous centres, which are in a state of exhaustion, and that the affections of the digestive organs are merely symptomatic of, and not necessarily present in, the disease. In regard to the treatment, he placed little dependence upon purgatives; mild tonics, cold affusion to the head, and horse exercise, were the most likely means of affording relief to the depressed condition of body and mind."

Mr Farr's Report on the Mortality of Lunatics is inserted on 15th, 22d, and 29th May.

In the same periodical, 29th May, there is a contribution "On the Moral Treatment of Insanity, by Wm. Stamer Stanley, Esq. M.R.C.S.L., Prescot." The author advocates principles similar to those of M. Leuret on this subject; and he observes of phrenology that it is "a science, which, however imperfect it may be, is nevertheless greatly calculated to assist us in our moral and intellectual management, not only of the juvenile, but also of the insane." He deplores the increasing tendency of the public to take upon themselves the treatment of patients who ought to be sent to an asylum, thus almost invariably lengthening the term, if not altogether establishing the disease. He expresses the belief that the increase of insanity very much depends on the ambition of individuals to maintain a position in society different from that which either their rank or abilities entitle them to; the consequence of which, whether it be in the literary, religious, mercantile, or lower ranks of life, is a complete overbalancing of the faculties of the mind, and the arbitrary rule of the one which has been for a long time, perhaps, striving for the mastery. A melancholy case of this kind, he adds, lately occurred to his knowledge, in which the individual was quite aware of the origin of her delusion, and more than once threatened to commit suicide.

On 5th June is inserted a communication from Dr W. A. F. Browne, recommending the establishment of an asylum for patients recovered after attempts at suicide—a subject so well deserving public attention, and of which Dr B. treats in so forcible a style, that we intend to transfer his observations to our own pages in a subsequent num[1]

IV. *Our Library Table.*

In *Dr Copland's Dictionary of Practical Medicine*, article INSANITY, p. 501-5, are stated a number of objections to Phrenology, many of them borrowed from Dr Pring's Sketches of Intellectual and Moral Relations, published in 1829. Dr Copland writes in good taste, and, we believe, in a candid spirit; but, from want of familiarity with the subject, he has fallen into errors, which we shall point out on another occasion.

The Dublin Review for May contains a notice of the works of Verity and Winslow, in which phrenological principles are propounded and applied in such a manner as to attract the notice of the pious as well as the philosophical. We anticipate good results from such an exposition, as the periodical is the organ of the Roman Catholics, and exercises even greater influence over the opinions of those to whom it is addressed than the Edinburgh and Quarterly Reviews. We have only to express our regret that the criticism is not more elementary and demonstrative.

Mr M. B. Sampson's *Letters on Criminal Jurisprudence*, originally published in the Spectator newspaper, have been reprinted in a cheap brochure, at the expense of Mr W. R. Henderson's trustees. A review of this excellent work is in types, and will appear in our next.

Observations on Instinct, by George F. Etherington, M. D. (Edinburgh: Rickard, 8vo, pp. 37), has for its objects—"first, to suggest that the word Instinct be altogether laid aside; and, secondly, to endeavour to point out the propriety of, and necessity for, considering all the lower animals to be guided by reasoning faculties."

Outlines of what seem highly rational plans and courses of study adopted at two academies in England, have come into our hands, and deserve to be made known. One of these institutions is "South Street School, Sheffield, under the direction of Samuel Eadon, A. M.," and the other; "Castlegate Academy, Nottingham, conducted by Mr Packer." Mr Eadon's aim is the development of the intellectual and moral powers, and the repression within certain limits of the selfish feelings; and the following are the principles on which he proceeds:—"That the culture of one faculty will only improve that faculty, and is not adapted to unfold any other; that all the mental functions should be called into play, and subjected to systematic discipline; that the habits acquired under this system must be of the highest value in after life;

and, finally, that the information imparted will enable a youth not only to apply his mind effectually and confidently to any study, or profession, or business, to which the duties of life may call him, but will be the source of frequent pleasure, as scarcely any object or circumstance can present itself, concerning which he will not have either correct ideas or pleasing associations." From the programme, the course of study appears well suited for the accomplishment of these ends.—In Mr Packer's "Outline" there are three sections, in which are severally considered, intellectual, moral, and physical education. The last is so generally neglected in boarding-schools, that what is said about it deserves to be transcribed. "The regulations in this department are directed to the promotion of constitutional vigour, and, in relation to the deportment, active, free, and graceful habits. When a deficiency of temperament is obvious, appropriate measures are used to increase its tone." (We presume that when the temperament is too excitable, opposite measures are adopted to reduce its irritability. This is of great importance, and may save the life of many a talented youth, who, if allowed to exercise his brain too much, may fall prematurely into the grave.) "An efficient drill-master attends weekly to conduct the pupils through a set of exercises adapted to strengthen the muscles, straighten the frame, and improve the general deportment; and, under the superintendence of Mr Packer, or a confidential assistant, daily, except when the weather prevents, they walk in the park, meadows, or neighbouring fields; longer excursions being frequently made on holiday afternoons. Particular regard is had to the ventilation both of the school-rooms, sitting apartments, and lodging-rooms; and especial care is taken to form habits of order and cleanliness. The articles of food, in which *variety* is studied, are of the first quality, and in that abundance which would satisfy the most indulgent parent." Another feature which deserves imitation is exhibited in the following words: "As a moral instrument, *music* is most effectively cultivated. A small portion of time is daily allotted to this; supplying a recreation amidst severer studies, soothing the harsher feelings, and calling into exercise those of a more refined and elevated nature." We are ignorant whether Mr Packer is a phrenologist; Mr Eadon's name appears on the list of members of the Phrenological Association.

In *Finden's Tableaux*, one of the annuals for the present year, there is a very pleasing paper by Miss Mitford, entitled "*Hop Gathering*," in which the following passage occurs:—"I do not know whether in the list of organs which figure upon the skull-maps in the system of Doctors Gall and Spurz-

heim, there be any which, being translated (for of a verity the language of phrenology needs translation), would indicate a fondness for animals. Most assuredly, if no such propensity be therein marked, it is an important omission, and should be supplied forthwith; for that such an indication does exist most strongly in numberless individuals of both sexes, and is often developed under the most extraordinary disadvantages, is as certain, and far more frequent, than the prodigies in music and painting, in language and in calculation, the Mozarts, the Correggios, the admirable Crichtons, and American boys, those wonders of learning, of science, and of art, whose lives crowd our biographical dictionaries, and whose heads (as handed down in books and portraits) form the triumph of the phrenologist. Separate from the fondness for animals generally, and more distinctive and engrossing, perhaps, than any other species of that very engrossing propensity, is the passion for birds. Boys are liable to it as a class; and so they say is that particular order of single women ungallantly termed old maids. It prevails a good deal in certain callings, chiefly among sedentary artisans, such as tailors, shoemakers, and hair-dressers in provincial towns. A barber in Belford Regis is amongst the most eminent fanciers of the profession, and wins all the prizes at canary-shows for twenty miles round. Also the taste is apt to run in families, descending from father to son through many generations. Ours, for instance, happens to be so distinguished. My grandfather had an extensive aviary, and was a celebrated breeder of the whole tribe of song-birds; and his brother, my grand-uncle, is even now remembered as the first importer of the nightingale into Northumberland. He had two in cages, which he kept for several years, to the unspeakable delight of the neighbourhood, who used to crowd around his hospitable door to listen to their matchless note—one of the few celebrated things in the world which thoroughly deserves its reputation. My dear father is no degenerate descendant of his bird-loving progenitors." Philoprogenitiveness is usually regarded as the principal source of fondness for small and weak animals; but it may be well for those who have opportunities, to make observations on the cerebral development of persons who display such fondness in a passionate degree. The kind of animals preferred is generally determined, we imagine, by early habits and accidental circumstances.

The following works have recently been published.

The Medical Jurisprudence of Insanity. By J. M. Pagan, M. D., Regius Professor of Midwifery in the University of Glasgow.

On the Phenomena of Sensation, as connected with the Mental, Physical, and Instinctive Faculties of Man. By James Johnstone, M.D., Physician to the General Hospital, and Lecturer on Materia Medica and Therapeutics at the Royal School of Medicine, Birmingham.

On the Construction and Management of Hospitals for the Insane; with a particular notice of the institution at Siegburg. By Maximilian Jacobi, M.D. Translated by John Kitching. With introductory observations by Samuel Tuke. London: Churchill, 1841.

Address to the Relatives and Friends of Obstinate Drunkards; in which the nature and causes of their malady are exposed, with a view to their proper treatment: containing remarks on Asylums for the Intemperate. By Andrew Alexander, M.D. Glasgow: D. Robertson, 1840.

IV. INTELLIGENCE, &c.

Lectures on Phrenology.—The following lectures have been reported to us within the last three months:—

1. Four lectures at *Brighton*, by Mr C. Donovan, who also, on 14th and and 21st September, read papers on Phrenology at the Brighton Literary and Scientific Institution. From the prospectus of the proceedings at that Institution, it seems to be well and usefully conducted, and worthy of imitation elsewhere. The papers for discussion, in addition to Mr Donovan's, which stand first on the list, are the following:—Report on the Sanatory State of Brighton, by the Secretary; Indigestion, H. Weekes, Esq., M.D.; Copyright, Rev. J. Edwards; Popular Superstitions, J. Peto, Esq.; Anglo-Saxon Times, J. Colbatch, Esq.; Vocal Music, S. Simes, Esq.; Fortification before the Invention of Gunpowder, Wm. Redknap, Esq.; Credulity, Wm. Seymour, Esq.; Instinct with reference to Self-Preservation, J. Cordy Burrows, Esq.; Life Insurance, P. Capon, Esq. There is a weekly meeting at eight o'clock P.M.—Mr Donovan is to lecture again at Brighton in October or November.

2. Short courses of lectures, by Mr E. T. Craig, at *Knaresborough, Harrogate, Leeds,* and *Stockton,* in July, August, and September.

3. Three lectures at the *London* Mechanics' Institution, by Mr E. J. Hytche, on 4th, 11th, and 14th August. The audience averaged about 800 persons.

4. A lecture, by Mr C. Donovan, at the *Malden* Literary and Mechanics' Institute, on 19th August. In the same month, Mr D. delivered three lectures at *Ross,* in Herefordshire.

5. Ten lectures at *Newcastle-on-Tyne,* by Mr Alexander Falkner, before the Popular Lecture and Musical Society. The first of these was noticed in our last Number, and we have since observed favourable reports of the others in the newspapers.

6. Eight lectures at *Portsmouth,* by Mr Jonathan Barber, in August and September. The audience amounted to about 100, and the newspapers speak highly of the talents of the lecturer. The *Hampshire Telegraph* of 16th August contains a report of a visit by Mr Barber to the jail at Portsmouth, in company with several other phrenologists, and the reporter, who says:—"We have always avoided expressing an opinion upon the merits

of phrenology as a science, and in the several discussions which have taken place in this town and its neighbourhood, have endeavoured merely to prevent misrepresentation by exposing prejudice and fallacious arguments. The examination at the jail was of course very cursory, but even in this short visit, sufficient was observed to denote the positive nature of the science; and after witnessing what occurred, that man must be blind to proof, however palpable, who fails to recognise the vast importance of its application in a moral and intellectual point of view. We shall not enlarge upon this subject now; indeed there cannot be the least occasion for our doing so, since Mr Barber is about to deliver a course of lectures. After recording what we observed during our short visit on Monday last, we cannot doubt that many will avail themselves of this opportunity to obtain knowledge of immense value. The prisoners were drawn up in the jail, and the gentlemen present were requested to call out one from the number. Several cases were examined; we shall merely mention these as the most striking:—No. 1. Probably convicted several times; Mr B. feared he was an incorrigible thief, not to be classed amongst those whose reform was probable. The intellect and moral sentiments very deficient: quarrelsome but not cruel, not likely to commit murder. The statement was in exact correspondence with the character of the prisoner as described by the jailer.—No. 2. Mr B. stated that the organs of Imitation and Mirthfulness were largely developed: he ought to be distinguished by great comic powers, was, in fact, the punch of the prison, and would probably be seen immediately mimicking him if observed in the yard. This statement received a curious confirmation in the course of a few minutes, as he was seen examining the heads of the prisoners and turning the scene he had just witnessed into fun and amusement, till called to order by the governor.—No. 3. A man very opposite to the last. Mr B. pronounced this to be gloomy, subject to severe melancholy, and probably disposed to suicide. He was asked if he did not feel a disposition to destroy himself, and replied in the affirmative. He was detected with a handkerchief around his neck attempting to hang himself a few days previously.—We need scarcely remark that no intimation of the characters to be examined had been made directly or indirectly to the examiner."

7. A lecture at the Mechanics' Institution, *Wolverhampton*, on 20th July, by Mr W. R. Lowe; being the fourth of his course. Benevolence, Veneration, Conscientiousness, and Firmness, were the faculties which he considered. "In the course of the address, the lecturer announced that, as several arguments had lately been brought before the members of the Mechanics' Institution with considerable force and ability against phrenology, he should deliver at the close of his course, a supernumerary lecture on anti-phrenological objections generally. This announcement was received with considerable applause by the audience."—(*Staffordshire Examiner*, *July* 31.) These lectures are delivered at long intervals.

8. One or two courses in *Edinburgh* by Mrs Hamilton, in July and August. The quality of these lectures is correctly described in a paragraph quoted from the *Kilmarnock Journal* in our thirteenth volume, p. 187. They are "a confused and illogical rhapsody, delivered in ungrammatical and mystical language. She possesses a great deal of egotism, and a good portion of her discourses is filled with irrelevant personal details." Mrs H. appears to more advantage as manipulator of heads, but here also there is much to be reprehended in her proceedings. Her inferences are drawn by far too hastily; and as she makes no inquiry into the education and circumstances of the persons whose heads are examined (most of whom, of course, possess that medium form of brain which is materially influenced by external circumstances), errors without number are un-

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6. Eight lectures at *Portsmouth*, by Mr Jonathan Barber, in August and September. The audience amounted to about 100, and the newspapers speak highly of the talents of the lecturer. The *Hampshire Telegraph* of 16th August contains a report of a visit by Mr Barber to the jail at Portsmouth, in company with several other phrenologists, and the reporter, who says:—"We have always avoided expressing an opinion upon the merits

of phrenology as a science, and in the several discussions which have taken place in this town and its neighbourhood, have endeavoured merely to prevent misrepresentation by exposing prejudice and fallacious arguments. The examination at the jail was of course very cursory, but even in this short visit, sufficient was observed to denote the positive nature of the science; and after witnessing what occurred, that man must be blind to proof, however palpable, who fails to recognise the vast importance of its application in a moral and intellectual point of view. We shall not enlarge upon this subject now; indeed there cannot be the least occasion for our doing so, since Mr Barber is about to deliver a course of lectures. After recording what we observed during our short visit on Monday last, we cannot doubt that many will avail themselves of this opportunity to obtain knowledge of immense value. The prisoners were drawn up in the jail, and the gentlemen present were requested to call out one from the number. Several cases were examined; we shall merely mention these as the most striking:—No. 1. Probably convicted several times; Mr B. feared he was an incorrigible thief, not to be classed amongst those whose reform was probable. The intellect and moral sentiments very deficient: quarrelsome but not cruel, not likely to commit murder. The statement was in exact correspondence with the character of the prisoner as described by the jailer.—No. 2. Mr B. stated that the organs of Imitation and Mirthfulness were largely developed: he ought to be distinguished by great comic powers, was, in fact, the punch of the prison, and would probably be seen immediately mimicking him if observed in the yard. This statement received a curious confirmation in the course of a few minutes, as he was seen examining the heads of the prisoners and turning the scene he had just witnessed into fun and amusement, till called to order by the governor.—No. 3. A man very opposite to the last. Mr B. pronounced this to be gloomy, subject to severe melancholy, and probably disposed to suicide. He was asked if he did not feel a disposition to destroy himself, and replied in the affirmative. He was detected with a handkerchief around his neck attempting to hang himself a few days previously.—We need scarcely remark that no intimation of the characters to be examined had been made directly or indirectly to the examiner."

7. A lecture at the Mechanics' Institution, *Wolverhampton*, on 20th July, by Mr W. R. Lowe; being the fourth of his course. Benevolence, Veneration, Conscientiousness, and Firmness, were the faculties which he considered. "In the course of the address, the lecturer announced that, as several arguments had lately been brought before the members of the Mechanics' Institution with considerable force and ability against phrenology, he should deliver at the close of his course, a supernumerary lecture on anti-phrenological objections generally. This announcement was received with considerable applause by the audience."—(*Staffordshire Examiner, July* 31.) These lectures are delivered at long intervals.

8. One or two courses in *Edinburgh* by Mrs Hamilton, in July and August. The quality of these lectures is correctly described in a paragraph quoted from the *Kilmarnock Journal* in our thirteenth volume, p. 187. They are "a confused and illogical rhapsody, delivered in ungrammatical and mystical language. She possesses a great deal of egotism, and a good portion of her discourses is filled with irrelevant personal details." Mrs H. appears to more advantage as manipulator of heads, but here also there is much to be reprehended in her proceedings. Her inferences are drawn by far too hastily; and as she makes no inquiry into the education and circumstances of the persons whose heads are examined (most of whom, of course, possess that medium form of brain which is materially influenced by external circumstances), errors without number are un-

avoidably committed. There is evident, moreover, a disposition to say agreeable rather than disagreeable things. One of her absurdities is the fancy that she can discover the degree of activity of any organ by feeling with her fingers the temperature of the overlying scalp; in reducing which notion to practice, she demonstrates, as we hardly need say, its utter delusiveness. With respect to the doubtful organs, such as Concentrativeness, Size, Weight, and some others, she proceeds as if they were fully ascertained, and as if no difficulty arose from the existence of the frontal sinus. In many cases, however, where the development happened to be remarkable, she has given accurate accounts of the leading dispositions and talents of the individuals. On the whole, our impression is, that she is a clever and well-meaning, but eccentric and ill-educated person, whose vagaries are too obviously such to be identified by judicious persons with phrenology.

Death of William Scott, Esq.—We regret to announce the death of this well-known and talented phrenologist, which took place on 18th August, at his seat of Teviot Bank, in Roxburghshire. Besides being one of the contributors to the Transactions of the Phrenological Society, Mr Scott is the author of many able papers in the first five volumes of this Journal, of which he was one of the original proprietors and conductors. In 1836, he published " The Harmony of Phrenology with Scripture, shewn in a Refutation of the Philosophical Errors contained in Mr Combe's ' Constitution of Man ;' " a work which was not replied to by Mr Combe, who thought it enough for the vindication of his opinions that his " Constitution of Man" was extensively in the hands of the public. Want of room compels us to defer some observations which we intend to offer on the phrenological writings of Mr Scott. In politics he was a keen conservative, and at the time of his death occupied a seat at the board of the Town-Council of Edinburgh, in whose proceedings he took an active share. His dispositions were kind and affectionate, but sternness and warmth of temper occasionally shewed themselves. In the social circle he was a delightful and humorous companion.

Moulded Heads brought to France by the Astrclabe.—We would recommend to such of our readers as may visit Paris, to examine the casts mentioned in the subjoined notice (extracted from the *Athenæum* of 26th June), and to make public their observations. " The rich collection of natural objects made during the long circumnavigation of the Astrolabe, is exhibiting in the Orangery of the Jardin des Plantes, at Paris. The collection includes a series of moulded heads, representing the natives of the various countries which the Astrolabe visited, with their protuberances, their tatooings, their projecting cheek-bones and flat noses, faithfully rendered."

Peruvian Skulls.—At the late meeting of the British Association, a discussion took place in the Zoological Section, on the skulls of the extinct race of Peruvians noticed at p. 90 of this volume. Professor Owen expressed his belief that their very remarkable shape " was artificially produced, and that it arose from pressure being applied all round the skull." (*Athenæum*, p. 676.) We shall insert the entire report of the discussion in our next Number.

Methods of Taking Casts.—A correspondent informs us, that he " had a cast taken of his head by Mr Bally of Manchester, and another by Mr Deville of London. On comparing the natural features with the former, they are exceedingly well preserved. In the latter, the soft parts have been so compressed as to render the likeness very faulty, the displacement of the cheeks exceeding an inch, and the nose being flattened and the mouth extended. For phrenological purposes this is of little importance;

but the singular thing is that the methods are the same. When the natural position of the features is preserved, it is certainly an advantage. This can best be done by not inclining the body so much as is directed by Mr Deville, and by allowing a thin coat of plaster to harden before the rest is put on, in order to support the soft parts." Our correspondent's features were perhaps more tense on one occasion than on the other. He adds, that it would be very interesting to have casts of the enemies of phrenology, that their development might be compared with that of its friends, as it is probable there may be a marked difference.

Will of the late Barber Beaumont, Esq.—The deceased, in his lifetime, commenced a philosophical institution, and by a codicil, dated May 28. 1840, he directs the munificent sum of L.13,000 to be invested in the hands of Robert Fellowes, LL.D., J. Elliotson, M.D., F.R.S., George Charles Christian Hennel, Esq., Alexander Henderson, M.D., F.R.S., Henry Churchill, Esq., and Henry B. Kerr (which said legacy is bequeathed free of duty), for the following purposes:—To establish a philosophical institution, in Beaumont Square, Mile-end, for the mental and moral improvement of the inhabitants of the said square and the surrounding neighbourhood, in their intervals of business, and freed from the baneful excitement of intoxicating liquors; and also the cultivation of the general principles of practical theology, and the wisdom of God, leaving to the different churches and sects the cultivation and pursuit of their particular tenets; and also for the purpose of affording them intellectual improvement, and rational recreation and amusement.—*Britannia.*

On Comparisons between the Brains of different Animals.—Lelut's defence of phrenology as a system of philosophy of the mind, and the objections to it as a physiology of the brain, which he has derived from the comparative anatomy of that organ, give room for reflection. In your review of Lelut's last work (No. vi. N. S., p. 168), you observe, Mr Editor, that, "In truth, comparative phrenology appears to be yet in its earliest infancy, notwithstanding the elaborate work of Vimont. It is very difficult to arrive at any clear results by comparing different species, unless they are closely allied to each other. When a comparison is attempted between the brains of hares and cats, or cows and tigers, there are so many other peculiarities to be taken into account, in addition to the carnivorous instinct, that it may well be doubted whether any trustworthy results can be attained until we shall have become better able to point out which are the corresponding parts of the cerebral masses in these widely different tribes of animals." And in another article in the same number, p. 117, you observe, that "One great difficulty in making observations on animals is occasioned by the impossibility of satisfactorily understanding their feelings and motives." On these grounds you arrive at the conclusion that comparative phrenology deserves little reliance except for general illustrations and analogies, without attempting minute details. Now, I would suggest in addition to those you have advanced, another argument leading to the same conclusion; I mean that derived from the enormous increase of importance, in the case of animals of different species, of those considerations relating to the constitution of the brain, and the influence exercised thereon by the constitution and habits of the body generally. Even in our own species, how often are we obliged to qualify, by these considerations, conclusions derived from the mere size of the organs; but it is obvious that in the case of animals of different species, their weight is incalculably increased—in whom the whole structure of body, the proportions of the various parts of the nervous system between themselves and to the body generally, the supply of blood to the brain, its texture as influenced by the mode and species of nutrition, &c. may present the most marked differences. Even

were the structure of the brain and the position of its several parts much more uniform among animals of different species than is the case, and even were our means of acquiring insight into their feelings and motives tenfold increased, still vast obstacles would be opposed to the accuracy of conclusions drawn from mere size, by the class of difficulties alone to which I have alluded; but now all three exist in full force, and if the two first determine us to place little reliance on comparative phrenology, except for illustrations and analogies, will not the additional strength of the last warrant us farther in repudiating altogether the idea of basing or testing our science, by comparisons as to mere size between the brains of animals of different species? I could add more in support of this conclusion, but should thereby exceed the bounds of a "short communication." A word, however, as to the special question discussed by Lelut. Must not the difference in diet between the carnivorous and herbivorous species depend partly on an elective instinct determining animals in the choice of their food, which it is impossible not to recognise, and which may probably occupy a part of the organ of Alimentiveness? This organ has hitherto, I believe, been observed large in one part or other, in connection both with love of feeding generally, and niceness as to its choice—two functions which cannot, however, be confounded, being not only evidently distinct, but in a great manner contrasted.—*Mr Hudson Lowe*, 1840.

Twelve copies of the second edition of Dr Boardman's Report of George Combe's Lectures on Phrenology in America (price 6s.), and three copies of his Address at Boston on the Anniversary of Dr Spurzheim's Birthday in 1839 (price 1s. 6d.), are still on sale by Messrs Simpkin, Marshall, & Co.; and no farther supply will be imported.

A Phrenological Almanac for 1842, to be published under the superintendence of the Glasgow Phrenological Society, is announced.

Books received.—Silliman's American Journal of Science and Arts, April 1841.—British and Foreign Medical Review, July.—Edinburgh Monthly Journal of Medical Science, June, July, Aug., and Sept.—Medico-Chirurgical Review, July.—Currency and Import Duties; or the Natural History of the Principles and Relations of the Monetary System and the Protective System. By Joseph Heath. London: Pelham, Richardson, &c. 8vo. Pp. 81.—Annual Reports of the Directors of the Lunatic Asylums of Dundee, Montrose, and Worcester in Massachusetts.

Newspapers received.—Tyne Mercury, June 22. 29.—Gateshead Observer, July 17. Aug. 7.—New Moral World, July 10. 24. and 31., August 7. 14. 21.—Staffordshire Examiner, July 31.—Hampshire Telegraph, Aug. 30.—The Yorkshireman, Sept. 11.

To Correspondents.—Several communications, which we intended to publish in this Number, are deferred for want of room.

Communications for the Editor (prepaid) may be addressed to Mr Robert Cox, 25 Rutland Street, Edinburgh. Books or parcels, too heavy for the post, may be left (free of expense) with the London publishers, Messrs Simpkin, Marshall & Co., Stationers' Hall Court.—Articles intended for the next following Number must always be with the Editor six weeks before the day of publication. Communications for the section of "INTELLIGENCE," and also advertisements, should be in hand at least a fortnight before the same day. Charges for advertising:—eight lines, 6s.; twelve lines, 7s. 6d; every additional line, 6d.; half a page, 14s.; a whole page, 25s. Advertisements may be sent to the publishers in Edinburgh or London.

1*st October* 1841.

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TO

THE PHRENOLOGICAL JOURNAL FOR THE YEAR 1841.