

THE
PHRENOLOGICAL
JOURNAL AND MISCELLANY.

VOL. VIII.

DECEMBER 1832—JUNE 1834.

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

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

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

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TO THE BINDER.

The Portrait of Dr SPURSHIM to face page 141.

ERRATA IN VOL. VIII.

Page 16, line 6, *for born read baptised*
217, line 11 from bottom, *delete the*
336, line 24, *after true, insert that*
415, line 6, *for organization, read disorganisation,*
477, line 6 from bottom, *for are read were*
524, line 31, *delete much*

THE
PHRENOLOGICAL JOURNAL.

No. XXXIV.

ARTICLE I.

NATURE AND USES OF THE SKIN, AS CONNECTED WITH
THE PRESERVATION OF HEALTH.

IN the thirst for knowledge which characterizes the present generation, the structure and functions of the human body have been as much overlooked by the general reader, as if the subject were destitute of interest in itself, and of no utility when known; and hence we have the singular anomaly before us of highly educated men—men who are conversant with the natural history of the mineral and vegetable kingdoms, and with the structure and habits of the lower animals—displaying a degree of practical ignorance in regard to their own bodily and mental constitutions, which would excite astonishment were it not so common. The evils attending this state of things are incalculably great, not only as involving the security of health and the happiness of families, and perpetuating the destructive reign of the quack; but as retarding the progress of the race in the improvement of their physical, moral, and intellectual conditions. Public attention is, however, awakening to the necessity of knowing something of ourselves; and a multitude of remarks soliciting information on the subject are now to be met with in many of the journals and cheap publications of the day. We propose to contribute our mite to the common stock, and shall begin with offering a few observations on the functions of the skin; carefully avoiding what is either too technical or too abstract for general comprehension.

Structure of the Skin.—The skin is that covering which in man and animals protects the whole surface of the body, and preserves it from the too rude contact of external objects. Like every other part of the animal frame, its structure displays the most striking proofs of the transcendent wisdom and beneficence of its great Creator. Simple in appearance and in design, it is, in fact, a compound of many elements, and the seat of as great a variety of functions. It is composed of three layers of membrane: the outermost is the thin scarf-skin, epidermis, or cuticle, which rises in blisters, and is so easily abraded by violence; the next is the soft mucous layer or coat, which is the seat of colour, and which in the Negro is of a dark colour; and the inner is the thick *true skin*, as it is called, which immediately encompasses the body, binding every part in its place. These distinctions should be kept in view, for, as it is a general law, amply illustrated by Phrenology, that every part has a use or function peculiar to itself, the combined uses of the compound can be understood only by attending to those of the simple elements.

Cuticle or Scarf-Skin.—The scarf-skin forms the outermost layer. It has no perceptible nerves or bloodvessels, and consequently it neither bleeds nor feels pain when cut or abraded. Such being its constitution, it is appropriately placed on the outer surface, because it may come into contact with rough bodies without injury; while its intermedium serves to soften the impression made on the more sensitive parts beneath, and it is sufficiently thin to allow every inequality to be felt distinctly by the nerves of the true skin, and the requisite information to be conveyed to the mind. From its quality of becoming thicker when much brought into use, it forms an admirable protection to the skin beneath. Were this not so, it would be impossible for us to walk on our feet, or to work with our hands, without pain. In infancy, the cuticle on the soles of the feet is nearly as thin, and the surface consequently as sensitive, as on any part of the body; and in proportion as the strength increases, and the child begins to walk, the cuticle begins to thicken and harden, so as to protect the feet from being hurt by the inequalities of the soil or the pressure of the shoes. It may be remarked, that the cuticle covering the arch of the foot remains thinner than the rest, because there external pressure operates least; and that it becomes very thick on the heel, particularly in those who walk much, because the heel forms the principal support of the body, and is most in contact with the ground. In like manner the sensitive skin of the hand is defended by a cuticle, thick in proportion to its wants. In the delicate lady, who wields no implement heavier than her needle, it is thin and pliant; while in the blacksmith and labourer, whose occupations

would tear in pieces the thin cuticle of the lady, it is thick and hard, forming as it were a protective cushion for the true skin below. Being destitute of bloodvessels and of nerves, and apparently also of life, it may be cut or torn without pain; and when removed by vesication or by burns it is speedily renewed. For the same reason it resists putrefaction for a long time, and is found unchanged in bodies which have undergone extensive decay. Homogeneous in structure, it is supposed to be perforated by numerous holes, to allow the hairs and perspiration to pass through, although these are so small as not yet to have been demonstrated. By preventing the perspiration from passing off too rapidly by simple evaporation, the cuticle subserves the purpose of preserving the true skin in that moist and pliant state which is essential to the due exercise of touch and sensation. Its uses, therefore, are twofold,—1st, The protection of the skin from the rude contact of external bodies; and, 2d, The preservation of its requisite degree of moisture and softness. The nails belong to the cuticle, and like it are insensible to pain, and regenerate on being destroyed.

Mucous Coat.—The middle or mucous coat of the skin need not occupy much attention, for it is still in dispute whether it be really a membranous expansion or merely a mucous secretion. Some anatomists have considered it to be composed of several distinct layers; while others think it a mere secretion, and destitute of organization. Being the seat of colour, it is thickest in Negroes and the coloured races of man, and is not perceptible in the Albinos. From all that is known regarding it, it may be viewed generally as merely a thin soft covering placed between the outer and the inner skin, to protect the nerves and vessels of the latter, and give them their requisite softness and pliancy.

True Skin.—The third or inmost layer, called the *true skin*, *dermis*, or *corion*, constitutes the chief thickness of the skin, and is by far the most important of the three both in its structure and functions. Unlike the scarf-skin and mucous coat, which are homogeneous in their whole extent, and apparently without organization, the true skin, or simply, as we shall call it for brevity's sake, *the skin*, is very delicately organized, and endowed with the principle of life in a very high degree. Not only is it the beautiful and efficacious protector of the subjacent structures, but it is the seat of sensation and of touch, and the instrument of a very important exhalation, viz. perspiration, the right condition or disturbance of which is so powerful an agent in the preservation or subversion of the general health. It is of a fibrous cellular texture, and its looser internal surface, which is closely united to the cellular membrane in which the fat is deposited, presents a great number of cells or cavities, which

penetrate obliquely into the substance and towards the external surface of the skin, and also contain fatty matter. These cells are larger on some parts of the body than on others, and are very small on the back of the hand and foot, the forehead, &c., where fat is never deposited, and the skin is consequently very thin; while they are large in the palm of the hand and sole of the foot, where the skin is consequently thicker and fat abounds. These cells or cavities are traversed by innumerable bloodvessels and filaments of nerves, which pass through to be ramified on the outer surface of the skin, where they shew themselves in the form of numerous small papillæ or points, which are very visible on the surface of the tongue, and on the fingers and palm of the hand. These papillæ constitute the true organs of touch and sensation, and are therefore most thickly planted where these senses are most acute.

The true skin is so abundantly supplied with blood and nervous power, that, for practical purposes, it may almost be regarded as composed of vessels and nerves alone; and it is important to notice this fact. The universal and equal redness of the skin in blushing is itself a proof of great vascularity; but a still stronger consists in our being unable to direct the point of the finest needle into any spot without puncturing a vessel and drawing blood. The same test proves the equal abundance of nervous filaments in the skin, for not a point can be punctured without transfixing a nerve and causing pain; and it is well known that, in surgical operations and accidental wounds, the chief pain is always in the skin, because it is profusely supplied with nerves on purpose to serve as the instrument of feeling. From these examples, the skin may be truly considered as a network of bloodvessels and nerves of the finest conceivable texture; and taking the vast extent of its whole surface into account, we can easily understand how these minute ramifications may really constitute a larger mass of nervous matter than is contained in the original trunks of the nerves from which they are incorrectly said to arise, and also how so large a proportion of the whole blood may be circulating through the skin at one time.

Uses of the Cuticle.—We must next study the uses to which these structures are subservient in the animal economy; and to understand them thoroughly, let us recall to mind the principle already mentioned, that every part has a function appropriated to itself, and that consequently, where more than one function appears, there must be complexity of structure. To apply this principle to our present subject,—we have first the cuticle or scarf-skin serving physically as a defence against external friction and injury to the softer parts beneath, and becoming thicker wherever the friction is increased so gradually as to ad-

mit of its formation. But, if too great friction be applied suddenly to parts unused to it, and time be thus not given to the cuticle over them to become thicker, the tender parts being inadequately protected, become irritated and inflamed, and throw out a quantity of watery fluid or serum on their surface, which raises up the cuticle in blisters, and, by making it painful to continue the pressure, obliges the person to desist from an exercise which, if continued, would evidently soon alter the structure of the sentient nervous filaments, and unfit them for their proper uses. In like manner the cuticle, by impeding undue evaporation from the surface of the true skin, preserves its softness and pliability; whereas, were the cuticle wanting, the skin below would become dry and hard by exposure to the air, and altogether unfit for its purposes.

Uses of the Mucous Coat.—The chief use of the mucous coat also seems to be the protection of the delicate structure beneath it. Being of a dark colour in the Negro, it is believed to diminish the influence of the sun's rays in tropical climates by the higher radiating power which is possessed by a black than by a light surface. It is the mucous coat which is the seat of the variegated colouring observable in the skins of many of the lower animals.

Uses of the true Skin.—To understand the important purposes of the true skin, we must distinguish between its constituent parts, and consider it in virtue of each of them,—*1st*, As an exhalant of waste matter from the system; *2dly*, As a joint regulator of the heat of the body; *3dly*, As an agent of absorption; and, *4thly*, As the seat of touch and sensation.

The Skin considered as an Exhalant.—Every body knows that the skin perspires, and that checked perspiration is a powerful cause of disease and of death; but few have any just notion of the real extent and influence of this exhalation, such as we shall attempt to exhibit it. When the body is overheated by exercise in warm weather, a copious sweat soon breaks out, and, by carrying off the superfluous heat, produces an agreeable feeling of coolness and refreshment. This is the higher and more obvious degree of the function of exhalation; but, in the ordinary state, the skin is constantly giving out a large quantity of waste materials by what is called *insensible* perspiration, a process which is of great importance to the preservation of health, and which is called *insensible*, because the exhalation being in the form of vapour, and carried off by the surrounding air, is invisible to the eye; but its presence may often be made manifest even to sight by the near approach of a dry cool mirror, on the surface of which it will soon be condensed so as to become visible. The average amount of the insensible perspiration in twenty-four hours has been variously estimated; but so many

difficulties stand in the way of obtaining minutely accurate results, and the difference in different constitutions, and in the same person at different times, is so great, that we must be satisfied with an approximation to the truth. Sanctorius, who carefully weighed himself, his food, and his excretions, in a balance every day for thirty years, came to the conclusion that *five* out of every eight pounds of substances taken into the system passed out of it again by the skin, leaving only three to pass off by the bowels, the lungs, and the kidneys. This is certainly an exaggeration, but Lavoisier and Seguin, who conducted their experiments with still more caution against error, estimate the highest amount at thirty-two grains per minute, or five pounds a-day, and the smallest amount at eleven grains per minute, or one pound eleven ounces and four drachms per day; while the greater number of observers agree that the cutaneous exhalation is more abundant than the united excretions of both bowels and kidneys; and that, according as the weather becomes warmer or colder, the skin and kidneys alternate in the proportions of work which they severally perform; most passing off by the skin in warm weather, and by the kidneys in cold, and *vice versa*. The quantity exhaled increases, after meals, during sleep, in dry warm weather, and by friction or whatever stimulates the skin; and diminishes when digestion is impaired, and in a moist atmosphere.

According to Thenard, the cutaneous exhalation is composed of a large quantity of water, a small portion of acetic acid, of muriate of soda and potass, of an earthy phosphate, a little oxide of iron, and some animal matter; but Berzelius considers the acid as lactic, and not the acetic. There is besides some carbonic acid and oily matter excreted. But the composition of the perspiration probably varies both at different ages and on different parts of the skin, as is presumable from the peculiarity of odour which it exhales in some situations. The arm-pits, the groins, the forehead, the hands and the feet, perspire most readily, in consequence of their receiving a proportionally larger supply of blood. Every thing tends to show that perspiration is a direct product of a vital process, and not a mere exudation of watery particles through the pores of the skin.

Taking even the lowest estimate of Lavoisier, we find the skin endowed with the important charge of removing from the system nearly two pounds of waste matter every twenty-four hours; and when we consider that the quantity not only is great, but is sent forth in so divided a state as to be invisible to the eye, and that the whole of it is given out by the very minute ramifications of the bloodvessels of the skin, we perceive at once why these are so extremely numerous and fine that a pin's point cannot touch any spot without piercing them; and we see an ample reason why checked perspiration should prove so de-

trimental to health, because for every twenty-four hours that such a state continues, we must either have two pounds of useless and hurtful matter accumulating in the body, or have some of the other organs of excretion over-tasked to an equal amount, which obviously cannot happen without disturbing their regularity and wellbeing. People know the fact, and wonder that it should be so, that cold applied to the skin, or continued exposure in a cold day, often produces bowel complaint, a severe cold on the chest, or inflammation of some internal organ. But were they taught, as they ought to be, the structure and uses of their own bodies, they would rather wonder that it did not always produce one of these effects. It is remarked, for example, that such organs as belong to the same class of functions sympathise closely with each other. Thus the skin, the bowels, the lungs, the liver, and the kidneys, have all the common object of throwing waste and injurious matter out of the system, each in a way peculiar to its own structure. Now, if we suppose the exhalation from the skin to be stopped by long exposure to cold, the large quantity of waste which it was charged to excrete, being in itself hurtful to the system, will be thrown upon the other excreting organs, in addition to their regular amount of work; and if any of them, from constitutional or accidental causes, be already weaker than the rest, as often happens, it is quite natural to expect that its health will suffer from the extra demand made upon it. In this way the bowels become irritated in one individual, and give rise to bowel complaint; while in another it is the lungs which suffer, giving rise to catarrh or common cold, or perhaps even to inflammation. If, on the other hand, all these organs are in a state of vigorous health, a temporary increase of function takes place in them, and relieves the system, without leading to any local disorder, and the skin itself speedily resumes its activity, and restores the balance between them.

One of the most obvious illustrations of this reciprocity of action is afforded by any convivial company seated in a warm room in a cold evening. The heat of the room, the food and wine, and the excitement of the moment, stimulate the action of the skin, cause an efflux of blood to its surface, and increase in a high degree the flow of the insensible perspiration, which thus, while the heat continues, carries off an undue share of the fluids of the body, and leaves the kidneys almost at rest. But the moment the company goes into the cold external air, a sudden reversal of operations takes place; the cold chills the surface, stops the perspiration, and drives the blood inwards upon the internal organs, which presently become excited,—and, under this excitation, the kidneys, for example, will in a few minutes secrete as much of their peculiar fluid, as they did in as many of the pre-

ceding hours. The reverse of this, again, is common in diseases obstructing the secretion from the kidneys, for the perspiration from the skin is then altered in quantity and quality, and acquires much of the peculiar smell of the urinary fluid.

When the lungs are the weak parts, and their lining membrane is habitually relaxed, accompanied with an unusual extent of mucous secretion from its surface, cold applied to the skin throws the mass of the blood previously circulating there inwards upon the lungs, and increases that secretion to a high degree; but this secretion, were it to accumulate, would soon fill up the air-cells of the lungs, and cause suffocation. To obviate this danger, the Creator has so constituted the lungs, that any foreign body coming in contact with them excites the convulsive effort called coughing, by which a violent and rapid expiration takes place, with a force sufficient to hurry the foreign body along with it, just as we see boys discharging peas with much force through short tubes by a sudden effort of blowing. A check given to perspiration, thus naturally leads very often to increased expectoration and cough, or, in other words, to common cold; because the matter which ought to have gone off by the skin, must find some outlet, and its presence disorders those organs most which are naturally weakest.

The lungs excrete, as we shall afterwards see, a large proportion of waste materials from the system; and the kidneys, the liver, and the bowels, have in so far a similar office. In consequence of this alliance with the functions of the skin, these parts are more intimately connected with each other in healthy and diseased action than with other organs. But it is a general law, that wherever an organ is unusually delicate, it will be more easily affected by any cause of disease than those which are sound. So that, if the nervous system, for example, be weaker than other parts, a chill will be more likely to disturb its health than that of the lungs, which are supposed in this instance to be constitutionally stronger; or, if the muscular and fibrous organizations be unusually susceptible of disturbance, either from previous illness or natural predisposition, they will be the first to suffer, and rheumatism will ensue; and so on. And hence the utility to the physician of an intimate acquaintance with the previous habits and constitutions of his patients, and the advantage of adapting the remedies to the nature of the cause, when it can be discovered, as well as to the disease itself. A bowel complaint, for instance, may arise from overeating as well as from a check to perspiration; but although the thing to be cured is the same, the *means* of cure ought obviously to be different. In the one instance, an emetic or laxative to carry off the offending cause, and in the other a diaphoretic to open the skin, will be the most rational and efficacious remedies; and

hence, too, become apparent the glaring ignorance and effrontery of the quack, who affirms that his one remedy will cure every form of disease. Were the public not equally ignorant with himself, their credulity would cease to afford his presumption the rich field in which it now revels.

It is in consequence of this sympathy and reciprocity of action between the skin and the internal organs, that burns and even scalds of no very great extent prove fatal by inducing internal, generally intestinal, inflammation. By disordering or disorganizing a large nervous and exhaling surface, an extensive burn causes not only a violent nervous commotion, but a continued partial suspension of an important excretion; and when death ensues at some distance of time, it is almost always in consequence of inflammation being excited in the bowels or sympathizing organ. So intimate, indeed, is this connexion, that some surgeons of great experience, such as Baron Dupuytren of the Hotel Dieu, while they point to internal inflammation as in such cases the general cause of death, doubt whether recovery ever takes place, when more than one-eighth of the surface of the body is severely burnt; and whether this estimate be correct or not, the facts from which it is drawn clearly demonstrate the importance of the relation subsisting betwixt the skin and the other excreting organs.

The Skin a regulator of Animal Heat.—One very important use of the cutaneous perspiration, we have seen to be the removal from the system of a great quantity of waste materials, which would prove noxious if they remained. The Creator has, in his omniscience and foresight, and with that regard to simplicity of means which betokens a profoundness of thought inconceivable to us, superadded to this another purpose scarcely less important, and which is in some degree implied in the former; I mean the proper regulation of the bodily heat. It is well known that, in the polar regions, and in the torrid zone under every variety of circumstances, the human body retains nearly the same temperature, however different that of the air may be by which it is surrounded. This is a property peculiar to life, and, in consequence of it, even vegetables have a power of modifying their own temperature, though in a much more limited degree. Without this power of adaptation, it is obvious that man must have been chained for life to the climate which gave him birth, and even then have suffered constantly from the change of seasons; whereas, by possessing it, he can enjoy life in a temperature sufficiently cold to freeze mercury, and, for a time, sustain unharmed a heat more than sufficient to boil water, or even to bake meat. Witness the wintering of Captain Parry and his companions in the Polar Regions; and the experiments of Blagden, Sir Joseph Banks, and others, who remained for

many minutes in a room heated to 260° , or 50° above the temperature of boiling water. The chief agents in this wonderful adaptation of man to his external situation, are undoubtedly the skin and the lungs, and in both the power is intimately connected with the condition of their respective exhalations; but it is of the skin alone, as an agent in reducing animal heat, that we have at present to speak.

When the body is exposed to a warm air and powerful sun, or, as in many trades, to the intense heat of a furnace, or when it is engaged in severe exercise, an increased production of heat takes place, which would soon kill the man were it not as rapidly carried off, and an equilibrium thus kept up. Attention to the order of events affords the requisite knowledge of the means employed for this purpose. At first the body is actually felt to be warmer, the skin becomes dry and hot, and the unpleasant sensation of heat is soon at its maximum. By-and-by a slight moisture is perceived on the skin, followed by an immediate increase of comfort. In a short time afterwards this moisture passes into free and copious perspiration, moistening and bedewing the skin in the shape of sweat; and if the heat or exertion is still kept up, the sweat becomes profuse, and drops from the body or wets the clothes which envelope it. A decrease of animal heat unavoidably accompanies this, because, independently of any vital action contributing to this effect, as is most probable, the mere physical evaporation of so much fluid is itself sufficient to take up and carry off a large quantity of caloric. On this latter account, the evaporation of water from a rough porous surface is constantly resorted to in the East and West Indies, and other warm countries, as an efficacious means of reducing the temperature of the air in rooms, and of wine and other drinks, much below that of the surrounding atmosphere. Franklin was, we believe, the first to point out the analogous use of the perspiration in reducing the heat of the body; and that he has not erred in ascribing this effect to it, must be evident to every one who chooses to make a very simple experiment: For, if we cover the bulb of a thermometer with a piece of wet rag, and swing it rapidly round in a dry air, we shall presently see the mercury fall, and indicate a reduction of temperature proportioned to the extent of surface exposed, and the rapidity with which the evaporation is accomplished. Keeping this in view, and setting aside (because it may be disputed) all reduction of temperature arising from heat becoming latent in the passage of the fluid perspiration into the state of vapour, we shall still find evaporation a perfectly adequate provision for the gradual and safe dispersion of the superfluous animal heat. The amount of fluid evaporated from the skin during profuse sweat, cannot be less than double of what is carried off by the lowest insensible

perspiration, viz. four or five pounds in twenty-four hours, and an amount like this is evidently sufficient to carry off a large quantity of heat from the body. In the performance of this function, the skin is, indeed, assisted by the exhalation from the lungs; but as both act on the same principle, the explanation is not affected by this circumstance.

In summer we suffer most from heat in what is called moist close weather, when no air is stirring; and warm climates, which are at the same time moist, are proverbially the most unwholesome. The chief reason for this is the diminished evaporation from the skin which such a condition of the atmosphere produces, partially shutting up the natural outlet of the superfluous heat of the body; and as it at the same time checks the exit of the waste matter which ought to be thrown out, and which is known to be as injurious to the system as an active poison taken into the body from without, the hurtful consequences of such weather and climates, and the fevers, dysenteries, and colds, to which they give rise, are partly accounted for; and this is one powerful reason why night air is so unwholesome, particularly in malaria districts, which are loaded with moisture and miasma: whereas, when the air is dry as well as hot, and free evaporation takes place, little or no inconvenience is felt, and health oftener remains uninjured. Delaroché has established this point conclusively by experiment. He exposed animals to a very high temperature in a dry air, and found them to sustain no mischief; but when he exposed them in an atmosphere saturated with moisture, to a heat only a few degrees above that of their own bodies, and greatly lower than in the former instance, they very soon died. Hence the reason also why, in ague and other fevers, the suffering, restlessness, and excitement of the hot stage, can never be abated till the sweat begins to flow, after which they rapidly subside; and the same remedies which, given in the hot stage, added to the excitement and distress, are now productive of the best effects.

Cutaneous Absorption.—The arterial or red blood is the source from which the cutaneous exhalation is derived, and the process is carried on in the capillary vessels (so called from their very small hair-like size) in which the branches of the arteries terminate, and which possess a vital power, in virtue of which they excrete a fluid of an uniform and peculiar nature, and do not act, as some have supposed, as mere mechanical filters for the thianer parts of the blood to exude. Corresponding to this distribution of the arteries, innumerable minute branches of veins are ramified on the skin, by which the red or arterial blood, after having supplied the purposes of nutrition, and furnished materials for the necessary secretions and exhalations, is collected and carried back to the heart in the form of dark and venous

blood, and which is no longer capable of supporting life, until it shall have undergone the requisite changes in its passage through the lungs, and received a new supply of nourishment from the junction of the chyle. These venous capillaries are the instruments of another though subordinate function of the skin, viz. that of *absorption*, in virtue of which they absorb and carry into the system substances in contact with their open extremities, much in the same way as the arterial capillaries seem to exhale or pour out their peculiar fluid. The laws and mode of this absorption are not very well known; and while some ascribe to it the widest limits, others hold it to be of little importance. The ancients supposed that, by this means, the body could be nourished for a time by immersing the patient in a bath of milk or strong soup; but recent experiments serve to shew, that absorption is, in such circumstances, far too trifling in amount for any such result. Some deny, indeed, that any absorption would take place at all; but be this as it may, it is capable of demonstration that many substances are readily taken up by the skin, when their passage through the cuticle is facilitated by friction, or when they are applied to sores or other surfaces from which the cuticle has been removed. As familiar examples of the former, the affection of the system by mercurial preparations rubbed into the skin in liver complaints, or by sulphur in cutaneous diseases, may be mentioned; and the irritation of the kidneys often caused by the absorption of the flies from a common blister, is a good illustration of the latter. Death has even been produced by forgetting this power of the skin in outward applications. Thus arsenic applied to cancerous sores, and strong solutions of opium to extensive burns in children, have been absorbed in quantities sufficient to poison the patients; and colic in its severest forms has in like manner resulted from the heedless application of salts of lead to external sores. It is in virtue of this absorbing power that cow-pox matter, placed under the cuticle, is taken into the system in ordinary vaccination; and that the poison arising from the bite of a mad dog, or from a cut or excoriation of the finger in dissecting, is so often fatal in its effects. It is alleged that contagion and marsh miasmata are received into the animal economy in the same manner; and Bichat thinks that he has established the fact experimentally, as regards the absorption by the skin of the effluvia of a dissecting room. But without insisting upon this as proved, it is manifestly probable, because it is in accordance with a power we know the skin to possess, and which is diminished in degree only by the interference of the thin inorganized cuticle. Many of our common medicines, such as laxatives, emetics, and diuretics, have in fact been administered in friction by Pinel, Dumeril, and Alibert, with perfect success; and it is

long since mercurial and other fumigations have been resorted to, when the speedy introduction of these remedies into the system was required. The reader should keep these facts in mind.

When the perspiration is brought to the surface of the skin, and confined there, being prevented, either by injudicious clothing or by want of cleanliness, from flowing off, there is much reason to suppose that its residual parts are again absorbed, and act on the system as a poison of greater or less power, according to its quantity and degree of concentration, thereby producing fever, inflammation, and even death itself; for it is established by observation, that concentrated animal effluvia form a very energetic poison. The fatal consequences which have repeatedly followed the use of a close water-proof dress by sportsmen and others, and the heat and uneasy restlessness which speedily ensue where proper ventilation is thus prevented, seem explicable only on some such principle.

The Skin the seat of Sensation and Touch.—It still remains for us to consider the skin as the seat of sensation and the organ of touch, functions which it exercises in virtue of the abundant distribution of nervous filaments to its every point; for, as formerly mentioned, we cannot place the end of a needle on the skin without exciting pain, and pain cannot be perceived without the presence of a nervous filament; and, as might consequently be anticipated, those parts, such as the hand, in which sensibility is in its highest endowment, are most amply supplied with nerves. This is beautifully illustrated not only in man, but in the lower animals. Thus the nerves going to the hand and arm, the most perfect instruments of touch and sensation in man, are at their dorsal roots five times larger than those which are destined for its motion; and, in like manner, the nerve supplying the tactile extremity of the proboscis of the elephant, exceeds in size the united volume of all its muscular nerves. On the other hand, in animals covered with hair or feathers, whose touch and sensation are comparatively defective, the muscular nerves far exceed in size those of sensation; and wherever Nature has endowed any particular part with high sensitive powers, she is invariably found to have distributed to that part, and to it alone, a proportionally higher nervous endowment; and, in this respect, we observe the same principle in operation as regards the nerves, which we pointed out as affecting the bloodvessels concerned in the exhaling functions of the skin, those parts which perspire most, such as the armpits and groins, being for that purpose the most bountifully supplied with blood.

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Independently of the amount of indispensable knowledge which we obtain by virtue of this constitution of the skin, its nervous structure is absolutely essential to our continued existence.

Were it not for the nerves and their accompanying power of sensation, external bodies might rub against, and injure or destroy the skin, or hot bodies might burn it, without our being aware; and hence its exquisite sensibility is in reality a chief safeguard of life. Pain is no doubt an unpleasant thing, but in its uses it is a positive blessing, in warning us against danger and even certain destruction, which would speedily overtake us if we had no such monitor at hand. If we had no nerves on the surface to communicate to us a lively impression of cold, we might inadvertently remain inactive in a temperature which would not only suspend perspiration, but benumb the powers of life; or we might, on the other hand, approach so near the fire or boiling fluids, as to have the organization destroyed before we knew. Whereas, by the kind interposition of the nerves, we cannot, when perspiring freely, be exposed to the cold air without a disagreeable sensation being experienced, impelling us to attend to our safety, and to keep up our heat either by additional clothing or by active exercise. When the nervous and vascular parts of the skin are both in healthy action, a pleasant soft warmth is felt over the body, which is in itself a delight, and which gives to the mind a lightness and hilarity, or pleasant consciousness of active existence, the very opposite of the low and languid depression which so generally accompanies defective action in the skin when of some continuance, and which forms a marked feature in many nervous affections.

The brain is readily admitted by reflecting minds, to exercise much influence on the general system, because the nervous substance of which it is composed is collected into one focus, and, thus united, is seen to constitute a large mass. In reality, however, the nervous matter spread out on the surface of the body for the purposes of sensation is so great, that many anatomists consider it as even exceeding the mass of the brain, and hence its influence ought to be, as it actually is, of much importance to health, and the sympathy between it and the brain is of the closest and most powerful kind. It is well known, for example, that sudden and violent passion stimulates and reddens the skin; while grief, melancholy, and apprehension lower its vitality, and cause it to present the dull, pale, and contracted appearance so characteristic of depression. An unexpected alarm is thus said to make the hair stand on end, and, in some animals, the expression is not metaphorical, but literally true. The reverse influence of the skin on the brain is seen on exposure to a severe degree of cold. The first sensation of chill is speedily succeeded by that of numbness and insensibility of the nervous surface, which immediately act on the brain, and first impair and then suspend its functions and the mental manifestations, and ultimately extinguish life itself. If, on the other hand, as in tropical

climates, the surface be relaxed by excessive heat, a feebleness and indolent languor come on, and, by affecting the brain, equally indispose the mind and body to active or energetic exertion. Again, when the nervous system is debilitated, its action is not sufficiently vigorous to give a healthy stimulus to all its parts; the nervous influence is concentrated in the head; and its remoter branches, such as the nerves of the skin, being inadequately supplied, are unable to keep up sufficient vital action, and the surface of the body becomes habitually cold, shrunk, and uncomfortable. Nervous invalids sometimes describe the misery of this state as intolerable; and while the unhealthy activity of the brain is the immediate cause of oppressive mental anxiety or depression, and is shown to be unhealthy by its concomitant headaches and the inability for continuous thinking, the morbid deficiency of nervous action on the surface places them, as it were, at the mercy of the wind and weather, and subjects them to annoyance and perverted sensations from trifles which formerly gave them pleasure. And hence one cause of the coldness of feet and deficient warmth of skin to which literary and sedentary people are so proverbially subject.

Nor is this chilliness of surface the sole evil resulting from debilitated action in the nerves of the skin. So intimately related are all parts of the body, that each is essential to the other, directly or indirectly, and no one can long suffer without entailing evil consequences upon the rest. This is peculiarly the case with the nervous system, which, in truth, presides over every other function, so that when the healthy stimulus which the cutaneous nerves furnish to the vessels of the skin is impaired or interrupted, their action becomes affected in turn, and the requisite exhalation from the surface of the body is diminished as effectually as by the direct application of cold; while the internal organs are equally subject to disorder from the excess of blood thrown in upon them.

Such are the direct and important purposes of the skin. In addition to the principal circumstances which we have noticed in its structure, it possesses a number of small glands called Sebaceous glands, destined for the secretion of an unctuous oily matter which lubricates and softens its external surface, and prevents its becoming so dry as to unfit it for its uses. It is this oily matter which prevents water from penetrating easily and relaxing the cuticle, and the absence of which, when removed by the soda used in washing, allows the skin of the hands and fingers to assume that wrinkled and shrivelled appearance which is common among washerwomen.

Practical Uses of the preceding principles.—It is only in its useful applications to the improvement and happiness of man that knowledge truly becomes power, and, in accordance with

this principle, we proceed to point out some of the advantages derivable from that which we have been attempting to communicate.

Protection of the Skin.—It appears from the London Bills of Mortality, that between a fourth and a fifth of all the infants born die within the first two years of their existence. This extraordinary mortality is not a part of the Creator's designs; it does not occur in the lower animals, and must therefore have causes capable of removal. One of these, to speak only of what is related to the present inquiry, is unquestionably the inadequate protection afforded, especially among the poorer classes, to the new-born infant, against the effects of the great and sudden transition which it makes in passing at once from a high and almost unvarying temperature in the mother's womb, to one greatly inferior and constantly liable to change. At birth, the skin is delicate, extremely vascular, and highly susceptible of impressions, so much so, that cases have occurred in which a leech bite has caused a fatal hemorrhage. The circulation is, in fact, cutaneous; for the lungs, the stomach, the liver, and the kidneys, are as yet new to life and feeble in their functions. If the infant, then, be rashly exposed to a cold atmosphere, or if it be inadequately protected by proper clothing, the mass of blood previously circulating on the surface of the body is immediately driven inwards by the contraction of the cutaneous vessels, and the internal organs are soon overpowered by the undue quantity of blood thus forced in upon them; and hence bowel complaints, inflammations, croup, or convulsions are brought on, and sooner or later extinguish life; and hence, too, the inexpressible folly of those who bathe infants daily in cold water even in winter, and freely expose them to the open air, or to currents from open doors or windows, with a view to harden their constitutions, when it is quite certain that no more effectual means can be resorted to in the earlier months of life, to undermine the general health and entail future disease on the unhappy subjects of the experiment. But the opposite error is scarcely less pernicious, for the system may be enfeebled by too much heat and clothing, and too close air, as effectually as by the other method. The skin may be thus kept too open and relaxed, perspiration be too much excited, and the important organs of digestion and respiration now called into play, be deprived of a due supply of nourishing blood, and be consequently so far enfeebled as to afford insufficient support to the whole body.

The insensible perspiration is composed of a large quantity of water, which passes off in the form of vapour and is not seen, and of various salts and animal matter, a portion of which remains adherent to the skin, and, if not removed, would soon tend to block up its pores and prevent future exhalation. The

removal of this residue, by cleanliness and washing, consequently becomes an indispensable condition of health, the observance of which prevents the appearance of cutaneous and other more serious diseases that follow its neglect. Not only, therefore, is daily washing of the body required in infancy when the skin is so full of life, but a frequent change of clothing is essential, and every thing in the shape of dress ought to be loose and easy, both to allow of free circulation through the vessels, and to permit the insensible perspiration to have a free exit, instead of being confined to and absorbed by the clothes, and held in contact with the skin till it gives rise to irritation.

Influence of Dress on the Skin.—As life advances, the respiratory and digestive functions become more developed, and play a more conspicuous part in the support of the animal system. In youth, the skin is still delicate in texture and the seat of extensive exhalation and acute sensation, but it is at the same time more vigorous in constitution than it was in infancy; and the several animal functions being now more equally balanced, it is less susceptible of disorder from external causes, and can endure with impunity changes of temperature, which, either earlier or later in life, would have proved highly injurious. The activity and restless energy of youth keep up a free and equal circulation even to the remotest parts of the body, and this free circulation in its turn maintains an equality of temperature in them all. Cold bathing and lighter clothing may now be resorted to with a rational prospect of advantage; but when, from a weak constitution or unusual susceptibility, the skin is not endowed with sufficient vitality to originate the necessary reaction, which alone renders these safe and proper,—when they produce an abiding sense of chilliness, however slight,—we may rest assured that mischief will inevitably follow at a greater or shorter distance of time. Many young persons of both sexes are in the habit of going about in winter and in cold weather with a dress light and airy enough for a northern summer, and they think it manly and becoming to do so; but those who are not very strongly constituted suffer a severe penalty for their folly. The necessary effect of deficient circulation and vitality in the skin is to throw a disproportionate mass of blood upwards, and when this condition exists, insufficient clothing perpetuates the evil, until internal disease is generated, and health irrecoverably lost. Insufficient clothing not only exposes the wearer to all the risk of sudden changes of temperature, but it is still more dangerous (because in a degree less marked, and therefore less apt to excite attention till the evil be incurred), in that form which, while it is warm enough to guard the body against extreme cold, is inadequate to preserving the skin at its natural heat. Many youths, particularly females and those whose occupations are se-

dentary, pass days, and weeks, and months, without ever experiencing the pleasing glow and warmth of a healthy skin, and are habitually complaining of chilliness of the surface, cold feet, and other symptoms of deficient cutaneous circulation. Their suffering, unfortunately, does not stop here, for the unequal distribution of the blood oppresses the internal organs, and too often, by insensible degrees, lays the foundation of tubercles in the lungs, and other maladies, which show themselves only when arrived at an incurable stage. Young persons of a consumptive habit will generally be found to complain of this increased sensibility to cold, even before they become subject to those slight catarrhal attacks which are so often the immediate precursors, or rather the first stages, of pulmonary consumption. All who value health, and have common sense and resolution, will therefore take warning from signs like these, and never rest till equilibrium of action be restored. For this purpose, warm clothing, exercise in the open air, sponging with vinegar and water, the warm bath, regular friction with a flesh brush or hair glove, and great cleanliness, are excellent means.

But while sufficiency of clothing is attended to, excessive wrapping up must be as carefully avoided. Warmth ought not to be sought for in clothing alone. The Creator has made exercise essential as a means; and if we neglect this, and seek it in clothing alone, it is at the risk or rather certainty of weakening the body, relaxing the surface, and rendering the system extremely susceptible of injury from the slightest accidental exposures, or variations of temperature and moisture. Many good constitutions are thus ruined, and many nervous and pulmonary complaints brought on, to embitter existence, and to reduce the sufferer to the level of a hot-house plant.

Female dress errs in another important particular, even when well suited in material and in quantity. From the tightness with which it is made to fit on the upper part of the body, not only is the insensible perspiration injudiciously and hurtfully confined, but that free play between the dress and the skin, which is so beneficial in gently stimulating the latter by friction on every movement of the body, is altogether prevented, and the action of the cutaneous nerves and vessels, and consequently the heat generated, rendered lower in degree, than would result from the same dress worn more loosely. Every part and every function are thus linked so closely with the rest, that we can neither act wrong as regards one organ without all suffering, nor act right without all sharing in the benefit.

Effects of Cold Feet and Damp.—We can now appreciate the manner in which wet and cold feet are so prolific of internal disease, and the cruelty of fitting up schools and similar places without making adequate provision for the welfare of their young

occupants. The circumstances in which wet and cold feet are most apt to cause disease, are where the person remains inactive, and where, consequently, there is nothing to counterbalance the unequal flow of blood which then takes place from the feet and surface towards the internal parts: For it is well known that a person in ordinary health may walk about or work in the open air with wet feet for hours together without injury, provided he put on dry stockings and shoes immediately on coming home. It is therefore not the mere state of wetness that causes the evil, but the check to perspiration and the unequal distribution of blood to which the accompanying coldness gives rise. Wet and damp are more unwholesome to the feet than to other parts, chiefly because they receive a larger supply of blood to carry on a higher degree of perspiration, and because their distance from the heart or centre of circulation diminishes the force with which this is carried on, and thus leaves them more susceptible of injury from external causes. They are also more exposed in situation than other parts of the skin; but cold or wet applied any where, as to the side, for instance, either by a current of air or by rain, is well known to be pernicious.

Use of Flannel.—The advantages of wearing flannel next the skin are easily explicable on the above principles. Being a bad conductor of heat, flannel prevents that of the animal economy from being quickly dissipated, and protects the body in a considerable degree from the injurious influence of sudden external changes. From its presenting a rough and uneven though soft surface to the skin, every movement of the body in labour or in exercise, causes, by the consequent friction, a gentle stimulus to the cutaneous vessels and nerves, which assists their action and maintains their functions in health; and being at the same time of a loose and porous texture, flannel is capable of absorbing the cutaneous exhalations to a larger extent than any other material in common use. In some very delicate constitutions, it proves even too irritating to the skin, but, in such cases, fine fleecy hosiery will in general be easily borne, and will greatly conduce to the preservation of health. Many are in the custom of waiting till winter has fairly set in before beginning to wear flannel. This is a great error in a variable climate like ours, especially when the constitution is not robust. It is during the sudden changes from heat to cold, which are so common in autumn, before the frame has got inured to the reduction of temperature, that protection is most wanted, and flannel is most useful.

Ventilation.—The exhalation from the skin being so constant and extensive, its bad effects, when confined, suggest another rule of conduct, viz. that of frequently changing and airing the clothing, so as to free it from every impurity. It is an excellent

plan, for instance, to wear two sets of flannels, each being worn and aired by turns, on alternate days. The effect is at first scarcely perceptible to the senses, but in the course of time its advantages and comfort become very manifest, as the writer of this has amply experienced. For the same reason, a practice common in Italy merits universal adoption. Instead of making up beds in the morning the moment they are vacated, and while still saturated with the nocturnal exhalations which, before morning, become sensible even to smell in a bed-room, the bed-clothes are thrown over the backs of chairs, the mattresses shaken up, and the window thrown open for the greater part of the day, so as to secure a thorough and cleansing ventilation. This practice so consonant to reason, imparts a freshness which is peculiarly grateful and conducive to sleep, and its real value may be inferred from the well-known fact, that the opposite practice carried to extremes, as in the dwellings of the poor, where three or four beds are often huddled up in all their impurities in a small room, is a fruitful source of fever and bad health, even where ventilation during the day and nourishment are not deficient. In the abodes of the poor Irish residing in Edinburgh, we have seen bedding for fourteen persons spread over one floor not exceeding twelve feet square, and when morning came, the beds were huddled above one another to make sitting room during the day, and at night were again laid down, charged with accumulated exhalations. If fever were not to appear in such circumstances, it would be indeed marvellous; and we ought to learn from this, that if the extreme be so injurious, the lesser degree implied in the prevalent practice cannot be wholesome, and ought, therefore, not to be retained when it can be so easily done away with.

Ablution and Bathing.—Another condition of health in the skin is frequent ablution. The liquid portion of the perspiration, being in the form of vapour, easily passes off with ordinary attention to change of clothing and cleanliness; but its saline and animal elements are in a great measure left behind, and, if not removed by washing or friction, they at last both interrupt perspiration, and irritate the skin. Those who are in the habit of using the flesh-brush daily, are at first surprised at the quantity of white dry scurf which it brings off; and those who take a warm bath for half an hour at long intervals, cannot fail to have noticed the great amount of impurities which it removed, and the feeling of grateful comfort which its use imparts. The warm tepid cold or shower bath, as a means of preserving health, ought to be in as familiar use as a change of apparel, for it is equally a measure of necessary cleanliness. Many, no doubt, neglect this, and enjoy health notwithstanding, but many, very many, suffer from its omission; and even the former would be

benefited by it in point of feeling. The perception of this truth is gradually extending, and warm baths are now to be found in fifty places for one in which they could have been obtained twenty years ago. Still, however, we are far behind our continental neighbours in this respect. They justly consider the bath as a necessary of life, while we still regard it as a luxury.

Many entertain a prejudice against the use of the tepid or warm bath, from an apprehension of catching cold after it. This fear is groundless, if ordinary precautions be used; and extensive experience warrants this assertion. Like other good things, it may be abused, or taken at improper times; but, when used judiciously, it will often remove incipient colds, and in severe cases, after the feverish state begins to yield, the bath promotes recovery very much, by equalizing the circulation, and relieving the internal organs, as well as by restoring perspiration. We, therefore, hope to see it speedily rank as an indispensable part of every family establishment.

If the bath cannot be had at all places, soap and water may be obtained every where, and leave no apology for neglect; or, if the constitution be delicate, water and vinegar, or water and salt, used daily, form an excellent and safe means of cleansing and gently stimulating the skin to vigorous and healthy action; and to the invalid, they are highly-beneficial, when the nature of the indisposition does not render them improper. A rough, rather coarse, towel is a very useful auxiliary to such ablutions. Few of those who have steadiness enough to keep up the action of the skin by the above means, will ever suffer from colds, sore throats, or such like complaints; while, as a means of restoring health, they are often incalculably serviceable. If one-tenth of the persevering attention and labour bestowed to so much purpose in rubbing down and currying the skins of horses, were bestowed by the human race in keeping themselves in good condition, and a little attention were paid to diet and clothing, colds, nervous diseases, and stomach complaints, would cease to form so large an item in the catalogue of human miseries. But man studies the nature of other animals, and adapts his conduct to their constitution. Himself alone he continues ignorant of, and neglects. He considers himself a rational and immortal being, and therefore not subject to the laws of organization which regulate the functions of the inferior animals; but this conclusion is the result of ignorance and pride, and not a just inference from the premises on which it is pretended to be founded.

The writer of these remarks has, unfortunately for himself, had extensive experience, in his own person, of the connexion between the state of the skin and the health of the lungs; and can, therefore, speak with some confidence as to the accuracy of his observations, and the benefit to be derived from attending

to the condition of the skin in chronic pulmonary complaints. Many affections of a consumptive character are preceded or begun by a deficiency of vital action in the skin and extremities, and a consequent feeling of coldness in the feet and on the surface, and susceptibility of catarrhal affections from apparently inadequate causes, often long before any pressing symptom, directly connected with the lungs, occurs to attract notice. In this state, means systematically directed to restoring the cutaneous circulation will frequently be successful in warding off consumption; and even when the disease is formed, the same means will help to prolong life and relieve suffering, while they will go far to effect a cure in those chronic affections of the bronchial membrane, which simulate, and are sometimes undistinguishable from, consumption, and which, when mismanaged, are equally fatal.

The two remedies which have the oldest and most general reputation in the successful treatment of pulmonary and consumptive disease, have this quality in common, that both owe much of their influence to their exciting the cutaneous functions, and equalizing the circulation. We allude to sailing, and riding on horseback. Many authors speak of both in the highest terms, and Sydenham is well known to have considered the latter as almost a specific. Dr Rush, of Philadelphia, too, extols it with nearly equal force. So far as my observation goes, these exercises are productive of advantage, chiefly in proportion as they determine the blood to the surface, which squeamishness, sea-sickness, and riding all do in a powerful manner. Riding seems to have this effect, partly from the bodily exercise giving general vigour to the circulation, and partly from the continued gentle friction between the skin and the clothing, stimulating the cutaneous vessels and nerves. Those, accordingly, who are proof against sea-sickness, derive least benefit from a voyage; while those who suffer under it long, are compensated by the amelioration which it induces in the more serious malady. The writer of these remarks became ill in the month of January 1820, and soon presented many of the symptoms of pulmonary consumption, and, in spite of the best advice, continued losing ground till the month of July, when he went by sea to London, on his way to the south of France; but finding himself unable for the journey, was obliged to return from London also by sea. Being extremely liable to sea-sickness, he was squeamish or sick the whole way on both voyages, so much so, as to be in a state of gentle perspiration during a great part of the time. After this he became sensible for the first time of a slight improvement in his health and strength, and of a diminution of febrile excitement. Some weeks after, he embarked for the Mediterranean, and encountered a succession of storms for the first four weeks,

two of which were spent in the Bay of Biscay in a very heavy sea. For more than three weeks he was generally very sick, and always in a state of nausea; and during the whole time, notwithstanding his bed was repeatedly partially wetted by salt water, and the weather cold, the derivation to the skin was so powerful as to keep it constantly warm, always moist, and often wet with perspiration, forced out by retching and nausea. The result was, that, on entering the Mediterranean at the end of a month, and there meeting fine weather, he found himself still more reduced in flesh, and very weak, but in every other respect decidedly improved; and on arriving in Italy at the end of seven weeks, recovery fairly commenced, after about ten months' illness, and by great care it went on with little interruption, till the summer of 1821, when he returned home.

To carry on what was so well begun, riding on horseback in the country was resorted to, and that exercise was found to excite the skin so beneficially, as to keep it always pleasantly warm, and generally bedewed with moisture, even to the extremities of the toes; and in proportion to this effect, was the advantage derived from it, in relieving the chest, increasing the strength, and improving the appetite. A second winter was spent in the south with equal benefit; and in the summer of 1822, riding was resumed at home; and the health continued to improve. The excitement given to the skin by riding was sufficient to keep the feet warm, and to prevent even considerable changes of temperature from being felt; and rain was not more regarded, although special attention was of course paid to taking off damp or wet clothes the moment the ride was at an end. Strength increased so much under this plan, combined with sponging, friction, and other means, that it was persevered in through the very severe winter of 1822-3, and with the best effects. For nine years thereafter the health continued good, under the usual exposures of professional life; but in 1831 it again gave way, and pulmonary symptoms of a suspicious character once more made their appearance. The same system was pursued, and the same results have again followed the invigoration of the cutaneous functions, by a sea-voyage and by horseback exercise, both of which, as formerly, have proved beneficial in proportion to their influence in keeping up the warmth and moisture of the surface and extremities.

In thus insisting upon the advantages of maintaining the healthy action of the skin, we must not be supposed to ascribe the whole benefit to that circumstance alone, for so beautifully is the animal economy constituted, that it is impossible to use rational means for the invigoration of one organ or function, without good being done to all; and so closely are the various parts allied to each other, that, to describe fully the functions and sym-

existence, between which and the brain there is, in many important respects, an intimate community of interest. MAN, in short, is our object; and man, being a compound being, must be studied in his compound nature, otherwise our knowledge will remain too partial and incomplete ever to afford a solid basis for directing his progress, and adding to his happiness; and with this conviction before us, it would be a display of folly, for which few would thank us, were we to withhold from our pages important practical truths, bearing strongly, though indirectly, upon our subject, merely because they are not commonly included under the *title* of our science.

ARTICLE II.

THOUGHTS ON SECONDARY PUNISHMENTS, IN A LETTER TO EARL GREY. By RICHARD WHATELY, D. D., Archbishop of Dublin. With an Appendix. 8vo. pp. 204. London 1832.

OUR readers are already acquainted with our high estimate of the talents of Archbishop Whately. In his Lectures on Political Economy, noticed in Volume VII. p. 321 of this Journal, we discovered a profound, clear, and comprehensive intellect, combined with moral sentiments of the highest order. They give to his writings a force and energy of reasoning, a warmth of benevolent purpose, and a bold unhesitating reliance on the power of truth to vindicate itself and lead to good, which render them at once instructive and delightful. We are well pleased to meet him again in a very interesting field of inquiry, that of criminal legislation, and shall briefly notice the views which he brings to light.

Reports were made from select committees of the House of Commons on criminal commitments and convictions, and on secondary punishments, in 1828, 1831, and 1832. From these and the minutes of evidence and documents on which they are founded, and from certain works * lately published on the subjects of transportation and the punishment of death, a clear and instructive view is presented in the volume before us, of the condition of convicts in the hulks, in New South Wales, and in the penitentiaries of England,—and of the effects of these as punishments; and suggestions are offered for an improvement of secondary punishments. The appendices consist of articles

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first published in the London Review and Law Magazine, part only of which are written by Archbishop Whately. In the following pages we shall select information from the whole of these series indiscriminately, and present it in as condensed a form as possible.

“ I found myself,” says the Archbishop, “ long since, as a parish minister, inculcating moral conduct under circumstances unfairly disadvantageous ; when the law afforded not only no adequate discouragement to crime, but even, in many instances, a bounty on it. When I met with instances in my own immediate neighbourhood, on the one hand, of persons of the best character not only refusing to proceed against depredators, but labouring in every way to promote the escape of the guilty, because the law denounced death against the offences, and they could not bring themselves to incur even the remote and almost imaginary risk of exposing a thief to that fate ;—and, on the other hand, of persons receiving letters from relatives who had been transported, exhorting them to find *some means* of coming out to join them, and depicting the prosperity of their condition in such terms, as naturally to excite the envy of the honest and industrious labourers whom they had left at home, struggling for a poor subsistence :—when all this, I say, came under my own observation, I could not feel and teach that government answered its end of being ‘ for the punishment of evil-doers, and for the praise of them that do well,’ while its enactments produced, on the contrary, rather a terror to the good than to the evil. And I could not but feel that, not only as a member of the community, but as a minister of the Gospel, I had a right to complain of this counteraction of my endeavours to diffuse morality.” He therefore conceives himself justified, nay, called on, to endeavour to diffuse correct views of the subject. It appears to us that a clergyman can never be better employed than in investigating points of practical morality which involve the welfare of society.

Crime continues to increase in this country with alarming rapidity, even after allowing for the increase of population and the greater efficacy with which offences are now detected and punished.

In England and Wales the following were the numbers of persons charged with crime :

				Committed.	Convicted.
In 7 years, ending 1817 inclusive,				56,000	35,000
Do. do. 1824	do.			93,000	62,000
Do. do. 1831	do.			122,000	85,000

For 10 criminals at the first period there were 17 at the second, and 24 at the third ; and crime has thus more than doubled in 14 years ! The report of the Committee observes,

existence, between which and the brain there is, in many important respects, an intimate community of interest. MAN, in short, is our object; and man, being a compound being, must be studied in his compound nature, otherwise our knowledge will remain too partial and incomplete ever to afford a solid basis for directing his progress, and adding to his happiness; and with this conviction before us, it would be a display of folly, for which few would thank us, were we to withhold from our pages important practical truths, bearing strongly, though indirectly, upon our subject, merely because they are not commonly included under the *title* of our science.

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In England and Wales the following were the numbers of persons charged with crime:

				Committed.	Convicted.
In 7 years, ending 1817 inclusive,				56,000	35,000
Do. do. 1824	do.			93,000	62,000
Do. do. 1831	do.			122,000	85,000

For 10 criminals at the first period there were 17 at the second, and 24 at the third; and crime has thus more than doubled in 14 years! The report of the Committee observes,

that there was nothing in the political or commercial state of the country to account for such a change.

Within the last two years 172,000 persons, exclusive of debtors, have passed through the prisons of England and Wales! "It is almost impossible, it is said, for any but the most degraded criminal to be confined, even for a short period, within the walls of any prison as at present regulated, without injury to his morals; the most virtuously constituted mind would find it difficult to escape contamination; but where moral and religious principles are but feebly implanted, their total overthrow may be expected."

"In England a prisoner is frequently confined before trial for a longer period than that to which he is sentenced after conviction!" and should he be acquitted no reparation is or can be made to him for the restraint and degradation to which he is subjected. In London the period of confinement before trial cannot exceed six weeks; in the Home Circuit it may amount to five months; and in other parts of the country it may extend to seven or eight months!

The absurd practice of retaining capital punishments on the statute book, which the feelings of society prevent being put in force, is strongly illustrated.

The persons sentenced to death in England and Wales were,

	Persons sentenced to death in England and Wales.	Executed.	Sentenced to death but not executed.
In 1829, . . .	1385,	74	1311
1830, . . .	1397,	46	1351

There is great mockery of reason and trifling with human feeling in such a system of punishment. No procedure can be more mischievous than passing sentence of death where there is no intention of carrying it into effect.

"In all cases where death is not inflicted in consequence of the sentence of a court of justice, the punishment is either—
1. Transportation to the colonies for life, or for a term of years;
2. Imprisonment, with or without hard labour; or, 3. Fine."
The two great punishments, therefore, are *transportation* and *imprisonment*. It appears, that for 200 sent to the Penitentiary, 1000 are sent to the Hulks, and 4000 to the Colonies.

An original or commuted sentence of transportation, either for life or a term of years, may mean any one of three things: viz. transportation to the colonies, imprisonment in the hulks, or imprisonment in the penitentiary.

In reference to the Penitentiary at Millbank, the Committee state that—

"As a place of punishment, it possesses one great advantage over any other of this country, in being generally dreaded for the strictness of the discipline, and irksomeness of the con-

finement. There was, however, till very lately, much to be desired in the way of improvement. It was the rule of the establishment to divide the prisoners into two classes; on their entrance into the prison, they were confined in the first class; after remaining in which, from eighteen months to two years, they were removed to the second. During the first period, separation was always strictly enforced (except when the prisoners were at work in the crank-mills and water-machine for a short time each day); and it appears that, generally speaking, a decided improvement in their deportment and conduct took place. But, on being removed to the second class, and being allowed to associate with their fellow-prisoners during the day, the consequences, as described by the governor and chaplain, were such as might have been expected; any progress towards reformation, effected by the discipline of the first class, being frequently followed by a relapse when removed to the second. Your committee, however, are given to understand, that new regulations have lately been adopted, that there is no longer a distinction between the classes, and that it is intended to subject the convicts in future to the discipline of the first class during the whole period of their sentence, from which it is expected that hopes of permanent amendment may be entertained, and that a shorter period of punishment will be found sufficient.

“ The committee express ‘ their unqualified disapprobation of the whole system pursued on board the Hulks,’ and adduce considerable evidence in support of this conclusion. With respect to the labour on board the hulks, the committee state that—

“ ‘ During the day, the convicts are employed in the arsenals and dock-yards, but there is nothing in the nature or severity of their employment which deserves the name of punishment or hard labour. They are supposed to work from eight to ten hours per day, according to the season; but so much time is lost in the repeated musters which it is necessary to make, when going to, or returning from labour, that the number of hours’ work actually performed does not exceed eight and three quarters in summer, and six and a half in winter. As a common labourer usually works ten hours per day, and when at task-work, or during harvest-time, much longer, the committee fully agree with the opinion expressed, that the convicts do no more work than is sufficient to keep them in health and exercise; and ‘ that the situation of a convict cannot be considered penal; that it is a state of restriction, but hardly of punishment.’ Indeed, three out of four convicts examined by your committee, admitted that the labour is not more than sufficient to keep them regularly employed, and less severe than the daily occupation of a labourer.

“ ‘ This short sketch of the manner in which a criminal sentenced to transportation for crimes to which the law affixes

the penalty of death, passes his time, which portrays him well-fed, well-clothed, indulging in riotous enjoyment by night, with moderate labour by day, will prepare the house for readily believing that confinement on board the hulks fails to excite a proper feeling of terror in the minds of those who are likely to come under its operation. The minutes of evidence furnish ample testimony, that the hulks are not dreaded; 'that the life in them is considered a pretty jolly life;' and that if a criminal can conquer the sense of shame, which such degradation is calculated to excite, he is in a better situation than a large portion of the working-classes, who have nothing but their daily labour to depend on for subsistence. Indeed, so far is this punishment from operating as a preventive to crime, that your committee have evidence, that the situation of a convict has been regarded with envy by the free-labourers who see him at his daily work; and in the words of Mr Lang, the master ship-right of Woolwich dockyard, under whose superintendence all the convicts in that yard are placed, 'many labourers would be glad to change places with him, and would be much better off than they were before.'

TRANSPORTATION is thus described:—

"When it is finally determined that a criminal is to be transported to New South Wales, he is moved in a caravan, under a proper guard, to the coast, in order to be embarked in a convict ship. This necessity of moving prisoners to long distances from the place of their confinement is, of itself, an evil and an expense, and, in times of disturbance, might become a matter of serious difficulty. However, among the evils of the entire system, this holds a very subordinate place. From the evidence of Dr Rutherford, who has sailed seven times to New South Wales as surgeon of convict ships, it appears that about 200 convicts go out together; that mutinies are not frequent; that the convicts enjoy generally good health, are well fed, are not ironed, do little work, have free intercourse with each other, and (as may easily be expected) their conduct is reckless and careless; they amuse themselves with the stories of their past life, and glory in the remembrance of their misdeeds: the natural consequence of which is, that any stray remnants of virtue and good feeling which some of the crew may possess at starting, are effectually eradicated before the ship reaches its destination. When so large a body of criminals are crowded indiscriminately into so small a space for so many months, without being forced to work, and having no diversion except conversation with each other, a much less proportion of depraved and reprobate persons than is commonly to be found in such a number of convicts, would be sufficient to leaven the whole mass with one uniform taint of depravity.

“When the convicts arrive at New South Wales, the term of their regular punishment commences, and they are severally disposed of in different manners, according as they belong to one of the classes of, 1. gentlemen convicts; 2. mechanics; 3. common male convicts; and 4. women. Now the punishment which all convicts suffer in New South Wales for crimes committed in the United Kingdom, may be described in a word, as *domestic slavery*. They are placed in precisely the same situation as the working classes in the ancient states, and in the West Indies; that is, they have not their personal liberty, and they are maintained by those who profit by their labour, to which they are forced by the dread of punishment, not induced by the prospect of reward.”

“The *convict women* are allotted to private individuals as domestic servants; and with them there is no difficulty, as on account of the great disproportion between the sexes, caused by the unnatural manner in which the society has been formed, females are at a great premium in New South Wales. But the class of *gentlemen convicts* (as they are called), *i. e.* persons who, in England belonged to the upper or middle ranks, being devoid of mechanical skill, and unfit for common agricultural labour, occasion a greater perplexity. At one time, a penal settlement named Wellington Valley was made in the interior, at a distance of about 250 miles from the coast, where the gentlemen convicts were employed in light agricultural work, such as tending sheep, and were thus removed from the society and luxuries of the towns. This measure being the means of inflicting a much severer punishment than that usually endured by the upper class of convicts, had the effect of spreading great alarm among criminals of the same rank in London, who were lying in prison under sentence of transportation, and we may reasonably suppose, among other persons meditating crimes which would entail the same consequences. The establishment at Wellington Valley, however, having proved expensive, was discontinued, and gentlemen convicts have now returned to their former state of comfort and enjoyment; that is to say, they are employed as clerks in the government offices, or given as tutors to private families; their whole time, except when occupied with business, being at their own disposal. Of those who are employed as tutors, Mr Busby, who held an official situation at New South Wales, states, that ‘as far as regards the necessaries and many of the comforts of life they are exceedingly well off.’

“The other two classes of convicts do not create any difficulty in a colony where manual is more valuable than intellectual labour. The *mechanics* are usually taken by the government to be employed in public works, and are distributed in Sydney and the other towns. Most convict mechanics are, at first

landing, induced to conceal their skill, either by a belief that if they are taken into the service of government they will not so soon get their ticket of leave (*i. e.* a pardon conditional on their good conduct), or by a hope that they may be assigned as common labourers to a person who will share with them the profits of their mechanical skill. So great is the demand for skilled labour in New South Wales, that mechanics in the employ of government frequently neglect their regular work, that they may be able to labour on their own account after the government hours; by obtaining permission to sleep out of barracks as a reward for good conduct; and the wages which they thus procure enable them again to bribe the overseers for fresh indulgences. Mr Busby states that 'he had heard of a case, of the truth of which he had no doubt, of a mechanic in the service of the government at Sydney, who contrived to work for an individual as many hours during one week as entitled him to the wages of eight days' labour,' by which means (as the same person adds) the convict-mechanic is able to procure a reward for his labour and the means of indulgence to a greater extent than the most industrious mechanic in England can procure: (Rep. p. 126.) The other convicts, not skilled in mechanical arts, are allotted to persons living in the country, by whom they are lodged, fed, and clothed, and for whom they work as slaves: being, as has been already remarked, in precisely the same situation as the gangs of slaves on the estates of an ancient Roman landlord, or a modern West Indian sugar planter; except that their treatment is milder, and their condition altogether more agreeable,—partly from their former position as freemen, and partly from the difficulty of inflicting punishment, and the distance of magistrates, whose sanction is necessary for this purpose.

“Now with regard to this class of convicts who form the great mass of the criminal population of New South Wales, there is a very important regulation which is not, as we believe, sufficiently known in this country, even to those who are familiar with the administration of criminal law; we mean the practice of granting *tickets of leave*, *i. e.* a conditional suspension of slavery, by which a convict is permitted to work for his own profit, provided he lives within a certain prescribed district, and commits no fresh crime.

“A convict for seven years is allowed the privilege of a ticket of leave at the end of four years' service; a convict for fourteen years, after six years'; and a convict for life after eight years' service; provided they have continued during these respective periods in the service of one master. But it is in general taken for granted, that if a change of masters has occurred, the convict has not exerted himself to give satisfaction, and the

period of probation, before he can obtain a ticket of leave, is lengthened accordingly.' Busby, Report, p. 126.

"Hence it appears that the sentence of a common prisoner to transportation for life in fact amounts to no more than this: if he conducts himself with sufficient propriety to avoid the commission of fresh crime, he becomes an agricultural labourer for eight years, during which time he is guaranteed against all contingencies, and is fed, lodged and clothed by his master: and after the expiration of this term he is allowed to work on his own account within a certain district, where labour commands high wages, and common industry ensures to every one a tolerable livelihood. This is the worst lot that can befall a convict who is not guilty of fresh misconduct in his place of punishment, as it is called."

If we desired to exhibit an example of the dreadful consequences which may be produced by a legislature utterly regardless of the mental constitution of criminals, and of all the laws, organic, moral, and intellectual, to which their nature has been subjected by the Creator, we could not desire one more forcible than that which is presented to us by the penal colony of New South Wales. We have already stated that crime continues to increase in this country in the face of our penal system. The effects on the criminals themselves and on the new colony remain to be noticed.

The convicts are almost never reformed.

"'Whatever the cause,' says Mr Wakefield, 'the fact is certain, that a thief is hardly ever—I am tempted to say never—reformed.'—*On the Punishment of Death*, 75.

"Mr Chesterton, the governor of the House of Correction at Coldbath-fields, likewise expresses his conviction that the London thieves are irreclaimable from their vicious habits; and he even thinks that no punishment which can be devised will deter them from the commission of crime: (Ev. 513, 517.)

"Nor is it less painful to know that those whose sentences have expired, or to whom pardons have been granted, seldom or never incline to reform, even when they have acquired property. Intoxication and fraud are habitual to them, and hardly six persons can be named throughout the colony, who, being educated men, and having been transported for felonies, have afterwards become sober, moral, and industrious members of the community.

"The existing vice and evils (says Major M'Arthur) are now frightful in a moral, but they will soon become alarming and dangerous in a political, point of view. The towns are filled with the most useless and depraved men. Instead of adopting the habits of others, they communicate their own.

With numbers they have acquired confidence; and already give a tone and character to the society."

"From documents which have been laid before Parliament, it appears that of 4876 convicts, whose sentences had been remitted, or whose time had expired, 296 only were considered as of reputable character; while in Van Diemen's Land the moral condition of the convicts appears to be far lower than even in New South Wales."

The effects on the colony remain to be noticed. Lord Bacon long ago remarked, that "it is a *shameful* and *unblessed thing* to take the scum of the people, and *wicked condemned men* to be the people with whom you plant." If our legislators had believed in the law of hereditary descent of mental qualities, in other words, of particular forms and proportions of brain, they would have seen that in this remark Lord Bacon was stating not a mere opinion, but a great natural truth, which could not be contemned in practice, without great evils resulting from its neglect. The following remarks are highly instructive:—

"If it were proposed to select all the worst characters from the thickly peopled gaols of a large nation, to send them in transports by hundreds to a distant quarter of the globe, enjoying unrestrained intercourse and entire idleness during a voyage of several months; on their arrival to distribute them for a few years as bond-slaves to various task-masters throughout the towns and country, under an imperfect system of inspection, and with different degrees of liberty and comfort, their number to be perpetually increased by fresh supplies of convicts from the mother country, so as to enable them soon to form the most numerous order in the new colony, and to establish a public opinion and a separate interest of their own: could even the most sanguine person expect that a society so formed would, according to the ordinary course of nature, exhibit any other spectacle than that of the most frightful licentiousness and immorality? If these transported criminals are so depraved, that separately they are dangerous to a large state, how will a small state resist them when they are collected together? If the matured strength of the mother country cannot endure the evil, how is it to be borne by the feeble infancy of the colony? Why should we expect that the dwarf will bear up against a weight which the shoulders of the giant are declared to be incapable of supporting? Indeed, when it is considered of what elements the population of New South Wales is composed, the wonder is, not that all the accounts should represent its moral state as being at the lowest ebb, but that it should have been possible to maintain a system of regular government and administration of justice in a society formed of persons who have

lived by the habitual infraction of law. Certainly New South Wales, as far as we are aware, is the only instance of a *commonwealth of thieves* recorded in history.

“ The testimony of the different witnesses, particularly of the Rev. Mr Scott and Major M'Arthur, is very strong and explicit on this point; but although it is a subject which does not admit of precise definition, some notion of the moral condition of this convict colony may be derived from the following statements.

“ The population of New South Wales in 1828 was 36,598, omitting the runaway convicts, who are criminals that set the law at defiance, and live by outrage and depredation. In the year 1830, 134 persons were capitally convicted, and 49 were executed (11 for murders) in that colony. (Rep. p. 139, 141.) In the year 1830, 1397 persons were capitally sentenced, and 46 executed in England and Wales. Taking the population of New South Wales at 40,000, and of England and Wales at 13,000,000 in 1830, the executions would be one to every 280,000 persons in the mother country, and one to every 900 in the colony. In the year in question, notwithstanding the immense difference in the population, the whole number of executions in New South Wales exceeded the whole number of executions in England and Wales.

“ ‘ Crime is of constant occurrence; and so completely organized, that cattle are carried off from the settlers in large numbers, and slaughtered for the supply of the traders at Sydney, who contract with the commissariat. It is not, therefore, the vicious habits alone of the towns which are to be dreaded, but the effects that are communicated and felt throughout the country. The agricultural labourer is encouraged to plunder his master, by finding a ready sale for the property he steals; and whenever his occupations call him to the towns, he sees and yields himself to the vicious habits around him. He returns intoxicated and unsettled to his employer's farm, and excites his comrades to the same sensual indulgences, with equal disregard of the risk and of the consequences. To these causes the present vicious and disorganized state of the convicts in New South Wales is chiefly attributable; and the extent of the evil may be, in some degree, estimated, when it is stated that the expense of the police establishment amounts to more than L. 20,000 per annum.’ (Rep. p. 142.)

“ These general statements are confirmed by the other witnesses, who add some particulars to complete this melancholy picture of crime and immorality, created in the wilderness by an act of Parliament. When the convicts are assigned to settlers in the country, each person is furnished with a full allowance of clothes, blankets, &c.; but these are almost always stolen

from them, or sold by them before they reach their destination. (Ev. 827.) When the new-comer arrives among his brother convicts, he takes a fresh lesson of roguery ; for (as Mr Walker says, Q. 918) ‘ the colony has a *curious effect* upon the most practised thieves in this country ; one of the most experienced thieves in London has something to learn when he comes out here ; probably he would be robbed the first night he came into his hut.’ ”

The picture is completed by the following description :

“ One of the results, not, we apprehend, originally contemplated, is, that these ‘ wicked condemned men,’ have planted for themselves several volunteer-colonies ; escaping in small craft, either to the South Sea Islands, (in many of which, for a good while past, each native chief has for a prime minister some choice graduate of the university of Newgate), or more frequently, to some part of the coast of New Holland, or some of the small islands at a little distance from the main, particularly one called Kangaroo Island ; where they settle, and subsist chiefly on wild animals ; especially seals, whose skins and oil form a profitable article of traffic with the small traders from the mother-colony. Several more of these lawless settlements are supposed to exist besides those generally known ; as it is clearly the interest of the above mentioned traders, when they discover such a one, to keep the knowledge to themselves, for the sake of monopolizing the commerce. A most profitable trade they of course find it ; as their customers are not only willing to pay an enormous price in oil for the luxuries of rum and tobacco, but, when once intoxicated, are easily stripped of all. Another article, it seems, has been found more profitable in this trade than even rum, viz. *women* ; who, if kidnapped at Botany Bay, and carried off to one of these settlements, will sell for a whole ocean of seal oil ! This infernal traffic was betrayed by the wreck of a vessel, from which, in consequence, two women, who had been thus carried off from Sydney, made their escape, and it is to be hoped put others on their guard against the detestable fate designed for them. These volunteer settlers, however, it seems, resort to another expedient to supply themselves with wives ; viz. seizing on the native black women, after, we presume, knocking on the head the males of the tribe.

“ So that we may hope, in time, to have the coast of New South Wales, surrounded by a *fringe*, as it were, of colonies of half-castes, consisting of a mixture of the blood of the most debased of savages, with that of the more refined and intelligent scoundrels of civilized society ; and exhibiting we may anticipate, a curious specimen of the worst possible form of human nature.”

Here, then, we have a view of the nature of the secondary

punishments of Britain; of their effects on the community at large in deterring from crime; and on the colony of New South Wales; and a more lamentable picture of failure and mischievous consequences probably was never exhibited to human contemplation. In our next publication we shall advert to the remedies suggested in the work before us; and, as they are devised by an author of the highest talents and attainments, who, however, writes without taking any assistance from Phrenology, we shall contrast them with the views thrown out by Dr Caldwell, whose admirable remarks are professedly founded on this science, and are already in the hands of our readers in Nos. 31 and 32 of this Journal, vol. vii. p. 386 and p. 493.

ARTICLE III.

THE CYCLOPEDIA OF PRACTICAL MEDICINE. Part VI.
 Article, PHYSICAL EDUCATION, by Dr BARLOW, Physician to the
 Bath United Hospital and Infirmary. London, June 1832.

DR BARLOW sets out with shewing the necessity of including a system of physical as well as moral and intellectual training under the term *education*, a principle which the phrenologists have long and earnestly advocated, and which is, in fact, of fundamental importance, since the mind and body are so intimately connected, that even moral and intellectual cultivation can be successfully prosecuted only when conducted in accordance with the organic laws which regulate the bodily functions.

“However difficult it may be,” says Dr Barlow, “to correct the manifold errors by which, in early life, health and happiness are sacrificed, it must at least be right to point out to those who wish to learn, what are the principles by which the first of earthly blessings, a sound mind in a sound body, can be best ensured. With bodily health,” he continues, “mental is here associated, for the connexion is intimate; if the body languishes, the mental powers, which act only through bodily organization, must fall short of that energy and activity of which they would otherwise be capable; while the irritability of mind to which weakness and ill health are prone, is sure to act unfavourably on all the moral feelings.” The peevishness of ill health is unfortunately too common and well known to be doubted, and it serves to demonstrate, were farther proof required, that even as concerns the moral improvement of man, we must build on sand, if we neglect the physical constitution in our attempts at education.

Various as are the constitutions of men, and differing as these

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ARTICLE IV.

AN ADDRESS TO THE PUBLIC ; particularly to the MEMBERS of the LEGISLATURE of NEW YORK, proposing a Plan for Female Education. By EMMA WILLARD.

Mrs EMMA WILLARD is one of the most remarkable women of the present day ; remarkable for vigour of thought and action, practical sense, extensive knowledge, and literary talent. In 1819, she wrote the address mentioned in the title, which is so excellent that we shall present the greater part of it to our readers. Mrs Willard is now principal of the Troy Female Seminary, in which nearly two hundred young ladies are educated, and thirteen teachers are employed. She not only manages the whole establishment, and takes a share in the duty of teaching, but has written a number of valuable practical works for the instruction of youth. Her institution is a nursery from which are drawn teachers for female schools all over the United States. The largest of her works is " A History of the United States, or Republic of America ; exhibited in connexion with its Chronology and Progressive Geography, by means of a Series of Maps : the first of which shews the country as inhabited by various tribes of Indians at the time of its discovery, and the remainder, its state at subsequent epochs ; so arranged as to associate the principal events of the history and their dates with the places in which they occurred ; arranged on the plan of teaching history adopted in Troy Female Seminary. Designed for schools and private libraries." It has reached a third edition.

In conjunction with Mr Woodbridge, she has produced a System of Universal Geography, combining the greatest extent of useful information that we have ever seen comprised within the same space in a geographical work. A large space is devoted to physical geography, which is illustrated by numerous wood-cuts. Civil geography, or the geography of states and nations, is next treated of ; then follows statistical geography ; and the whole concludes with a comprehensive summary of ancient geography and mythology. This work has arrived at a fourth edition. Her sister, Mrs Almira H. Lincoln, formerly vice-principal of the same seminary, has published " Familiar Lectures on Botany," a work which is now in the second edition. Mrs Willard has also published poems, which have been favourably received ; and she has at present additional works in the press. In the course of last year, she visited Paris, London, and Edinburgh, and carried to America with her the most accomplished young ladies she could engage as teachers.

as long), that was not more or less CROOKED! Our patient was in this predicament; and we could perceive (what all may perceive who meet that most melancholy of all processions—a boarding-school of young ladies in their walk) that *all* her companions were pallid, sallow, and listless. We can assert, on the same authority of personal observation, and on an extensive scale, that *scarcely a single girl (more especially of the middle classes) that has been at a boarding-school for two or three years, returns home with unimpaired health*; and for the truth of the assertion, we may appeal to every candid *father*, whose daughters have been placed in this situation. Happily, a portion of the ill health produced at school is in many cases only temporary, and vanishes after the return from it. In the schools in which the vacations are frequent or long, much mischief is often warded off by the periodical returns to the ordinary habits of healthful life; and some happy constitutions, unquestionably, bid defiance to all the systematic efforts made to undermine them. No further proof is needed of the enormous evil produced by the present system of school-discipline, than the fact, well known to all medical men, that the greater proportion of women in the middle and upper ranks of life do not enjoy even a *moderate* share of health; and persons, not of the medical profession, may have sufficient evidence of the truth, by comparing the relative powers of the young men and young women of any family in taking bodily exercise, more particularly in walking. The difference is altogether inexplicable on the ground of sex alone.”

We agree with Dr Barlow in thinking that popular ignorance and prejudice are among the chief bars to the removal of the monstrous evils here described. “By the foregoing statements,” says he, “we do not mean to cast the slightest reflection on those by whom these seminaries are superintended. We have ever found them most solicitous for the health of their pupils, sedulous to preserve it, and, when disease arose, unremitting in devoted attentions. But the system is faulty; and for this they are not accountable. By the influences and prejudices which uphold that system, they, like others, are chained; and until the system itself yield to increasing knowledge, juster views of the animal economy, a more correct conception of mental energies, and of the injuries which their over-excitement occasions both to themselves and to the bodily frame, and a firm resolution not to barter health for vain accomplishments;—in other words, until both mental and physical education undergo considerable reformation, and be founded on more rational principles, the evils must exist to an extent which no superintendent of a seminary can control. We are sorry to be compelled by truth to add, that we have often found the same pernicious regimen car-

ried to as great a height, although on a smaller scale, in private families, under the eye of a fashionable governess, and a fond but injudicious mother."

Our extracts from this excellent article shall be concluded with a paragraph on female clothing, a subject most deserving of attention:—"The clothing of young females is far from what reason would sanction. It is oftentimes deficient in the necessary warmth, the materials being too slight to yield protection against the vicissitudes of a variable climate, and too much of the person being wholly exposed. Errors of this kind, however, are much more common, and carried to much greater lengths, at the period when *education*, in its usual sense, may be said to be completed; that is, when the young lady passes from the restraints of the school-room to the dissipations of fashionable life. As, however, this change usually takes place before the body has attained its full vigour, the following remarks on the dress and conduct of females, on first leaving school, belong properly to our subject. If the errors of dress are less signal in the attire worn by day, they reach their acme when the evening rout or midnight ball is to be attended. At these seasons the tightly laced stays, exposed chest, and thin draperies, furnish a combination of influences, the continued effects of which no constitution could withstand; while to these is yet to be added that of respiring for hours a heated and vitiated atmosphere, and after this, of passing, when relaxed and exhausted, into the cold currents of a frosty night air. So far from wondering that many suffer from these egregious imprudences, our surprise should be that any escape; and instead of the inherent delicacy so often imputed to the constitution of females as explanatory of their peculiar ailments, we have ample proof, in their powers of resisting such noxious influences, that they possess conservative energies not inferior to those of the most robust male. Were men to be so laced, so imperfectly exercised, so inadequately clothed, so suffocated, so exposed, their superiority of bodily vigour would soon cease to have any existence*.

"Defect of clothing, though most signal in the chest and shoulders, is not confined to the upper part of the body. The feet require warmth, which subservience to fashion prevents. They cannot be compressed, but at the cost of much suffering, some distortion, and the infliction of positive disease. Fashion also permits the legs to be covered with only the thinnest materials. Thus the capillary circulation of the feet, rendered sufficiently languid by the general weakness, becomes farther im-

* Dr Paris has aptly bestowed on the ball-room the denomination of "Death's antechamber."—*Ed. P. J.*

peded by the pressure of tight shoes, and the debilitating effects of cold. The crippled state, too, thus occasioned, is a further obstacle to efficient exercise, and so adds to the general debility."

We have frequently affirmed that Phrenology was quietly but surely making its way among medical men, and that another generation will see a wonderful change in public opinion in regard to its merits: Dr Barlow's article is another confirmation of our statement. It is phrenological throughout, and when he comes to treat of mental activity as connected with physical education, he expressly avows himself a phrenologist, and upholds the importance of the new philosophy. For some years past, Dr Barlow has been an active disciple, and it is gratifying to find him turning his talents to the cultivation of a field so rich in promise as that under consideration. In treating of the influence which the exercise of the mental powers has on the bodily health, he thus publishes his creed. "In the following remarks on this subject, we shall draw freely from an admirable paper published (by Dr A. Combe) in the sixth volume of the *Phrenological Journal*, entitled 'On Mental Exercise as a Means of Health;' the principles inculcated are of the highest importance, and though emanating in this instance from phrenological views, they have also so sure a basis in established physiology, that they may be beneficially applied even by those who still close their eyes to the truths of a science in which the writer of this article has no hesitation to avow his firm belief; and which, justly estimated, has more power of contributing to the welfare and happiness of mankind, than any other with which we are acquainted." P. 699. Copious extracts follow, but as the essay itself is to be found in our sixth volume, we need not repeat them here. The *Cyclopædia of Practical Medicine*, in which Dr Barlow writes, is a dictionary of medical science now in course of publication in London under the direction of Drs Forbes, Tweedie, and Conolly; and as it is ably conducted, and its circulation is understood to be extensive and chiefly among the younger of our established professional men, we have no doubt that Dr Barlow's labours will not be without effect in turning the attention of some of them to a more accurate examination of the science of Phrenology.

ARTICLE IV.

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Perhaps the most singular and characteristic feature of her system of instruction is, that the philosophy of the mind forms an important branch of the course. One of the classes of young ladies recently studied Dugald Stewart's Philosophy, including his volume on the active and moral powers; and at the end of twenty weeks, they passed a public examination on the subject. We believe that Mrs Willard's seminary is the only one in the world, in which the Philosophy of Dugald Stewart is taught as a branch of education. Her pupils must have severely felt the barrenness of the soil in which they were digging for instruction; but the fact of Mrs Willard teaching the philosophy of mind at all to young ladies, speaks highly in favour of the enlightenment of her understanding; and the disappointment which must have been experienced, is the fault of the system, and not of the teacher or the pupils. She has the merit, also, of having selected the best philosophy known to her. We recommend to her to teach Phrenology, and the natural laws of the human constitution, as expounded in the writings of the phrenologists, and we venture to predict much more satisfactory results. She is qualified to do this. She possesses strength and depth of understanding sufficient to comprehend and appreciate Phrenology, and force of character adequate to its adoption. She will earn an additional title to be recorded as the great benefactress of her country, when she shall have introduced the rising generation of females of America to a knowledge of this system. The following observations shew a mind admirably prepared to embrace and successfully apply the true philosophy of man.

“ The object of this Address, is to convince the public, that a reform, with respect to female education, is necessary; that it cannot be effected by individual exertion, but that it requires the aid of the legislature: and further, by shewing the justice, the policy, and the magnanimity of such an undertaking, to persuade that body, to endow a seminary for females, as the commencement of such reformation.

“ The idea of a college for males, will naturally be associated with that of a seminary instituted and endowed by the public; and the absurdity of sending ladies to college, may, at first thought, strike every one, to whom this subject shall be proposed. I therefore hasten to observe, that the seminary here recommended, will be as different from those appropriated to the other sex, as the female character and duties are from the male.—The business of the husbandman is not to waste his endeavours, in seeking to make his orchard attain the strength and majesty of his forest, but to rear each to the perfection of its nature.”

“ In the arrangement of my remarks, I shall pursue the following order.

“ I. Treat of the defects of the present mode of female education, and their causes. II. Consider the principles, by which education should be regulated. III. Sketch a plan of a female seminary. IV. Shew the benefits which society would receive from such seminaries.”

“ *Defects in the Present Mode of Female Education, and their Causes.*

“ Feminine delicacy requires that girls should be educated chiefly by their own sex. This is apparent from considerations that regard their health and conveniences, the propriety of their dress and manners, and their domestic accomplishments.

“ Boarding schools, therefore, whatever may be their defects, furnish the best mode of education provided for females.

“ Concerning these schools it may be observed :

“ They are temporary institutions, formed by individuals, whose object is present emolument. But they cannot be expected to be greatly lucrative ; therefore, the individuals who establish them, cannot afford to provide suitable accommodations, as to room. At night, the pupils are frequently crowded in their lodging rooms ; and during the day they are generally placed together in one apartment, where there is a heterogeneous mixture of different kinds of business, accompanied with so much noise and confusion, as greatly to impede their progress in study.”

“ It is for the interest of instructresses of boarding schools to teach their pupils showy accomplishments, rather than those which are solid and useful. Their object in teaching is generally present profit. In order to realize this, they must contrive to give immediate celebrity to their schools. If they attend chiefly to the cultivation of the mind, their work may not be manifest at the first glance ; but let the pupil return home, laden with fashionable toys, and her young companions, filled with envy and astonishment, are never satisfied till they are permitted to share the precious instruction. It is true, with the turn of the fashion, the toys, which they are taught to make, will become obsolete, and no benefit remain to them, of perhaps the only money that will ever be expended on their education ; but the object of the instructress may be accomplished notwithstanding, if that is directed to her own, rather than her pupil's advantage.

“ As these schools are private establishments, their preceptresses are not accountable to any particular persons. Any woman has a right to open a school in any place ; and no one, either from law or custom, can prevent her. Hence the public

are liable to be imposed upon, both with respect to the character and acquirements of preceptresses."

"Those women, however, who deceive society as to the advantages which they give their pupils, are not charged with any ill intention. They teach as they were taught, and believe that the public are benefited by their labours. Acquiring, in their youth, a high value for their own superficial accomplishments, they regard all others as supernumerary, if not unbecoming. Although these considerations exculpate individuals, yet they do not diminish the injury which society receives; for they show, that the worst which is to be expected from such instruction, is, not that the pupils will remain ignorant; but that, by adopting the views of their teachers, they will have their minds barred against future improvement, by acquiring a disrelish, if not a contempt, for useful knowledge."

"They can, at their option, omit their own duties, and excuse their pupils from theirs. They can make absurd and ridiculous regulations. They can make improper and even wicked exactions of their pupils."

"Of the Principles by which Education should be regulated.

"Education should seek to bring its subjects to the perfection of their moral, intellectual and physical nature, in order, that they may be of the greatest possible use to themselves and others: or, to use a different expression, that they may be the means of the greatest possible happiness of which they are capable, both as to what they enjoy, and what they communicate.

"Those youth have the surest chance of enjoying and communicating happiness, who are best qualified, both by internal dispositions, and external habits, to perform with readiness, those duties, which their future life will most probably give them occasion to practise.

"Studies and employments should, therefore, be selected, from one or both of the following considerations; either, because they are peculiarly fitted to improve the faculties; or, because they are such as the pupil will most probably have occasion to practise in future life.

"These are the principles on which systems of male education are founded; but female education has not yet been systematized. Chance and confusion reign here. Not even is youth considered in our sex, as in the other, a season, which should be wholly devoted to improvement. Among families, so rich as to be entirely above labour, the daughters are hurried through the routine of boarding-school instruction, and at an early period introduced into the gay world; and thenceforth, their only object is amusement.—Mark the different treatment,

which the sons of these families receive. While their sisters are gliding through the mazes of the midnight dance, they employ the lamp, to treasure up for future use the riches of ancient wisdom ; or to gather strength and expansion of mind, in exploring the wonderful paths of philosophy. When the youth of the two sexes has been spent so differently, is it strange, or is nature in fault, if more mature age has brought such a difference of character, that our sex have been considered by the other, as the pampered, wayward babies of society, who must have some rattle put into our hands, to keep us from doing mischief to ourselves or others * ?

“ Another difference in the treatment of the sexes is made in our country, which, though not equally pernicious to society, is more pathetically unjust to our sex. How often have we seen a student, who, returning from his literary pursuits, finds a sister, who was his equal in acquirements, while their advantages were equal, of whom he is now ashamed ? While his youth was devoted to study, and he was furnished with the means, she, without any object of improvement, drudged at home, to assist in the support of the father's family, and perhaps to contribute to her brother's subsistence abroad ; and now, a being of a lower order, the rustic innocent wonders and weeps at his neglect.

“ Not only has there been a want of system concerning female education, but much of what has been done, has proceeded upon mistaken principles.

“ One of these is, that, without a regard to the different periods of life, proportionate to their importance, the education of females has been too exclusively directed, to fit them for displaying to advantage the charms of youth and beauty. Though it may be proper to adorn this period of life, yet it is incomparably more important to prepare for the serious duties of maturer years. Though well to decorate the blossom, it is far better to prepare for the harvest. In the vegetable creation, nature seems but to sport, when she embellishes the flower ; while all her serious cares are directed to perfect the fruit.

“ Another error is, that it has been made the first object in educating our sex, to prepare them to please the other. But reason and religion teach, that we too are primary existencies ; that it is for us to move, in the orbit of our duty, around the Holy Centre of perfection, the companions, not the satellites of men ; else, instead of shedding around us an influence, that may help to keep them in their proper course, we must accompany them in their wildest deviations.

* Several noted writers have recommended certain accomplishments to our sex, to keep us from scandal and other vices ; or, to use Mr. Addison's expression, “ to keep us out of harm's way.”

“ I would not be understood to insinuate, that we are not, in particular situations, to yield obedience to the other sex. Submission and obedience belong to every being in the universe, except the great Master of the whole. Nor is it a degrading peculiarity to our sex, to be under human authority. Whenever one class of human beings derive from another the benefits of support and protection, they must pay its equivalent, obedience. Thus, while we receive these benefits from our parents, we are all, without distinction of sex, under their authority: when we receive them from the government of our country, we must obey our rulers; and when our sex take the obligations of marriage, and receive protection and support from the other, it is reasonable that we, too, should yield obedience. Yet is neither the child, nor the subject, nor the wife, under human authority, but in subservience to the divine. Our highest responsibility is to God, and our highest interest is to please him; therefore, to secure this interest, should our education be directed.

“ Neither would I be understood to mean that our sex should not seek to make themselves agreeable to the other. The error complained of, is, that the taste of men, whatever it might happen to be, has been made a standard for the formation of the female character. In whatever we do, it is of the utmost importance, that the rule by which we work be perfect. For if otherwise, what is it but to err upon principle? A system of education, which leads one class of human beings to consider the approbation of another as their highest object, teaches that the rule of their conduct should be the will of beings, imperfect and erring like themselves, rather than the will of God, which is the only standard of perfection.

“ Having now considered female education, both in theory and practice, and seen, that in its present state, it is in fact a thing ‘ without form and void,’ the mind is naturally led to inquire after a remedy for the evils it has been contemplating.”

“ *Sketch of a Female Seminary.*

“ From considering the deficiencies in boarding schools, much may be learned with regard to what would be needed, for the prosperity and usefulness of a public seminary for females.

“ I. There would be needed a building, with commodious rooms for lodging and recitation, apartments for the reception of apparatus, and for the accommodation of the domestic department.

“ II. A library, containing books on the various subjects in which the pupils were to receive instruction; musical instruments; some good paintings, to form the taste, and serve as models for the execution of those who were to be instructed in

that art; maps, globes, and a small collection of philosophical apparatus.

“ III. A judicious board of trust, competent and desirous to promote its interests, would in a female, as in a male literary institution, be the corner stone of its prosperity. On this board it would depend to provide,

“ IV. Suitable instruction. This article may be subdivided under four heads. 1. Religious and Moral. 2. Literary. 3. Domestic. 4. Ornamental.

“ 1. *Religious and Moral.*—A regular attention to religious duties would of course be required of the pupils by the laws of the institution. The trustees would be careful to appoint no instructors, who would not teach religion and morality, both by their example, and by leading the minds of the pupils to perceive that these constitute the true end of all education. It would be desirable, that the young ladies should spend a part of their Sabbaths in hearing discourses relative to the peculiar duties of their sex. The evidences of Christianity, and moral philosophy, would constitute a part of their studies.

“ 2. *Literary Instruction.*—To make an exact enumeration of the branches of literature which might be taught, would be impossible, unless the time of the pupils' continuance at the seminary, and the requisites for entrance, were previously fixed. Such an enumeration would be tedious, nor do I conceive that it would be at all promotive of my object. The difficulty complained of, is not that we are at a loss what sciences we ought to learn, but that we have proper advantages to learn any. Many writers have given us excellent advice with regard to what we should be taught, but no legislature has provided us the means of instruction. Not, however, to pass lightly over this fundamental part of education, I will mention one or two of the less obvious branches of science, which I conceive should engage the youthful attention of my sex.

“ It is highly important, that females should be conversant with those studies, which will lead them to understand the operations of the human mind. The chief use to which the philosophy of the mind can be applied, is to regulate education by its rules. The ductile mind of the child is intrusted to the mother: and she ought to have every possible assistance, in acquiring a knowledge of this noble material, on which it is her business to operate, that she may best understand how to mould it to its most excellent form.

“ Natural philosophy has not often been taught to our sex. Yet, why should we be kept in ignorance of the great machinery of nature, and left to the vulgar notion, that nothing is curious but what deviates from her common course? If mothers

were acquainted with this science, they would communicate very many of its principles to their children in early youth. From the bursting of an egg buried in the fire, I have heard an intelligent mother lead her prattling inquirer to understand the cause of the earthquake. But how often does the mother, from ignorance on this subject, give her child the most erroneous and contracted views of the causes of natural phenomena; views which, though he may afterwards learn to be false, are yet, from the laws of association, ever ready to return, unless the active powers of the mind are continually upon the alert to keep them out. A knowledge of natural philosophy is calculated to heighten the moral taste, by bringing to view the majesty and beauty of order and design; and to enliven piety, by enabling the mind more clearly to perceive, throughout the manifold works of God, that wisdom in which he hath made them all.

“ In some of the sciences proper for our sex, the books written for the other would need alteration; because in some they presuppose more knowledge than female pupils would possess; in others, they have parts not particularly interesting to our sex, and omit subjects immediately relating to their pursuits. There would likewise be needed, for a female seminary, some works, which I believe are no where extant, such as a systematic treatise on housewifery.

“ 3. *Domestic Instruction* should be considered important in a female seminary. It is the duty of our sex to regulate the internal concerns of every family; and unless they be properly qualified to discharge this duty, whatever may be their literary or ornamental attainments, they cannot be expected to make either good wives, good mothers, or good mistresses of families; and if they are none of these, they must be bad members of society; for it is by promoting or destroying the comfort and prosperity of their own families, that females serve or injure the community. To superintend the domestic department, there should be a respectable lady, experienced in the best methods of housewifery, and acquainted with propriety of dress and manners. Under her tuition the pupils ought to be placed for a certain length of time every morning. A spirit of neatness and order should here be treated as a virtue, and the contrary, if excessive and incorrigible, be punished with expulsion. There might be a gradation of employment in the domestic department, according to the length of time the pupils had remained at the institution. The older scholars might then assist the superintendant in instructing the younger; and the whole be so arranged, that each pupil might have advantages to become a good domestic manager, by the time she has completed her studies.

“ This plan would afford a healthy exercise. It would pre-

vent that estrangement from domestic duties, which would be likely to take place in a length of time devoted to study, with those to whom they were previously familiar ; and would accustom those to them, who, from ignorance, might otherwise put at hazard their own happiness, and the prosperity of their families.

“ These objects might doubtless be effected by a scheme of domestic instruction ; and probably others of no inconsiderable importance. It is believed, that housewifery might be greatly improved, by being taught, not only in practice, but in theory. Why may it not be reduced to a system, as well as other arts ? There are right ways of performing its various operations ; and there are reasons why those ways are right ; and why may not rules be formed, their reasons collected, and the whole be digested into a system, to guide the learner's practice ?

“ It is obvious, that theory alone can never make a good artist ; and it is equally obvious, that practice unaided by theory can never correct errors, but must establish them. If I should perform any thing in a wrong manner all my life, and teach my children to perform it in the same manner, still, through my life and theirs, it would be wrong. Without alteration there can be no improvement ; but how are we to alter, so as to improve, if we are ignorant of the principles of our art, with which we should compare our practice, and by which we should regulate it ?

“ In the present state of things, it is not to be expected, that any material improvements in housewifery should be made. There being no uniformity of method prevailing among different housewives, of course the communications from one to another are not much more likely to improve the art than a communication between two mechanics of different trades would be to improve each in his respective occupation. But should a system of principles be philosophically arranged, and taught, both in theory and by practice, to a large number of females, whose minds were expanded and strengthened by a course of literary instruction, those among them, of an investigating turn, would, when they commenced housekeepers, consider their domestic operations as a series of experiments, which either proved or refuted the system previously taught. They would then converse together like those who practise a common art, and improve each other by their observations and experiments ; and they would also be capable of improving the system, by detecting its errors, and by making additions of new principles and better modes of practice.

“ 4. *The Ornamental* branches which I should recommend for a female seminary, are drawing and painting, elegant penmanship, music, and the grace of motion. Needle-work is not here mentioned. The best style of useful needle-work should either be taught in the domestic department, or made a qualification for

nothing to promote their country's
children, they revel in its prosperity, and
with a wanton profusion: and still worse
is their business,—within her temple
of God and man, they have erected
her altar, they sacrifice, with shame
to virtue or religion. Not the stron-
est maternal love—can restrain them!
The mother, while yet yearning
for it from the bosom which God has
given for its support, and casts it remorseless
to unhallowed devotion!

With an anguished heart, I thus depict to
the other stand by and smile. Re-
flect, are guiltier than we. You are our
brothers,—our fathers, and our rulers
of feeble minds, readily take the impres-
sions, then, have you neglected our edu-
cation, with lethargic indifference or
the formation of our characters, is
called?"

to which these remarks have condu-
ced by the plan of female educa-
tion may teach, or preserve, among
that purity of manners, which is allor-
dained for national prosperity, and so necessary
to a republican government.

By having their understandings cultiv-
ated, developed and strengthened, may be
the dictates of reason, and less from

as thus strengthened, they would
be enforced by the sanctions of reli-
gion, to acquire juster and more
and stronger and higher motives

female education offers all that can be
taught from a contempt of useful labor
to which she is accustomed to it, in conjunction
with the elegant pursuits of literature,
and the elegant pursuits of life, and
hoped that, both from habit and
life regard it as respectable.

It may be added, that if housewifery
is to be added, and taught upon philosophical
principles, and higher and more interesting occupa-

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entrance ; and I consider that useful, which may contribute to the decoration of a lady's person, or the convenience and neatness of her family. But the use of the needle, for other purposes than these, as it affords little to assist in the formation of the character, I should regard as a waste of time.

“ The grace of motion must be learnt chiefly from instruction in dancing. Other advantages besides that of a graceful carriage might be derived from such instruction, if the lessons were judiciously timed. Exercise is needful to the health, and recreation to the cheerfulness and contentment of youth. Female youth could not be allowed to range unrestrained, to seek amusement for themselves. If it was entirely prohibited, they would be driven to seek it by stealth ; which would lead them to many improprieties of conduct, and would have a pernicious effect upon their general character, by inducing a habit of treading forbidden paths. The alternative that remains, is to provide them with proper recreation, which, after the confinement of the day, they might enjoy under the eye of their instructors. Dancing is exactly suited to this purpose, as also to that of exercise ; for perhaps in no way can so much healthy exercise be taken in so short a time. It has, besides, this advantage over other amusements, that it affords nothing to excite the bad passions ; but, on the contrary, its effects are, to soften the mind, to banish its animosities, and to open it to social impressions.

“ It may be said, that dancing would dissipate the attention, and estrange it from study. Balls would doubtless have this effect ; but let dancing be practised every day, by youth of the same sex, without change of places, dress, or company, and under the eye of those whom they are accustomed to obey, and it would excite no more emotion than any other exercise or amusement, but in degree, as it is of itself more pleasant. But it must ever be a grateful exercise to youth, as it is one to which Nature herself prompts them at the sound of animating music.

“ It has been doubted whether painting and music should be taught to young ladies, because much time is requisite to bring them to any considerable degree of perfection, and they are not immediately useful. Though these objections have weight, yet they are founded on too limited a view of the objects of education. They leave out the important consideration of forming the character. I should not consider it an essential point, that the music of a lady's piano should rival that of her master's ; or that her drawing-room should be decorated with her own paintings, rather than those of others ; but it is the intrinsic advantage, which she might derive from the refinement of herself, that would induce me to recommend to her, an attention to these elegant pursuits. The harmony of sound has a tendency

to produce a correspondent harmony of soul ; and that art, which obliges us to study nature, in order to imitate her, often enkindles the latent spark of taste—of sensibility for her beauties, till it glows to adoration for their Author, and a refined love of all his works.

“ V. There would be needed, for a female, as well as for a male seminary, a system of laws and regulations, so arranged, that both the instructors and pupils would know their duty ; and thus the whole business move with regularity and uniformity.”

“ It now remains to inquire more particularly, what would be the benefits resulting from such a system.

“ *Benefits of Female Seminaries.*

“ In inquiring concerning the benefits of the plan proposed, I shall proceed upon the supposition, that female seminaries will be patronized throughout our country.

“ Nor is this altogether a visionary supposition. If one seminary should be well organized, its advantages would be found so great, that others would soon be instituted ; and, that sufficient patronage can be found to put one in operation, may be presumed from its reasonableness, and from the public opinion with regard to the present mode of female education. It is from an intimate acquaintance with those parts of our country, whose education is said to flourish most, that the writer has drawn her picture of the present state of female instruction ; and she knows that she is not alone in perceiving or deploring its faults. Her sentiments are shared by many an enlightened parent of a daughter who has received a boarding school education. Counting on the promise of her childhood, the father had anticipated her maturity, as combining what is excellent in mind with what is elegant in manners. He spared no expense that education might realize to him the image of his imagination. His daughter returned from her boarding school, improved in fashionable airs, and expert in manufacturing fashionable toys ; but in her conversation he sought in vain for that refined and fertile mind which he had fondly expected. Aware that his disappointment has its source in a defective education, he looks with anxiety on his daughters, whose minds, like lovely buds, are beginning to open. Where shall he find a genial soil, in which he may place them to expand ? Shall he provide them male instructors ?—then the graces of their persons and manners, and whatever forms the distinguishing charm of the feminine character, they cannot be expected to acquire. Shall he give them a private tutoress ?—she will have been educated at the boarding school, and his daughters will have the faults of its instruction second-handed. Such is now the dilemma of many parents ;

and it is one, from which they cannot be extricated by their individual exertions. May not, then, the only plan which promises to relieve them expect their vigorous support?

“ Let us now proceed to inquire what benefits would result from the establishment of female seminaries.

“ They would constitute a grade of public education, superior to any yet known in the history of our sex ; and, through them, the lower grades of female instruction might be controlled. The influence of public seminaries over these would operate in two ways ; first, by requiring certain qualifications for entrance ; and secondly, by furnishing instructresses, initiated in their modes of teaching, and imbued with their maxims.

“ Female seminaries might be expected to have important and happy effects on common schools in general ; and, in the manner of operating on these, would probably place the business of teaching children in hands now nearly useless to society ; and take it from those whose services the state wants in many other ways.

“ That nature designed for our sex the care of children, she has made manifest, by mental as well as physical indications. She has given us, in a greater degree than men, the gentle arts of insinuation, to soften their minds, and fit them to receive impressions ; a greater quickness of invention to vary modes of teaching to different dispositions ; and more patience to make repeated efforts. There are many females of ability, to whom the business of instructing children is highly acceptable, and who would devote all their faculties to their occupation. They would have no higher pecuniary object to engage their attention, and their reputation as instructors they would consider as important : whereas, whenever able and enterprising men engage in this business, they consider it merely as a temporary employment, to further some other object, to the attainment of which their best thoughts and calculations are all directed. If, then, women were properly fitted by instruction, they would be likely to teach children better than the other sex ; they could afford to do it cheaper ; and those men who would otherwise be engaged in this employment, might be at liberty to add to the wealth of the nation, by any of those thousand occupations from which women are necessarily debarred.”

“ Females have been exposed to the contagion of wealth without the preservative of a good education ; and they constitute that part of the body politic, least endowed by nature to resist, most to communicate it. Nay, not merely have they been left without the defence of a good education, but their corruption has been accelerated by a bad one. The character of women of rank and wealth has been, and in the old governments of Europe now is, all that this statement would lead us to expect. Not

content with doing nothing to promote their country's welfare, like pampered children, they revel in its prosperity, and scatter it to the winds, with a wanton profusion : and still worse,—they empoison its source, by diffusing a contempt for useful labour. To court pleasure is their business,—within her temple, in defiance of the laws of God and man, they have erected the idol fashion ; and upon her altar, they sacrifice, with shameless rites, whatever is sacred to virtue or religion. Not the strongest ties of nature—not even maternal love—can restrain them ! Like the worshipper of Moloch, the mother, while yet yearning over the new born babe, tears it from the bosom which God has swelled with nutrition for its support, and casts it remorseless from her, the victim of her unhallowed devotion !

“ But while, with an anguished heart, I thus depict the crimes of my sex, let not the other stand by and smile. Reason declares, that you are guiltier than we. You are our natural guardians,—our brothers,—our fathers, and our rulers. You know that our ductile minds, readily take the impressions of education. Why, then, have you neglected our education ? Why have you looked with lethargic indifference on circumstances ruinous to the formation of our characters, which you might have controlled ?”

“ The inquiry to which these remarks have conducted us is this—What is offered by the plan of female education, here proposed, which may teach, or preserve, among females of wealthy families, that purity of manners, which is allowed to be so essential to national prosperity, and so necessary to the existence of a republican government.

“ 1. Females by having their understandings cultivated, their reasoning powers developed and strengthened, may be expected to act more from the dictates of reason, and less from those of fashion and caprice.

“ 2. With minds thus strengthened, they would be taught systems of morality, enforced by the sanctions of religion ; and they might be expected to acquire juster and more enlarged views of their duty, and stronger and higher motives to its performance.

“ 3. This plan of education offers all that can be done to preserve female youth from a contempt of useful labour. The pupils would become accustomed to it, in conjunction with the high objects of literature, and the elegant pursuits of the fine arts ; and it is to be hoped that, both from habit and association, they might in future life regard it as respectable.

“ To this it may be added, that if housewifery could be raised to a regular art, and taught upon philosophical principles, it would become a higher and more interesting occupation ; and

ladies of fortune, like wealthy agriculturists, might find, that to regulate their business was an agreeable employment.

“ 4. The pupils might be expected to acquire a taste for moral and intellectual pleasures, which would buoy them above a passion for show and parade, and which would make them seek to gratify the natural love of superiority, by endeavouring to excel others in intrinsic merit, rather than in the extrinsic frivolities of dress, furniture, and equipage.

“ 5. By being enlightened in moral philosophy, and in that which teaches the operations of the mind, females would be enabled to perceive the nature and extent of that influence which they possess over their children, and the obligation which this lays them under, to watch the formation of their characters with unceasing vigilance, to become their instructors, to devise plans for their improvement, to weed out the vices from their minds, and to implant and foster the virtues. And, surely, there is that in the maternal bosom, which, when its pleadings shall be aided by education, will overcome the seductions of wealth and fashion, and will lead the mother to seek her happiness in communing with her children, and promoting their welfare, rather than in a heartless intercourse with the votaries of pleasure: especially, when, with an expanded mind, she extends her views to futurity, and sees her care to her offspring rewarded by peace of conscience, the blessings of her family, the prosperity of her country, and finally, with everlasting happiness to herself and them.”

ARTICLE V.

CASE IN WHICH CHARACTER WAS INFERRED FROM CEREBRAL DEVELOPMENT.

A CAST of the head of A. B. was sent to Mr Combe of Edinburgh, accompanied by the information that the individual was forty-one years of age when it was taken,—that he was educated,—and that his temperament was nervous-lymphatic. A sketch of the natural character was requested.

The development indicated by the cast was as follows:—

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|------------------------------------|--------------------------------------|
| 1. Amativeness, rather large. | 10. Self-esteem, large. |
| 2. Philoprogenitiveness, large. | 11. Love of approbation, large. |
| 3. Concentrativeness, very large. | 12. Cautiousness, full. |
| 4. Adhesiveness, rather large. | 13. Benevolence, very large. |
| 5. Combativeness, ditto. | 14. Veneration, large. |
| 6. Destructiveness, ditto. | 15. Firmness, full. |
| 7. Secretiveness, ditto. | 16. Conscientiousness, rather large. |
| 8. Acquisitiveness, full. | 17. Hope, large. |
| 9. Constructiveness, rather large. | 18. Wonder, moderate. |

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| <p>19. Ideality, rather full.
 20. Wit, moderate.
 21. Imitation, large.
 22. Individuality, rather large.
 23. Form, rather large.
 24. Size, full.
 25. Weight, rather full.
 26. Colouring, moderate.
 27. Locality, rather large.</p> | <p>28. Number, mod. or rather small.
 29. Order, moderate.
 30. Eventuality, full.
 31. Time, full.
 32. Tune, mod. or rather full.
 33. Language, large.
 34. Comparison, large.
 35. Causality, large.</p> |
|---|--|

Size of Anterior Lobe, large; portion of brain above Cautiousness, large; ditto above Causality, very large; Temperament, nervous-lymphatic.

Mr Simpson, without having learnt the gentleman's name, drew up from these materials, and the cast itself, the following observations.

“ Character of A. B., inferred from development.

“ The size of the head indicates more than average power of character, and the temperament considerable activity, with liability to intervals of indolence. The direction of the character, generally, is essentially moral and intellectual. The animal part is strong enough for a sufficient manifestation of all its purposes, and to give a basis of strength and energy; but it is under due control by the moral sentiments and intellectual powers. There is a due estimate of self in this individual, with perfect confidence in his own opinions and actions, and at the same time considerable interest in what is thought of him by others. Love of praise, and an impression that when bestowed it is due—with the elements of ambition—are inferred from the development.

“ The character is honourable and fair, and eminently kind and generous. Exertions, and even money, will not be spared to do good to others; and solicitation is with difficulty withstood. There are the elements of hospitality. The domestic feelings—of love, love of children, and attachment to friends, are all strong.

“ The intellect is much above average in the reflecting region. The reasoning powers are great, and the powers of concentrated continuous thinking remarkable, provided the subject of thought is agreeable; if the contrary, there will be a difficulty in persevering in it. This power of concentrative thinking adds much to the products of the reflecting intellect, both in quantity and quality. The capacity of acquiring knowledge by observation is considerable, though not equal to the reflecting power. The historical memory, or that which stores events or things that happen, is not so vivid and retentive. The power of putting the thoughts into words is great, and will give great command of language; and the talent of undisturbed steady thinking, even amidst distracting occurrences, should give power of extemporaneous reply in debate. The eloquence will be un-

adorned and argumentative, with more logic in it than either wit or imagery. If there is eloquence, it will be the eloquence of the sentiments of Justice, Mercy, Hope, and Veneration. That the faculties should have manifested themselves in public speaking, however, depends upon the profession and circumstances. The *power* exists, and that is all that Phrenology undertakes to point out.

“ There should be some talent for drawing, though little for colouring. Interest will be felt in landscape. The powers of arithmetic and music do not appear to be great. The manner will generally be sedate and rather mild, without much elegance; but there will be a sensible plainness, and what may be called on the whole a weight of character. Nevertheless, the animal part, or base of the brain, being considerable, the individual may be easily excited to its peculiar manifestations; so that, occasionally, he may exhibit some degree of *spirit*; but such feelings will be short-lived, as the sentiments and intellect must almost habitually predominate.”

These remarks were put into the hands of two intimate friends of the gentleman in question, who thus expressed their opinion regarding them:—

“ The paper headed ‘ Character of A. B., inferred from the development,’ and signed ‘ J. S.,’ with date ‘ Edinburgh, August 29. 1832,’ has filled me with agreeable surprise. I have been very sceptic on the subject of Phrenology. Though I never doubted the connection of the brain with the intellectual faculties and moral tendencies of each individual, yet I thought it impossible to trace the particular phenomena to their sources in that organ. In this state of doubt I continued till I read Mr Combe’s work *on Man*. The clear analysis of the mental powers which I found there (though I had missed it in the books of the metaphysicians), convinced me that the phrenologist did not build his system in the air. These were clear proofs to me that he followed some natural *index*, which not only directed his observation, but contained in itself a principle of order for the arrangement and classification of the results to which it led him.

“ The delineation of the character of A. B. has given me great confidence in the truth of my conclusion. A few features of the picture may be objected to by some friends of the individual. But this will probably originate in the imperfection of language when applied to distinguish moral shades of colouring. As to myself, I must declare that, in J. S.’s description, I behold a striking portrait of a man whom I have long observed in the freedom of intimate friendship. Had not the phrenologist been confident in the power of his natural *index*, he would have avoided detail. But he has entered boldly upon the most mi-

nute points ; such points as even a familiar friend would have overlooked or forgotten. The absence, therefore, of a single failure of consequence is to me a very remarkable and interesting fact.

C. D.

“ — *House, Sept. 10. 1832.*”

“ I should say, that the most remarkable feature of A. B.'s mind is the power of bringing all his faculties to bear on a given subject. Whatever he lays hold on he hunts down, if I may use the expression, and, like a good sporting dog, is led aside by no false scent ; it is evidently an annoyance to him to leave a subject until he has thus hunted it down.

“ I have been present during conversations, into which his companions have brought much acuteness and marks of general observation ; but I have been struck with this difference, that, while they seemed comparatively to hover about the subject under discussion, introducing much that was to the purpose with as much that was not, he, on the contrary, would follow it up, rejecting all extraneous matter, yet seizing with avidity whatever could be brought to bear on it, pouring in illustrations of every sort and kind with such aptitude that you might have supposed that he had looked at objects with a view only to this particular subject, if you had not found, on starting another, that a similar process was going on, and every object brought to bear on this also.

“ A. B. is very observant of nature, so that to the botanist he appears a botanist, to the zoologist a zoologist, &c. ; while, in fact, he is rather a philosopher. Every thing that he looks on, from the habits and instincts of the spider upwards, is immediately brought to bear on some given subject, to illustrate some general principle.

“ Nothing harasses him so much as diffusion of thought ; the having a quantity of business in petty detail to think on makes inroads on his constitution ; while the devoting his whole mind to any given subject, however great, is comparatively harmless, usually I think pleasurable, and never I believe painful.

“ On reading Mr Combe's remarks on Concentrativeness some time back, I remarked to him, ‘ If there be such an organ, and you have it not, there can be nothing in Phrenology.’ The character seems to me drawn with great accuracy in all, except one or two minor points ; though except through the organ of Comparison, I do not see an allusion to wit, for which the original is remarkable.

E. F.”

The following communication from A. B. himself accompanied the two foregoing sketches :

“ DEAR SIR,—As one is a bad judge of the likeness of his own portrait, I will enclose you some remarks, signed with ini-

tials, by persons who have been intimate with me for many years, stating their opinions as to the correctness of Mr Simpson's judgment. The only thing that strikes me as an error is in one point, where I have always understood the cranioscopist is the most uncertain, on account of the frontal sinus. There ought to be more bone than brain in my locality; for I have a great knack at losing my way; and my history is nearly blind of both eyes, chronology and geography."

A postscript is subjoined to the letter in these terms:

"As I am still dubious about this science, I will beg, in return for the light I have endeavoured to throw on the subject, that you will lend my cast to some other phrenologist, concealing not only the name, as before, but also your own note of development; for it has been suggested that, in your view of the cast, you might possibly be unconsciously biassed by your opinion of me, and Mr Simpson again biassed by your note*."

"It would be a satisfaction to have two independent and unassisted versions of the language which organology is said to speak."

In compliance with this request, the cast was sent to a third phrenologist, who received no information, except that the individual was educated, and rather above the middle period of life. The cast was speedily returned, accompanied by the following notes.

"This belongs to the better order of heads. The *man* decidedly predominates over the *animal*. A. B. must be capable of enlarged views, and generous and elevated sentiments, and I cannot think of him as indulging in any thing grovelling or base. A regard to self will not be awaiting, and he will be no stranger to motives of ambition; but he will not allow his own interests to interfere with the claims of friendship or of general philanthropy, and his highest ambition will be the fame of works of usefulness or excellence. His talents for mechanics are such, that, if circumstances are favourable to their development, he may rise to eminence in that department; though I am inclined to think that his tendencies will lead him more to moral and religious inquiries,—in which, if he is an author, he will express himself in a full and flowing style. If the subject of education is brought before his notice, it will excite a deep interest; and few things would afford him more delight than the sight of a well-conducted infant-school. The different organs are marked on a separate paper: None of them are likely to be inactive; and as their functions are mentioned in all elementary works on Phrenology, it is unnecessary to enter farther into par-

* It may be mentioned, that the cast, as well as the note of development, was sent to Mr Simpson, who confirmed the accuracy of the development, and was in no way biassed by the note of it sent him.

ticulars. I shall only add, therefore, that, in whatever sphere A. B. may move, his influence will be felt and acknowledged."

These notes were transmitted to the gentleman who forms the subject of them; and, in stating his ideas respecting them, he says:—

"I do not know that — —'s and Mr Simpson's accounts differ more than two descriptions of a man by his intimate friends often will; and I suppose phrenologists do not pretend, by the *mere* inspection of the head, to go *beyond* the knowledge which personal intimacy would give.

"What I was most struck with, was, in the one, my difficulty of withstanding solicitation; in the other, my delight in an infant-school. The former, though well-known to *myself*, was, I believe, never detected in my conduct.

"If the objects of science can be at all promoted by it, I have no objection to the publication of the characters given of me, and the testimonials of the correctness of Mr Simpson's, &c."

ARTICLE VI.

CASES ILLUSTRATIVE OF PHRENOLOGY. Communicated by
Dr OTTO of Copenhagen.

THE following criminal cases have been communicated to me by Mr Schiotz, sheriff of Mariager, a town in Jutland, who, since the publication of my book on Phrenology, has shown himself extremely active in the cause of the science. I will let him speak for himself.

CASE I.

"Christian R., a boy only twelve years old, was brought before me as judge. His organ of *Benevolence* was so small, that the cranium at that place formed a concavity so considerable, that it surprised every one who saw him, and bore the appearance of having been produced by external injury; yet, according to the relation of his parents, no such injury had ever been sustained. Destructiveness, on the other hand, was extremely great; it projected on both sides beyond the ears. The forehead was low.

"What did he do, that he so early came into the hands of justice? Malice, and propensity to spoil and destroy, were to be supposed. I was acquainted with the following circumstances. His parents are poor; he had a very bad education, and never was punished for his faults. His understanding was insufficient to render him capable of learning in the school. He was ar-

rested for setting fire to a house belonging to his father's neighbour, with whom he always had been on good terms. He tried to burn the house by a glowing coal, which he threw upon the roof; it fell several times again upon the ground, but he repeated the experiment until the coal remained, and the roof began to burn. At the sight of the fire, he ran to his mother and told her of it, but without naming himself as the perpetrator. To the question, why he had committed the crime? he answered, that *he did not know*. He has always been inclined to do mischief; has often spoiled the materials on the field; has broken the window-glasses in many houses, &c. &c.; at all times the property of people who never had offended him. His organization explains his behaviour perfectly.

CASE II.

“Of a prisoner, Jens L., the judicial transactions report:— ‘He has, from early youth, been accustomed, as soon as he had entered into service, to leave it after a couple of days, and either to return home, or to walk about in the country.’

“The court of justice in another town, W., testifies, ‘That it has always been the custom of the prisoner to be strolling about from village to village.’

“One of his masters tells, ‘That, after having been in his service a month, he went away, pretending to fetch his testimonials, but did not return.’

“Another says, ‘He cannot be trusted with any errand without the town, as he never returns.’

“A third reports, ‘The prisoner never remains quietly at his work: as soon as he has begun it, he leaves it.’

“His father remarks, ‘That he always changes places.’

“The certificate of the parson tells, ‘The prisoner has, during five years, changed service every six months.’

“He is now before the court of justice as a vagabond; and the organ of *Locality* is largely developed in his head: it is, indeed, the most conspicuous of all*.

CASE III.

“Niels Christensen B. is a natural child of a rambling woman, who got her livelihood by begging, and did not give him the least education; so that he was not confirmed before his 30th year, when he was arrested for his first theft. During his stay in the prison, he lent 246 dollars, which he had in his pocket, to another prisoner. How he had got them, was not ascertained.

* We think it exceedingly probable that Concentrativeness is deficient in this individual, and regret that Mr Schiøtz has not specified its development. E.D.

After having regained his liberty, he was soon again arrested for repeated theft. About 150 dollars were found on him, and afterwards, in the prison, other 650, which he had sewed into the neck of his shirt. Whether he had acquired all this money by stealing or begging, was not to be discovered. He asserted the last, but it appeared improbable; as he was besides suspected of more thefts. When this money was found with him, he had not got the 246 dollars which he had lent. He was imprisoned for five years, and, after the expiration of these, he presented himself before me with a letter from the lieutenant of the police in Copenhagen, in which were inclosed 199 dollars, which he had acquired in the prison by economy and extra-work. He told me that he would call on the man who had borrowed the 246 dollars from him. I assured him it would be of no use, as he was very poor; but he answered, he hoped yet to get something. He meant to court and marry a woman, who possessed some means.

"All these circumstances show, that the principal inclination of his mind was to acquire and accumulate money. That he did not care about the manner and means, must be ascribed to his total want of education*. I examined his head, and found the organ of *Acquisitiveness* extremely large. *Benevolence* was likewise large; and in the whole year he was under my jurisdiction, he manifested this feeling always in such a degree, that he was liked by every one, including myself.

"He left me, in order to call for the 246 dollars; but shortly afterwards I was informed that he again was arrested, and 534 dollars were then found with him, sewed into his stockings.

CASE IV.—*Illustration of the existence and the seat of the Organ of Form.*

"I happened to see that my son V., when two or three years old, whenever he took a book that lay turned upside down, always turned it right before he began to look into it. This excited my attention, and I afterwards made many experiments with him, which convinced me that the child, who, of course, did not know a single letter, had a clear perception whether or not the lines were placed in a proper relation to his eye. I gave him a book turned upside down, but he reversed it immediately. I then gave him it right, and he kept it so; or, if he sometimes turned it round, he discovered in the same minute that it was not right, and turned it again as it should be. I believed that the figures on the top of the pages fixed his attention, and gave him a song in which they were not numbered, but the case was

* Conscientiousness must have been moderate; for want of education alone will never produce dishonesty.—ED.

the same. I gave him verses and calendars, in order to see whether he might not be misled by the unequal irregular lines; but the boy stood the test. The same took place with Roman letters, and, what appears incredible, yet is literally true, with written papers, and even with notes. Two friends of mine have frequently attended these experiments, and may testify the truth of what I say.

“I did not know at that time the science of Phrenology, and consequently did not dream of any sense of form. It was not till I had made myself acquainted with Gall’s doctrine, through Dr Otto’s writings, that I observed my son’s eyes to be so much depressed at the internal angle, as almost to deform his face. I have since had many proofs that he has a very great sense for forms. He is now in his fifth year, and recognises people whom he has seen only once, and even when they are most differently dressed, so that I myself do not know them. He likewise draws everywhere on slates, glass-panes, &c., and this very symmetrically, for he never forgets, whenever he puts an ornament on one side of his figures (which for the most part are mathematical), to put a similar one on the other side.

“*Constructiveness* and *Imitation* are also very large in the head of the boy; and he has consequently talent to become a portrait-painter. His eyes are very prominent, and though he stammers, his tongue runs perpetually; and, by assisting me in the garden, he has learnt with facility many difficult Latin names of the flowers, only by hearing them from me. His organ of *Colour* is extremely small; and he has indeed no just idea of colours, and confounds their names, although always corrected. He lately called a green coat black.”

To the foregoing cases, reported by Mr Schiøtz, I shall add an extract of a letter which I received some time ago from Dr Manicus of Eckernforde, in Holstein, the author of several excellent articles in my Phrenological Journal. It contains an account of a singular instance of mental derangement.

“You will allow me to communicate to you a case, which in a very striking manner proves the truth of some of your opinions, and probably will become the subject of a dilemma *juridico-medicum*. Some declare the patient irresponsible, and have put him in the state of minority: others declare him to be responsible, and call the proceeding of the former cruel and despotic. As the patient is rich, every one takes an interest in this contest, and gives an opinion according to his psychological notions. The case is as follows: The patient, about forty years old, has from childhood displayed a singular obstinacy of disposition, and shewed so little regard to social manners and customs, that he was generally considered as an ‘odd fellow.’ He got early possession of a very large fortune, and was on that account able to

satisfy every foolish wish and every whim. In the mean time, his passions were excited by law-suits, the objects of which were of no greater value than a few dollars, but which nevertheless cost him five hundred, which he willingly paid. Nobody has ever perceived in him any sign of benevolence towards others, or any sense of that esteem we owe to the rest of mankind. He was also totally void of veneration towards the Deity. But, what appears still more remarkable, even the strongest propensities, such as that of self-preservation, that which leads to social intercourse, and all the moral feelings, are entirely subdued by his stubbornness. Amongst his fixed ideas, one predominates, viz. that every thing is impure; on which account he washes himself incessantly, and has thus contracted an affection of the chest, attended with hectic fever, which probably will kill him. About six months ago, this practice of washing was forbidden him, whereupon he resolved not to touch any thing with his hands,—a resolution which he has been firm enough to keep to this day. He will never eat any thing in a house where he expectorates, spits, or discharges the alvine or urinary excretions; and, as the state of his health has not allowed him to walk out, he cannot be persuaded to take any thing but fluids. His rooms must frequently be washed, and he threatens not even to drink, if this is not done,—a threat which he certainly will execute. Notwithstanding these hallucinations, his intellectual faculties are in the best order. He speaks sensibly about every object, and prosecutes with much sagacity and cunning the plans that tend to minister to his obstinacy. Finally, he has a depressed and passive appearance, and never offends any body by words or actions, being himself the only sufferer, whenever he meets with any obstacle to his whims. I should wonder if any of the old psychologists will be able to find a place for this mental disease in their systems.

“On his cranium I perceived at the first glance a prominence as large as a small hand in the region of the organ of Firmness; and before this, on the place where the organ of Veneration lies, a large depression. This depression extends itself over the organ of Hope, and indeed the man has never hoped any thing here or hereafter. The friendly conversations of the parson are, as soon as they assume a moral or religious character, immediately interrupted by him, with the remark, that it would be well to reserve such things for the pulpit.

“Is this mental disease not to be considered as a monomania in the organ of Firmness? And is not the patient to be looked upon and treated as irresponsible? At any rate, his insanity is only partial; his predominating stubbornness (firmness) subdues all his propensities and feelings.”

We are much indebted to Dr Otto for this communication, and hope to be favoured with another from him soon. He is Editor of the Danish Medical Journal, and in the winter of 1830-1 read to the Medico-Chirurgical Society of Copenhagen some remarks on mental derangement, founded entirely on phrenological principles, but without one of the technical names peculiar to the science. His paper was received with much approbation, which would certainly not have been the case, if he had made an express reference to Phrenology. How inconsistent is mankind!—ED.

ARTICLE VII.

SKULL OF A HOTTENTOT, AND CHARACTER INFERRED FROM IT.

A HOTTENTOT skull was lately sent by W. A. Davies, Esq. through Dr Mackintosh, to a phrenologist, Mr Combe, whose opinion of the mental qualities which it indicated was at the same time solicited. He accordingly drew up the following note of the development:—

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

Region of Animal Propensities, very large; size of Anterior Lobe, full; portion of Brain above Cautiousness, full; do. above Causality, full.

This development was transmitted, with the skull, to Mr Simpson, who thus inferred the character.

Inferred Character.—“The organization is essentially savage, and the character, with occasional gleams of kindness and sagacity, would be almost entirely animal. With a basis of considerable quickness and intelligence, there would be cunning and disregard of truth and honesty; and a tendency to rage and revenge: the revenge, if ever taken, would not stop short of murder, pro-

vided no formidable resistance was offered: secret and safe revenge would be preferred. The aspect would be sombre and melancholy; and, had there been a touch of insanity, there would have been danger of self-destruction. This savage would be vain, elated with praise, and irritated by ridicule; fond of children, and probably unsettled and wandering."

The development and inference were sent to Dr Mackintosh, and the following document has since been received from him.

"*The Dying Confession of Matroos the Boschiesman.*—I was a true Boschiesman, born in the Boschiesman's land. My name is Matroos, so given to me by one of my first masters. I was in the service of several cattle-farmers, along the borders of the colony at the New Plantation; but never would I behave myself well to any of them, leaving their service and wandering about; preferring an independent life to servitude. I went marauding and murdering through the country, and for a long time I escaped punishment. But at length stealing some horses from the farmers, I was pursued and surrounded, but scorned to surrender myself, though repeatedly called upon so to do. I defended myself with my assagais and poisoned arrows, as long as I had any left, and then made an obstinate resistance by hurling stones at my pursuers; but at length I was mortally wounded, and am now dying, being, as I believe, only about eighteen years of age.

"*Agter Suenberg, 182-.*"

"This statement was drawn up by Major Rogers, guardian of slaves, who accompanied Mr Justice Burton on the Circuit, when the skull of Matroos was presented to him at Graaf Reinet.—W. M. FORD."

It will at once occur to the reader, that the Boschiesman's confession confirms the character inferred, in its most striking features, but that it does not touch on some of its points. This was likely to happen, because the confession could not be expected to be a complete character of the individual.

The skull has been presented to the Phrenological Society*.

* Although we are seldom at liberty to publish cases of this nature, where the powers of Phrenology are put to the test, such cases are of not unfrequent occurrence among our phrenological friends. Another of them, possessing no common degree of interest, forms the subject of the 5th article of this Number.

ARTICLE VIII.

CURIOUS AFFECTION OF THE FACULTY OF COLOURING.

A VALUED correspondent has communicated to us the following particulars:—"I shall mention to you a circumstance, which may be interesting, respecting several members of a family I formerly knew a good deal of. Two sisters and a brother (all the children except one) had a strange connexion in their minds between sounds and colours. Every word spoken suggested to them the idea of some colour. It had no relation to the sense; *e. g.* the word 'green' was not green, nor of the same colour as *verd* and *χλωρος*. They said it was the *vowels* that determined the colour. It was certainly no fiction; for if you shut them up in three rooms, and asked them separately as to the colours of various words in unknown languages, they would all agree; and so they would as to the notes of different birds or musical instruments. Can this be explained by any reference to the organ of Colour?"

We published a case very similar to this in vol. iii. p. 420. The individual was a friend of Dr Otto of Copenhagen, to whom we were indebted for our information. "He tells me," says Dr Otto, "that every thing that is represented to his mind is considered and afterwards thought of as a colour; or, in other words, all his ideas are associated with different colours. When you speak to him of a person or a thing, a red, blue, or white colour rushes into his mind, and he cannot think of the person or thing afterwards, but as a colour: when he thinks of me, for instance, I am a blue colour. All the days of the week are thought of as different colours: Monday is white to him, Tuesday blue, &c. He does not at all *wish* to make such associations—it happens quite instinctively and involuntarily. The most curious phenomenon is, that *abstract* terms, as goodness, philosophy, justice, &c. have to him *different colours*, and when you name to him a quality, one of the colours immediately comes into his mind. He is a very respectable man, and I can fully rely on the truth of his assertions in this respect." Dr Otto mentions that the organ of Colouring was very large in the head of the individual alluded to, who was extremely fond of painting, and successfully practised the art. He thinks that the phenomena can be explained only by supposing great activity of that organ.

We can add nothing to what was formerly remarked on this subject in our third volume, viz. that Dr Otto's conjecture is the best that can, in the present state of our knowledge, be hazarded.

ARTICLE IX.

ON THE INSTINCTS OF THE LOWER ANIMALS.

(TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.)

EDINBURGH, 22d October 1832.

SIR,—Naturalists have been considerably puzzled to account for the extraordinary faculty possessed by the dog, the carrier-pigeon, the falcon, and other animals, of returning to their usual abodes from remote places, to which they have been carried. The common hypothesis, that dogs retrace their way by the aid of smell, is far from being satisfactory; for they have sometimes been found to return to their native towns, after being transported, by sea or in a coach, to a great distance. “A dog,” says Dr Gall, as quoted by Mr Combe in his *System of Phrenology*, p. 419, “was carried in a coach from Vienna to St Petersburg, and at the end of six months reappeared in Vienna. Another was transported from Vienna to London; he attached himself to a traveller, and embarked along with him, but at the moment of landing he made his escape, and returned to his native city. Another dog was sent from Lyons to Marseilles, where he was embarked for Naples, and he found his way back by land to Lyons.” Dr Gall considers this surprising talent to have some connexion with the organ of Locality. I do not pretend to offer any hypothesis in relation to this matter, but shall state merely a few doubts and suggestions; and having some time ago made an experiment, with the view of ascertaining whether carrier-pigeons can instinctively return to their homes from a distance, or whether, to make them useful as messengers, it be necessary to teach them the road, I think it may be interesting to you to learn the result. I shall, at the same time, take the opportunity of adding a few desultory observations on various phenomena connected with the faculties and instincts of the lower animals.

A pair of very fine carriers having been sent me by a friend, I kept them for some time in the house, and, I think, for about three weeks in the pigeon-house, in order to give them full time to forget their former place of residence. When permitted to fly abroad, they returned to their new habitation, where they soon had young; and when these were able to provide for themselves, and the female was a second time busied in the work of incubation, it was considered the best time to make the experiment, as the male would then have the strongest inducement to return to his mate. Accordingly he was sent, along with his two young ones, to a friend's near Kelso. That place was well adapted by its situation for the object in view; for as the road

lies over the high ridge of the Lammermoor hills, it was necessary for the bird to fly to a great distance in the proper direction, before he could see any part of the country of which he was likely to have acquired a knowledge, while taking pleasure excursions through the air in clear weather from his own home; a pastime much indulged in, when he was first allowed to fly from the pigeon-house, and which in all probability was prompted by a strong desire to know the appearance of the land. To avoid all danger from sportsmen, the bird was let off from my friend's house on a Sunday morning; and after rising to a considerable height, he took his course in a fair direction towards home. He was not seen for two days, but being unable to find his way home, he returned to the place where he had last seen his young, and which he had only time to observe as he toured in the air before taking his direct line of flight. On the top of this house he lived for some weeks, and until a pigeon-house was made in the roof, and his young allowed to go out after being confined a proper time to the house. This, I think, when joined with other observations on the subject, clearly proves that the carrier is guided in his journey solely by memory, and a knowledge of the country he has to traverse. These birds, when employed to carry intelligence from one part to another, are trained by being taken first, say five miles from home, then ten, and so on till the whole journey is completed by short stages; and even should the bird know the road, it cannot travel in foggy weather.

Among these animals, as among men, some are more easily taught than others, and the fanciers distinguish the best birds by the height and fulness of the membrane above the nostrils; and the method they practise to set off an indifferent bird, is to raise this membrane, and puff up the part by stuffing pieces of cork under it.

As a proof of the quickness of observation in birds, I may mention a circumstance which I noticed some years ago, clearly shewing that, when a singing bird sits to all appearance listlessly on its perch, it does not allow operations going on near it to pass unheeded, or fail to lay up a store of information, one day to be turned to good account. I had a goldfinch, which was chained to a perch, instead of being kept in a cage; its food was put into a box, resembling a water-fountain used for cages, and the little opening at which the bird fed, had a cover loaded with lead to make it fall down. The bird raised this by pushing down a lever like the handle of a pump; and its manner of working was to push the lever down with its bill, which raised the lid of the box, after which, by putting its foot on the lever, it could feed at leisure. I had also a redpole (*F. linaria*) chained on a nearly similar perch: this bird fed from an open box,

without the trouble of having recourse to the lever power, like his neighbour the goldfinch. But though the redpole considered the theory of the action of the lever as quite out of his line, yet he judged it wise to observe that the little box which he saw the goldfinch open contained good food; and this he kept in mind against the day of need: for, one morning, when in bed, I was very much amused to see the redpole, whose supply of seed was exhausted, fly across to the perch of his friend, raise the lid of his seedbox with his bill, and then laying hold of it with one foot, keep it up until he had made a good breakfast. This to some may appear a trifling incident, but to me it was very interesting, as it was the best possible proof of the power of birds to observe and copy the actions of each other, and to profit to a certain extent by what they see passing around them. It required some tuition to teach the goldfinch the use of the lever for holding up the lid of the box; but the redpole, having observed that there was seed within, fell upon its own plan of getting it out.

It appears to me, that, by attending to the actions of animals, we might arrive at a more accurate knowledge of the operations of their minds; and that much of what, for want of a better name, is called Instinct, would turn out to be an intelligent mode of acting, dictated by previous observation. In support of the truth of this I may mention what I noticed in a dog. One summer evening, when returning from the top of Leapen, a very steep hill behind the village of Inverleithen, I found a hedgehog creeping along about half way from the bottom, at the steepest part, apparently a dangerous situation for such an animal. Not doubting that, if put in motion when it had drawn itself up, it would roll to the foot of the hill, and curious to know how it would attempt to save itself, I set it a rolling, and was much pleased to see it spread out its feet and stop before descending six feet. A friend has a small terrier, from the original stock Pepper and Mustard, famous for his cunning and sagacity, a feature strongly marked in the face of the dog; and one side of the head being generally turned up, gives him a great obliquity of expression, not a little helped out by an eye in which the white part is very predominant. He has a great dislike to hedgehogs, and rarely goes through the woods in warm weather without killing one or two for his day's work. Being very small, and having had two of his legs much injured in his youth by horses, the murder of a hedgehog is by no means easily accomplished; nor can he succeed until he has had recourse to several stratagems. I have been much amused to see him carry the object of his ill-will to the first little bank he could find, such as the sloped side of a ditch when no better could be had, and persevere in rolling it from the top to the bottom until he could get

hold of some part less densely covered with spines than the back, or sides, which alone are exposed when the hedgehog is rolled up. Often I have seen him take them to a bank too short to make them unfold themselves entirely, but at every descent they opened a little, which enabled him to get a bite nearer the head of the animal, a sufficient encouragement to make him continue the process for an hour, if necessary. Killing hedgehogs appears to be this dog's greatest delight; nor has it been found possible to drive him from it. It is a feeling common to the rest of his tribe, but it is very odd that he should have discovered that the hedgehog unfolds itself when rolled down a steep slope; it is probable that, like myself, he must have discovered this by chance, and had stored it in his mind as a piece of knowledge of great practical utility. I might mention other instances in which I have seen dogs display their powers of profiting by experience and observation; but those which I have already given are perhaps the most striking, as the terrier makes up for his want of strength by his knowledge of the habits of the animal he wishes to kill. Every one has read anecdotes of the sagacity of dogs, but these must be credited with great caution, because, having been handed from one author to another, they are not likely to be recounted as less ingenious than they actually happened to be; and as men are much prone to wonder that brutes should have any originality at all, they often wonder themselves into inaccurate observation, and, having got a few leading points, generally contrive to make a very wonderful story. This may happen very innocently; indeed it is difficult for a person with some imagination to keep clear of filling up, after his own way, the defects he may find in the thread of the story. I have seen this happen among people who were most anxious to give the true version of a story, whatever it might be; but, in one instance, by overlooking a common practice of a dog, they not only ascribed to him a perfect knowledge of the days of the week on which his enemy made his visits, but showed him capable of making up his mind to be revenged of an injury two days before the act was to be committed, and of lying in ambush in order that he might succeed, proving him guilty of *malice prepense* under the worst possible circumstances, which, although it made out the poor dog to be a greater scoundrel than he really was, yet at the same time gave him credit for a depth of intellect he did not possess. In general, people never look for intellect in an animal; they seem better pleased to attribute all its actions in the least degree out of the ordinary course of its behaviour to the force of instinct, probably because this explanation makes them look much more miraculous, and saves all trouble of explanation, just as an observer of the changes of the clouds, &c. when he is puzzled to discover the cause of any

phenomenon, refers it to the action of electricity, a good easy way of appearing learned with as little trouble as possible. I am inclined to consider the actions of animals as for the most part referable to the operation of the intellectual faculties, although these are very limited when compared with those of man—and that instinct has very little to do in the matter. For instance, we often (as already mentioned) hear of dogs returning home when carried to a great distance, and, as they seek their way through countries they have had no opportunity of knowing, it is said this must be instinct; more especially as, from the shortness of the time taken to perform the journey, it is obvious they must have come back by the shortest road. If we suppose this to be the effect of an instinct implanted in the animal, how does it happen that so few dogs, out of the many taken to strange places, ever find their way back, and that so many are lost even in the town in which they live? for an instinct ought to be common to the whole species, as every bee works a cell of the same shape, each possessing the same instinct. If one dog finds his way home by a peculiar faculty, this ought to guide the footsteps of the whole race, should any of them be put into a situation demanding its action. Nothing is more common than to hear it said, “What a number of strange faces are in town at present!” or to hear some one remark, that, “when last in London, he saw many faces he knew;” these observations referring not to people we positively know, either as friends or strangers, but being made from a feeling that we have met, in the one case, a person not having the *tout ensemble* of a townsman, and in the other, one quite familiar to us, although we perhaps never took particular notice of it before: and in the same way with many other things. May not this kind of latent knowledge also be possessed by the lower animals? And suppose a dog, endowed with an acute sense of smell in addition to its sight, be taken to London by sea, it is evident it cannot know the way home by land; but then it sees and smells a great many friends or townsmen in the great city, and by following one of them, or perhaps a mail-coach, it gets fairly on the right road, and, by pursuing it, may arrive at its home, perhaps by chance, after having set out right; or it may get hints on the road, similar to that which first put it on the proper track. Very few, however, find their way back, when compared with the vast numbers which are lost, even when they travel from one end of a town to the other, and on a road, too, which they may have travelled before. This, I think, could never happen, supposing them endowed with the instinct so often attributed to them. I shall be much gratified if these observations prove interesting to you. I am, &c.

A. A. D.

To the foregoing esteemed communication we shall add several cases, which tend to show that some of the lower animals are endowed with the power of perceiving and appreciating intervals of time. The first extract is from the Library of Entertaining Knowledge, vol. i. p. 55; and for the concluding case we are indebted to an observant phrenological friend, on whose statements we place entire confidence.

“ Mr Southey, in his *Omniana*, relates two instances of dogs, who had acquired such a knowledge of time, as would enable them to count the days of the week. He says: ‘ My grandfather had one which trudged two miles *every Saturday* to cater for himself in the shambles. I know another more extraordinary and well-authenticated example. A dog which had belonged to an Irishman, and was sold by him in England, would never touch a morsel of food *upon Friday*.’ The same faculty of recollecting intervals of time exists, though in a more limited extent, in the horse. We know a horse (and have witnessed the circumstance), which, being accustomed to be employed once a week on a journey with the newsman of a provincial paper, always stopped at the houses of the several customers, although they were sixty or seventy in number. But, further, there were two persons on the route who took one paper between them, and each claimed the privilege of having it first on the alternate Sunday. The horse soon became accustomed to this regulation, and although the parties lived two miles distant, he stopped once a fortnight at the door of the half-customer at Thorpe, and once a-fortnight at the door of the other half-customer at Chertsey; and never did he forget this arrangement, which lasted several years, or stop unnecessarily, when he once thoroughly understood the rule.”

The other case closely resembles that just cited. We shall let our friend tell his own story:—“ My brother,” says he, “ has a bitch of the name of *Quelo*, which unequivocally manifests the power of distinguishing the days of the week. On Saturdays, it is my brother’s practice to go out to walk or shoot; and on these occasions he generally takes *Quelo* along with him. From Monday to Friday her outgoings and incomings seem to be regulated by no certain rule. On the *Saturday* mornings, however, she is observed to indulge much in sleep, and to be careful to go very little out of doors. Towards noon (the time when her master usually comes home), she evinces a growing impatience, and at last places herself in the middle of the kitchen floor, pricks up her ears, and listens with most eager attention to every footstep. Being, on a particular occasion, confined in a remote part of the house for several days, she, of course, manifested great dislike to her situation by yelping and barking; but when Saturday arrived, and the usual hour glided

past without her master making his appearance, her cries became louder and more incessant than they had been on any other day. It will perhaps be insinuated, that this knowledge of Saturday may be derived from the observation of domestic operations peculiar to that day; but as these operations have, in the present instance, nothing extraordinary about them, the argument is untenable. Besides, how could the animal know what was taking place in the house on the day when she was chained in a cellar?"

ARTICLE X.

PHRENOLOGICAL VIEW OF THE QUESTION OF COLONIAL SLAVERY.

NUMEROUS as are the institutions and practices which we have already brought to the phrenological standard, we have not yet offered a word on the deeply interesting question of Colonial Slavery. If, however, we should wish to give a place to the subject, philosophically treated, in our record, we have no time to lose, for there seems to be little doubt that a grand meliorating and conclusive measure will shortly engage the attention of the Legislature, certainly under the guidance of the Cabinet, and not improbably in obedience to a message from the King. As lately as 2d November 1831, Lord Goderich, the Colonial Secretary, addressed the governors of the Crown Colonies in an admirable letter of instructions,—accompanying an order in Council ameliorating the condition of the slaves,—which concludes with the following memorable passage. “The exigency of the occasion is such as to demand from the King’s government decision and firmness,—from yourself the utmost exertion of your authority and influence,—and from all classes of the King’s subjects in the colonies, a calm and deliberate review of the position in which the great question of negro slavery stands. It would be a fatal illusion to suppose, that *the progress of ameliorating measures, tending to the ultimate extinction of slavery by cautious and gradual means, can be averted.* No man who has watched the progress of public opinion in Europe, can avoid this conclusion. It is in no unfriendly spirit, but, on the contrary, with feelings of the deepest anxiety for the welfare of the proprietary body, that I would most earnestly and respectfully urge this fact on their attention. To embark in a contest upon this subject, of which the result could not but be unfavourable, and might be most disastrous to those who should provoke it, would be but to add to the amount of that

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... and acts on the offensive. Impelled by
... prompted by Self-esteem and Des-
... Acquisitive-
... most conscious unremitting impulse of injus-
... plunder the property of others already accu-
... it appropriates their persons to create property
... by their labour forced, by torture and privation,—or, as has
... been fearfully exemplified, in more than one part of Bri-

tain; kills them if there is a profitable market for their dead bodies. The live Negro only is valuable in the West Indies; in London and Edinburgh he would be worth twenty-five per cent. of his colonial living value when dead; and such, we doubt not, would be the final commercial disposal of the Negro slave, were it not physically impossible for his proprietor, "who does what he likes with his own," to compensate part of his original outlay in that manner: for the man who pockets gain by working a human being to death, kills him for that gain not less than Burk or Bishop did, only he keeps him suffering longer under his hands*.

If the doctrine be sound, that the propensities directed against others, in a manner disowned by the moral sentiments, is essentially crime, it would only waste time to demonstrate in words, that man has no right so to abuse his propensities. Had the first ship-load of kidnapped human beings been brought by force from the coast of Guinea, only the other day, to labour the soil, under the lash and the burning sun of the Antilles, the morality of even the present age would, throughout Europe, have been roused to an expression of wonder at the astounding impudence of the crime. Our "pious ancestors" took it more easily; and the working morality of their descendants got so familiar with the practice of the slave-trade, as to see or feel no harm in it; nay, to cherish it as a very excellent good thing, and, for a quarter of a century after it was denounced, to cling to its gains, and furiously resist its abolition. It was one of the most cheering proofs of the commencement of that civilization and that mercy, which our ancestors knew not, that Benevolence and Conscientiousness finally triumphed, and the slave-trade, always a crime, was at last written down in our statute-book a felony. But it so obviously followed, as a corollary from the abolition principle, that colonial slavery is the tree of which the slave-trade was the root, that one of the chief obstacles to the abolition of the practice of stealing the African, was the conscientiousness that the retention of him and of his children in servitude would be exposed as having a criminal origin, vitiating, *ab initio*, the pretended right of property. Never was guilty fear better founded. The thief dreads conviction because of its consequence of restitution, as well as punishment; and we are not aware, that the friends of the injured African, either in or out of Parliament, ever dreamed of compounding the slave-trade felony by any pledge, express or implied, to spare the slavery itself, or to give us a pretence, that if we should prudentially quit our grasp of the slave-trade, we might keep, and torture, and over-labour the slave at our pleasure. Our crime of taking follows out to its

* The loss by slaves worked to death, is facetiously called "the underground account" in the West Indies.

distress which no men more freely acknowledge or more deeply deplore than the official advisers of the Crown. It would be difficult to exaggerate the anxiety I feel to prevent so calamitous a result, and I persuade myself that it is best avoided by such legislation as that to which this despatch refers; which, on a calm review of the subject, will, I trust, be found to concede to the slaves nothing more than strict justice demands, and to offer to their owners the best practicable security for the peaceable and quiet enjoyment of their property." This cautious but firm declaration, coming from such a quarter, cannot be too deeply pondered by the slave proprietors. It pronounces the doom of slavery, and leaves the way and manner only for after deliberate consideration. The whole of the long letter, which prints out to no less than thirteen octavo pages, like those of this journal, it is a moral treat to read. It is delightfully refreshing to those who hold moral elevation to be the main pillar of political power, to witness the spectacle of a minister of the British Crown, possessing power over the Crown Colonies all but despotic, resorting to the weapons of reason and right feeling alone, and calmly, candidly, paternally, and almost humbly answering the objections, allowing for the prejudices, and soothing the irritations of the misguided colonists. Orders in Council and Cabinet instructions were other matters when they produced the American war. It was then the rule of governments always to consult their own dignity by being insolent, unless it was considered wise to be cunning and fraudulent.

We cannot quit Lord Goderich's letter of instructions, without recording in our pages his memorable answer to Mr Irving, the member for Bramber, who objected that the new codes would, by virtually emancipating the negroes, stimulate the foreign slave trade, and thereby, in attempting to do good, produce the most serious evil. "Where the inference is manifestly untenable," says Lord Goderich, "I cannot think it worth while to debate the premises. If neither the state nor individuals are to do justice without an absolute certainty as to possible consequences which are beyond their control, the great rule of right is at an end, and every one may plead the probable injustice of another in defence of his own deliberate wrong-doing. I can never consent to oppose a temporary and apparent expediency, to those eternal obligations which religion founds upon the law of God, and which morality derives from an expediency which is permanent and universal. I will not attempt to prevent the foreign slave-trade, by refusing justice to the slaves in his Majesty's dominions."

The cause has been incalculably forwarded by an able exposition of the evils of slavery to both master and slave, from a quarter which has given it a degree of weight and trustworthi-

ness which have never belonged to the very best productions of the most disinterested controversialists in the question, and are scarcely accorded to parliamentary documents and the most searching committee evidence, in which both interrogators and witnesses are scarcely ever held pure from party bias, or colonial contamination. The work we allude to is a series of essays, four in number, by John Jeremie, Esq., late first president of the Royal Court of St Lucia. This gentleman went out to his duties in the West Indies, as he himself declares, certainly free from all leaning to the cause of the abolitionists, and not free from a strong prejudice against them, because of what he then considered their violence, partiality, and exaggeration. Nay, the result of his earlier experience on the spot chanced to confirm his prepossessions, and had he then returned to England, he would have proved as powerful a witness *for* the slave proprietors, as farther observation has at last rendered him against them. Step by step the evils, and the horrors, and the follies of colonial slavery forced themselves upon his observation; and on that induction, and his own sagacity, he has produced an argument upon all the controverted topics of the great question, which, coming at a time when the cause of mitigation and ultimate abolition is already greatly advanced, seems just what was wanted to set the question to rest, and prepare the way and make straight the path of the British Legislature to the grand consummation of justice, which the sway of the propensities has so long withheld from the injured sons of Africa.

Mr Jeremie's first essay is a masterly portrait of the general features of slave communities. In his second he treats of general theories involved in the consideration of the question of slavery,—colour, climate, monopoly, free labour. The third essay details ameliorations introduced into St Lucia, and practicable elsewhere. The fourth gives the results of measures hitherto adopted, and takes a view of the farther steps to be taken to promote the final annihilation of slavery. None who read it will wonder that Judge Jeremie's pamphlet is hailed by the friends of abolition as one of the most effective contributions which their cause has yet received.

If so much has been done already, it may be asked, what has the Phrenological Journal to do with the controversy? We would answer, that it deals with a sound philosophy of human nature, which affords a test of all human affairs so discriminating and satisfactory, as, when properly applied, to impart to views, however worthy of confidence without it, an additional, and as it were conclusive correctness, which gives them the character of demonstrative truth and moral certainty. Let us try this standard upon a few of the leading topics of the colonial slavery controversy.

First, The ethics of Phrenology dispose briefly and sum-

marily of the question of slavery in general, and brand it at once in its origin and practice as the offspring of the basest propensities; unmitigated by one trace of those human sentiments whose prevalence distinguishes civilization from barbarism. Slavery is connected with barbarism,—with a state of society purely animal, uninfluenced by justice and mercy, the social exercise of Conscientiousness and Benevolence. Grecian and Roman pride and pomp, and the barbaric indolence of ancient Asia, enslaved the natives of conquered countries, and gloried, with all the exultation of gratified Self-esteem, in so unequivocal a badge of conquest. The faculties thus gratified hold in the phrenologist's estimation, a sufficiently humble place in the moral scale; but these are dignified compared to the sordid impulses which produced and continue our colonial slavery. There is no pride of conquest over the kidnapped Negro. No exultation over a fallen foe once formidable in the field, and now "gracing," as the poetry of heathen morality terms it, the victor's chariot-wheels, unjust, and cruel, and ungenerous as that exultation was. We stole our slaves, not conquered them; and to glut a grovelling Acquisitiveness, chained them, not to our chariot-wheels, but to our sugar casks; while of all the cruelties we have perpetrated upon them, and all the toil to which we have subjected them, and all the privations with which we have requited them, we have made gain—gain the basest that has ever stained the hand of avarice. The master of the helot was unjust, and it may be cruel,—we, the oppressors of the Negro, are unjust, and cruel, and sordid. The slavery of the ancients sufficiently degraded them; but it was an exalted system of social relations, compared with the abject slavery yet polluting the nineteenth century, and dimming to enlightened, moral, Christian England, all her glories, and all her worth. No institution or practice can be right which the Moral Sentiments disown. Whenever man's dealings with his fellows are in discordance with Benevolence and Conscientiousness, inferior, and necessarily selfish impulses are moving him. If he has no positive selfish end to serve, and, to farther it, is not moved to some positive injurious act towards his fellow, he will, in the absence of Benevolence and Conscientiousness, simply neglect him, and let him suffer want and pain, or die unheeded and unaided. This negation, however, has not contented human selfishness. It puts forth the hand and acts on the offensive. Impelled by Amativeness, it violates; prompted by Self-esteem and Destructiveness, it revenges, tortures, or murders; but Acquisitiveness furnishes its most continuous unremitting impulse of injustice; it takes by plunder the property of others already accumulated,—or it appropriates their persons to create property by their labour forced, by torture and privation,—or, as has lately been fearfully exemplified, in more than one part of Bri-

tain; kills them if there is a profitable market for their dead bodies. The live Negro only is valuable in the West Indies; in London and Edinburgh he would be worth twenty-five per cent. of his colonial living value when dead; and such, we doubt not, would be the final commercial disposal of the Negro slave, were it not physically impossible for his proprietor, "who does what he likes with his own," to compensate part of his original outlay in that manner: for the man who pockets gain by working a human being to death, kills him for that gain not less than Burk or Bishop did, only he keeps him suffering longer under his hands*.

If the doctrine be sound, that the propensities directed against others, in a manner disowned by the moral sentiments, is essentially crime, it would only waste time to demonstrate in words, that man has no right so to abuse his propensities. Had the first ship-load of kidnapped human beings been brought by force from the coast of Guinea, only the other day, to labour the soil, under the lash and the burning sun of the Antilles, the morality of even the present age would, throughout Europe, have been roused to an expression of wonder at the astounding impudence of the crime. Our "pious ancestors" took it more easily; and the working morality of their descendants got so familiar with the practice of the slave-trade, as to see or feel no harm in it; nay, to cherish it as a very excellent good thing, and, for a quarter of a century after it was denounced, to cling to its gains, and furiously resist its abolition. It was one of the most cheering proofs of the commencement of that civilization and that mercy, which our ancestors knew not, that Benevolence and Conscientiousness finally triumphed, and the slave-trade, always a crime, was at last written down in our statute-book a felony. But it so obviously followed, as a corollary from the abolition principle, that colonial slavery is the tree of which the slave-trade was the root, that one of the chief obstacles to the abolition of the practice of stealing the African, was the consciousness that the retention of him and of his children in servitude would be exposed as having a criminal origin, vitiating, *ab initio*, the pretended right of property. Never was guilty fear better founded. The thief dreads conviction because of its consequence of restitution, as well as punishment; and we are not aware, that the friends of the injured African, either in or out of Parliament, ever dreamed of compounding the slave-trade felony by any pledge, express or implied, to spare the slavery itself, or to give us a pretence, that if we should prudentially quit our grasp of the slave-trade, we might keep, and torture, and over-labour the slave at our pleasure. Our crime of taking follows out to its

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most distant consequences the keeping and using the plunder. No length of time, or change of public feeling, can create a right in us either to the originally kidnapped Negro, or to his remotest progeny. The enslaving of every new-born infant is a fresh crime, without shadow of either present or hereditary right; the retention in bonds, for a moment, of the adult, is a criminal act of violence, however remote his generation may be from that of his stolen ancestor. This, when stated in the abstract, is not denied by any rational being. Colour can make no moral difference. There is the same absence of right in the white to enslave the black, as there would be in the startling converse of the relation, supposing that some sable merchant of Hayti were to freight a slave-ship to Jamaica or Barbadoes, and succeed in kidnapping any of the white assertors of a right of property in stolen human beings, that might chance to come readiest for a landing in the night, and re-embarkation with the *property* before morning! No length of time, or succession of generations, would legalize such an acquisition. In its very nature, therefore, our Colonial Slavery is destined to be abolished, as a barbarism which civilization disowns and condemns, as an imperative sacrifice to the supremacy of the moral sentiments. On the principles now relied upon, we need scarcely say, that the Negro is treated with glaring injustice by the *privilege* proposed for him of purchasing his own manumission. At whose expense soever he is freed, it must not be at his own.

The next point of the controversy which we should like to see phrenologically tested, is the actual condition and treatment of the colonial slave. A distinction occurs here. It is the country as much as the planters that must bear the reproach of the *institution and existence* of slavery; but the whole responsibility of the *treatment* of the slaves must, in the nature of things, rest with their masters on the spot. If our strictures on *slavery* are severe, they are self-reproaches; but we cannot consent to share the additional crime of direct every-day cruelty. It is of great moment in the question of melioration and mitigation, to keep steadily in mind, that the slave-holders, to a man, claim the merit of treating the Negroes not only fairly, but kindly, liberally, and generously,—like children more than servants. Even those who give up as untenable the abstract right, tell you, that the condition is a mere name, amply compensated by as much and as good food, clothing, and lodging, and as moderate labour, and as much holiday, as is enjoyed by the most favoured of the English peasantry. How the *fact* stands is well known to every member of the British community, who ever employs himself in reading on public affairs. Some colonial proprietors have earned, to a certain extent, the patriarchal title of fathers to their slaves, though even tender mercies are severe

in the colonies; but the slaves of by far the greater number are treated cruelly, on commercial system, the most unfeeling of all systems; they are notoriously laboured in a manner and degree inconsistent with health and average longevity; severely and often cruelly punished to extort that excessive exertion; while their food is calculated down to the least quantity of the cheapest edible matter, with very little regard to quality, that can keep soul and body together; their clothing, too, is scanty; and lodging no better. Volumes of parliamentary evidence leave no doubt of all this; and Mr Jeremie follows it up, a confirming witness, with the best opportunities of observation, and as to character above all exception. Over-labour under a tropical sun, double the time of a British convict, according to Mr Stephen, and this incessant, in one weary round of hopeless and oppressive sameness, is a view of colonial slavery, not so much pressed on public notice as it ought to be. It exhibits a picture of slavery far more striking, and that embracing all the slaves of the proprietors to whom it applies, than occasional and even frequent cruel punishments, which, at the worst, fall to the lot of a part, though a large part, of the slave population*.

But, phrenologically, we know enough of the human faculties, of the average of their endowment, and above all, the present stage of their agency, especially in the colonies, to be enabled, the actual circumstances being given, to come to the conclusion, that the Negro slave cannot be humanely treated; that he *must* be over-worked, under-cared for, and cruelly punished by so many slave-holders and overseers, as to constitute ill treatment the rule, and kindness or even justice the exception. It requires much more careful culture than society has yet institutions for bestowing, to render the bulk of men so far moral as to act habitually from the higher sentiments, and not on the contrary to yield to undue preponderance of the lower or animal propensities. This is too true nearer home than the colonies. The propensities which circumstances call into activity, have, in various degrees, a sway in the society at large of the nineteenth century, productive of the greatest evils.

As it would serve no beneficial end, but on the contrary would have very unwelcome consequences to ourselves, to lash and over-work and under-feed our fellow men at home, selfishness takes other directions within the four seas of Britain.

* It may be said that there are many of the lower classes in Britain and Ireland as wretchedly off as the most miserable of the slaves; and much worse than those better cared for. This is certainly true, but we cannot view it as a ground of justification of the colonial system, that there is misery elsewhere. Moreover, however the British and Irish poor may be situated as to food, clothing, and lodging, they are at least free from compulsory over-labour and the cart-whip.

But give to any gentleman or lady an estate in the West Indies, and send him or her out to superintend it, and you will find them soon flogging their slaves, because it is "indispensably necessary;" over-working, under-feeding, under-clothing, and wretchedly lodging them, because it is the custom, is gainful, and they could not compete with other planters if they pursued any other course.

We all know the severity which becomes familiar to officers of the army and navy who are educated from their boyhood in those systems of conventional despotism; and we find that severity in persons possessing at least so much benevolence as to give them, on other occasions, the credit of humane and excellent dispositions. The course of moral deterioration,—the induration which merciful men and meek women undergo who settle in the colonies, is a well known phenomenon. At first they shrink from the sight or sound of the lash; but becoming irritated by the negligence or perverseness of the slaves, they are urged by their colonial advisers to try punishment, and unwillingly consent; congratulated on the success of the first experiment, they repeat it, and at last superintend severe punishments, and in some instances inflict them with their own hands. One lady told us that, from the utmost horror of the application of the whip, she became so familiar with it in a few months, that, provoked by *great impertinence* from a female Negro, an adult, she herself assisted to hold her until she received from another hand what the lady called a smart domestic chastisement. On another occasion, wishing to save a Negro waiting-maid from a birch rod vigorously applied by her mistress, a young and interesting married lady, she received a lash upon her own arm that brought the blood. We happen to know another lady of unusually gentle disposition, who, having married an officer, went with the regiment to the West Indies. The only lodgings that could be assigned to her were within hearing of the lashes and cries of the public flogging-house, and these seemed never to cease during the day. The lady endured the utmost misery for weeks. By degrees, however, she became accustomed to the horrors, paid them less and less attention, and in a few months scarcely heard them without an effort to attend to them. If such be the negative effect upon the mind and feelings of an amiable woman, what may not the positive operation be upon the average animal endowment of male brains that go out as keen and needy adventurers to the colonies? Reading, writing, and arithmetic form probably the sum-total of their education; no moral distinctions have ever been inculcated, or feelings cultivated; the whole habits are coarse, selfish, and above all directed to money-getting; plunged at an early age into the demoralizing medium, and all the prejudices and ignorances of slave society,

their animal tendencies of domineering and revenging are rendered more active by example and indulgence; above all, impressed with the notion that strictness in working the slaves, and sharp discipline exercised over them, is the perfection of an overseer, and his road to fortune; and practically applying the diabolical doctrine prevalent in the colonies, that "it is cheaper to work slaves out, and purchase new," than to encourage their increase by well regulated marriage; it is not to be expected that such men can be, or at least will long continue to be, even tolerably indulgent and humane. Bad as things must be at all times, circumstances may be conceived that will render them much worse, and these are the very circumstances in which our colonies now are. Making every allowance for the outcry of the colonists that they are ruined, there can be no doubt that their affairs are at a very low ebb indeed; overwhelmed with debt, and mortgaged, in many cases, to the full value of their estates, having bought them without a price, with instances not a few of money paid out, in place of returns, to keep the estate in existence, in hope of better times, it cannot be supposed, that in all the sourness of disappointed selfishness, the slave-holder will have any mercy on his slaves, and will not rather work them to the bone to avert his own ruin; nay, that he will not sanction the appliance of greater severity, and even cruelty, to enforce the increased labour, on which, in his profound ignorance of political economy and human nature, he believes his existence depends.

Our phrenological inference, from the known working of the faculties of man in given circumstances, that the slaves *must* be maltreated, receives confirmation from certain extrinsic *indicia*, which, however, we have only room to glance at. For example, the notoriously fraudulent legislation of the colonial assemblies, most instructively exposed by Mr Jeremie, the design of which is to hood-wink the Parliament and people of England; the systematic concealment of the doings in the plantations; exclusion of the evidence of the slaves *against* the whites, and that every where, with the honourable exception of Tobago and Grenada; jealousy of the eyes of strangers; resistance to the inspections, *without notice*, of protecting officers; and, above all, the most ferocious vengeance, by universal colonial consent, directed against the teachers of religion, who dare to enter the Negro's hovel to learn his oppressions, console him in his afflictions, and invite him to their chapels that he may be enlightened and humanized. Nothing has tended to stagger the most slow of belief in the degraded state of colonial society, than the composition of the *white mobs* of the West Indies, for the legal purpose of burning the chapels, and tarring and feathering, beating and bruising, the persons of the missionaries. In ad-

dition to the direct agency of clerks, overseers, and drivers, there is the superintendence and direction of magistrates,—the very men who the hour before have been condemning and hanging the Negroes, for greatly more justifiable burnings and violences*.

The difficult question of compensation to the planters for the emancipation of the slaves, is one of political economy more than of Phrenology, unless in the most extended sense of the latter. We shall therefore pass it over with merely expressing our belief, that, if the planter's loss is calculated upon a trial of time under a new and better system of free labour, his ultimate loss, if, as is not generally admitted, it shall fall on the country, will be a debt more easily discharged than the planters imagine. For one item of his loss the slave-holder can claim no compensation; namely, the difference, under a system of mitigation, between the returns of excessive and of moderate labour, and between the cost of poor food, clothing, and lodging, and of these necessities of life adequately supplied. This is the slave-holder's own account, not the country's. He cannot claim indemnifications for losing what it was absolute wrong to gain; of which wrong the very compensation he claims would be the measure: Besides, inasmuch as the slave-holder boasts that all is, and has always been right on this head, he is committed, and must make good his engagement, and redeem his own pledge, without being paid for doing so.

The branch of this great question which treats of the time and mode of the annihilation of colonial slavery,—that annihilation being at the same time certain,—we must also pass by with a single word. This inquiry, too, is full of difficulty, and we venture an opinion upon it with due diffidence. First, We should dread immediate simultaneous emancipation of 800,000 Negroes, as dissolving the whole fabric of colonial society, driving the whites from the country, leaving the Negro population, who are habituated to pupillage, utterly unfit to provide for themselves, and liable, from the mere impulses of their animal nature in extreme privation, to resort to mutual extermination. The argument has never weighed with us that we have no right to continue the slave's fetters one hour. Abstractly we have not. Abstractly I have no right to hold a person fast against his will, although he would sink in the sea and be drowned if I should quit him. But when, in addition, I have myself unjustly and violently brought him into his dangerous position, I am not only entitled but bound to hold him fast, in spite of his

* Mr Knibb, one of the persecuted missionaries of Jamaica, has within this few days produced a considerable sensation in Edinburgh, by a speech of much impressiveness delivered by him at a public meeting. He averred, and challenged the whole of Jamaica to prove the contrary, that the Negro members of the missionary congregations did not join in the insurrection, but defended their masters' property.

right to instant freedom, till I replace him on the safe footing from which I at first took him, that then and there I may set him free. Farther, we dread the effects of the partial manumissions, of what is called the gradual system of emancipation. Slavery and free labour cannot efficiently co-exist. The planters would cling to slave-labour to the last, and discourage the emancipated Negroes, who would lapse into idleness, listlessness, and vagabondism; while the Negroes not yet emancipated would every day become more impatient of their bonds, and more valueless as labourers. There would neither be free-labour nor slave-labour. In respect to the earlier emancipated, there *could* be no previous preparation for freedom, and there *would* be none in respect to the latter. What we should suggest would be what we may call *postponed simultaneous* emancipation. That is, that the Legislature should forthwith, by one act, abolish slavery prospectively, to take effect with regard to the whole slave population in the colonies on a day certain at the end of a certain number of years, ten, fifteen, or twenty. The same act then to proceed to a well arranged system of mitigatory and meliorating enactments, which would render the interim condition of the slave comfortable, and insure his improvement, and preparation for freedom*. Mr Jeremie suggests a repeal of all the laws touching colonial slavery, and the substitution of one statute for its future regulation. The author of an able article in the Edinburgh Review, No. 109, protests against such a statute, as legalizing slavery. We join in this feeling most cordially; but we should think that our suggested *abolition* with a postponed operation, is at least an escape from the reproach of the positive sanction of slavery, still more of the institution of it. The grand positive act of our statute would be abolition, while all its subordinate enactments would be direct provisions for the Negro's benefit and wellbeing till the appointed day of his complete deliverance.

We come now to an inquiry, especially phrenological, namely, the capacity of the Negro for freedom,—the grounds for expecting that, after the preparatory interval which we have suggested, he will resort to free labour for his own support, and harmonise with the new order of colonial society.

The enemies of emancipation commit the common error in logic of proving too much on this point. The Negro is an inferior being, they say, whose freedom would be a compound of sloth, anarchy, and plunder; he would be alternately a sluggard and a wild beast, till the white population were driven out or exterminated, and each colony presented another St Domingo.

* Much has already been done by the Crown colonies, in the way of mitigation on many essential points, by the orders in council we have already alluded to, transmitted in November 1831.

If the Negro were an inferior being to the degree maintained, it is as absurd to say that he could drive out the white colonists, as it would be to allege that the horses or dogs could do so. If there is power and intelligence to combine and overcome, there is power and intelligence to resort to free labour, sufficient motive being presented. Now we know phrenologically, from our opportunities of observing the Negro brain, that although the average Negro capacity, intellectual and moral, is inferior to the average white,—for Negro heads often rise equal, and occasionally superior to the average white endowment,—there is not that degree of inferiority in the mass of the Negro population of the colonies as to incapacitate for free labour. But perhaps the incapacity meant by the slavery advocates, is only the moral incapacity of unwillingness; in other words, that no motive but the lash will induce a slave to labour. Now even labour under terror of the lash is so far voluntary that it is designed and intelligent. The Negro *does* work intelligently, for all the sugar produced is the fruit of his intelligent labour. The horse or the dog could not have produced it. The question is, has the Negro faculties which can be excited sufficiently, by other means than the lash, to furnish him with motive for at least as much intelligent labour as he bestows under the lash, if not for a great deal more? To begin with the lowest impulse, hunger is an irresistible motive to the Negro to exert all the powers he possesses. The necessaries of life, food, clothing, and lodging, if the municipal arrangements are such as to cut off all hope of obtaining them by any other means, must be laboured for, labour to the most slothful being the lesser evil. To rise a step in the scale of motives, the Negro is notoriously Acquisitive, and loves accumulation. In thirteen Negro skulls and casts of heads in the museum of the Phrenological Society at Edinburgh, there is scarcely an exception in this development. Those who have observed the slaves in the plantations, know well the eagerness with which they covet and receive money, and the value they put upon the smallest sums; and have borne witness to the zeal—the voluntary over-work of every individual of a gang, when a liberal proprietor occasionally proposes prizes for the best and most work, on occasions when despatch is of importance. The change of character is like the effect of magic; a listless, sullen, inefficient working party become instantly active, hard working, and joyous, and finish their piece-work with the mirth and song of our hay-makers or harvest-reapers. The Negro has other faculties to which to appeal. In all the heads in the Museum, Love of Approbation is largely developed: and it is well known that the vanity of the Negro, even in his degradation, is manifested to a ludicrous degree: he loves distinction and praise, and is fond of dress and finery,

which he will make great exertions to obtain. What a fund of motive in this one faculty! Benevolence is well marked in most of the specimens, the faculty which moves to exertion in return for kindness; and a combination of this feeling with Veneration—large in them all—for intellectual and moral superiority in the whites, and no excess of Combativeness and Destructiveness, with very large Cautiousness, seems to afford a reasonable guarantee against all violence and vengeance, which is not elicited by ill usage and tyranny.

One defect the Negro shares with all barbarous tribes of the human species, namely, an under endowment of Conscientiousness. In different degrees of deficiency we have noticed this development, we may say in all the Negro heads which have come under our observation. But, as practical phrenologists, we wish we could say, that a much better endowment of this valuable moral faculty were universal among Europeans; we wish we could find it in France,—in Ireland,—nay, within the boundaries of Great Britain! Yet it has not been found that, with a rather prevalent deficiency in this particular in the great mass of our own population, there is any want of free labourers in this country. The Celtic head, especially as exhibited in Ireland, is perhaps the most deficient in Europe in the faculty in question; yet our farmers know that more willing or better labourers do not enter their harvest-fields than the Iris's reapers. This argument against the Negroes, by the way, we would advise their present proprietors to avoid, seeing that the current irony of "the morality of the Antilles," is certainly not applied to the black population.

The general size of the Negro head is greater than that of the Hindoo or Brazil Indian; and although there is a considerable preponderance of animalism, there is moral and intellectual endowment enough to direct that very animalism to active and efficient manual labour, above which sphere of usefulness we grant that the majority of Negroes are not at present fitted to rise. In community with whites, they must continue long to be the inferior and labouring class; for there is an aristocracy of Nature's establishing in favour of the whites, not of mere colour, but of superior brain.

In some Negroes we have seen the knowing faculties with Constructiveness so large as to have promised something above mere labour, a considerable degree of mechanical skill. We have been assured by persons familiar with the colonies that expert artificers are to be found in many of the Negroes; and we have just heard from a gentleman from Caraccas, that the emancipation of their slaves by the Columbians, while it has furnished an ample supply of free labourers, has produced a great number of clever workmen and mechanics. We have

heard from many persons who have known the slaves in the West Indies, the Cape, and the Mauritius, that they have seen much ability and skill among them. In most of the specimens in the Edinburgh Museum, the organ of Individuality is large, as also are Size, Weight, and Constructiveness. It is quite unnecessary for our purpose to ascend so high as the talented Ignatius Sancho, the Negro friend of Garrick and Sterne, for such instances are beyond our object, which is to establish Negro capacity for free manual labour; but such instances, it must be remembered, could not occur in a race of beings decidedly inferior to the white in kind as well as in degree.

To the natural capacity of the Negroes, we are to add, on our plan, ten or more years of preparatory education. This will produce its most marked effects on the young, who will be men when emancipated. Infant education would tell, in the next generation, on the Colonial Negroes; and Mr Wilderspin once offered to devote himself to its introduction. We may also estimate the intermediate gradual adaptation of their system to the inevitable event of simultaneous Negro freedom, which the proprietors will be forced for their own interest to adopt, by trials of free labour,—a fair subject of a bounty,—and other changes of plantation economy.

So far the argument *a priori*, drawn from the Negro capacities, and the nature of things. But there are facts enough to settle the question. Negroes enlist with alacrity and pride into the West India regiments, and make good soldiers. We find them on board of ship, where very generally the cook is a Negro, and a cook's functions require considerable intelligence and skill. We see them every day in England and Scotland in the capacity of domestic servants, at no reduction of wages. If these are picked Negroes, we may at least infer that those that are left possess character enough to perform agricultural labour for wages. Mr Jeremie adduces a very interesting instance of Negro intelligence and social character. In 1830 about a hundred slaves escaped from Martinique and took refuge in St Lucia, where they became free under Dr Lushington's Act. These men fled from a system of unmitigated slavery, like that which prevailed in our own colonies thirty years ago: they were of course, according to colonial reasoning, the worst fitted for free labour or social co-operation. Accordingly they were advertised by the authorities of Martinique as "incendiaries, idlers, and poisoners." Nevertheless, of these some hired themselves for wages, as masons, carpenters, or domestic servants; while about twenty-six united together, erected a pottery, divided the labour most judiciously, and introduced a new manufacture into the colony. Mr Jeremie's detail of this incident is much more particular than we have room for, and well worth perusal.

At the Cape of Good Hope, slaves, called Prize Negroes, are occasionally emancipated at the public expense. The South African Advertiser, of 9th. February 1831, says, "We speak advisedly, three thousand prize Negroes have received their freedom, four hundred in one day, but not the least difficulty or disorder occurred. Servants found masters, masters hired servants, all gained homes, and at night scarcely an idler was to be seen." In a former paper (vol. vii. p. 531) we gave some account of the colony of free Negroes from America on the coast of Africa, called Liberia, a community that has conquered, not territory, but peace, and are living in a state of practical morality and religion, which more self-satisfied societies would be considerably improved by imitating. By recent accounts from the colony, it appears that no less than twenty-five thousand natives of the neighbouring tribes, including some kings, have become citizens of this new commonwealth*.

Our informant from Caracas†, assures us that freed Negroes in his country make willing and efficient free labourers, and many of them skilful artizans. When, in 1821, the republicans of Columbia promulgated their own freedom, they avoided the immorality as well as the solecism of forgetting their slaves. Immediate emancipation they did not consider safe, but a process of gradual emancipation was instantly commenced, to be dated from their own deliverance. All children born since 1821 have had a prospective freedom vested in them, to be complete at a fixed period when they are capable of free labour, till which period they are maintained by, and are subject to the modified authority of, the proprietor of the mother. This is another form of the certain but postponed freedom which we humbly advocate. There is also the interim mitigation. In the State of Venezuela, a fund created from a succession tax, holding a proportion, like our own, to the degree of relationship, is entirely devoted to purchasing the freedom of the more deserving slaves. To this is added the entire estates of persons dying without heirs. Cruelty, established before competent tribunals, is punished by the judicial manumission of the slave without ransom. "The laws of the state," says our able and intelligent informant, "as well as the general feeling of the community, are favourable to the people of colour, and especially to those who are slaves; and the operation of

* We have heard that there is a controversy in America about the purity of the motive which induced the Americans to encourage this settlement. That is said to have been a wish to get rid of the most enlightened, able, and enterprising of the free Negroes. We feel assured, from the high, moral and religious cast of the American interference in the scheme, that this is a calamity. But be the origin what it may, the results are excellent.

† A gentleman who has held important public situations in the State of Venezuela, in the new federation of Columbia, and we hope will fill you higher, for which he is fitting himself by several years residence in Euro

these causes has produced the best effects on the coloured population, who have shewn themselves worthy of the kindness and consideration they have received, by the manner in which they have devoted themselves to industrious occupations. They have much aptitude for the mechanical arts, in which they excel, and many instances might be adduced, where they have evinced attainments of a superior order, and have been able to take their place on important occasions, along with the most able and intelligent of their countrymen. In 1830, the number of slaves in the republic of Venezuela did not exceed 28,000 persons, which forms a small portion of the number existing in that country before the commencement of the revolution. The measures of abolition already alluded to, are still in active operation, and it is confidently anticipated, that in the course of ten or fifteen years hence, there will be no slaves in Venezuela.*

When from this we turn our eyes back again to our own West India islands, some of them almost within sight of Venezuela, our sense of humiliation is absolutely oppressive. There the laws and the feelings are all *unfavourable* to the coloured population, which of course is debased and unworthy, and *therefore* considered incapable of improvement. But when we look at the sensible and humane legislation of Venezuela, and contrast it with the mock law-making, and worse law-executing of Jamaica; with the mobbings, the burnings and demolitions enacted personally by members of Assembly, magistrates, reverend rectors, and militia officers; the ferocious persecutions, prosecutions and subornations of perjury*, we are forced to the conclusion, that the crisis is come, and that slavery must be removed from our colonies, not only for the credit of the British name, but as indispensable to the civilization of the white population themselves, which, relatively to what it ought to be, is at a lower point of the scale than that of the slaves, with whom they scarcely deign to acknowledge a common nature.

* * Since the foregoing pages were written, accounts have come from the Mauritius, to which Mr Jeremie had been sent, that his arrival created so great a ferment among the slave proprietors, as to induce him, with the governor's sanction, to re-embark and leave the colony. It is added that the colonists have resolved to throw off their allegiance to Great Britain, and declare for independence! The independence of slaveholders! Slaveholders, too, outnumbered in the proportion of ten to one by their slaves! As was to be expected, mercy to their slaves and to themselves is to be *forced* on these colonists. Mr Jeremie, we learn, is to return, accompanied by an additional regiment and a general officer.

* See a full account of these outrages, perpetrated so lately as February and March last, and of the previous insurrection of the slaves, in the Report of the Baptist Missionary Society for 1832.

ARTICLE XI.

- I. THE STUDENT'S MANUAL; being an Etymological and Explanatory Vocabulary of Words derived from the Greek. 5th Edition.
- II. AN ETYMOLOGICAL AND EXPLANATORY DICTIONARY OF WORDS DERIVED FROM THE LATIN; being a Sequel to the Student's Manual. 3d Edition.

By R. HARRISON BLACK, LL. D. London, Longman; Edinburgh, Adam Black.

WHEN, in several of our previous Numbers, we protested against the paramount sway of Latin and Greek in the education of youth, we did not deny that much of the etymology of our own language will be found in these languages, and we reserved a place for them in a complete education. The etymological use of the dead languages, indeed, is generally put foremost in the array of reasons for the study of them. The author now before us has thought, and we perfectly concur with him, that the etymological advantage may be obtained at a much cheaper rate than the formal and protracted study of the language, seeing that nothing more is needed than the root of each derivative, which, in the very nature of etymology, will be found the same in the ancient and the modern language. The first volume was written for the studies of a young female relative of the author. Practically, it has been found to render females, although not at all instructed in Greek and Latin, expert and ready etymologists, to exercise them on the mere words, as in a dictionary or vocabulary; and if beneficial to females, there is no reason why the benefit should not equally avail the other sex. This has been felt, for a third edition of the Latin volume has just been called for, while the Greek is in its fifth; and we know that both works have been largely infused, and generally without acknowledgment, into school-books. With a specimen, which we now add, we recommend the works to all students of the English language, old as well as young; indeed to all who relish curious matter and amusing reading.

WORDS DERIVED FROM THE GREEK.

- ANTHROPOS, ἄνθρωπος, man.
- ANTHROPO PHAGI, φάγω, *phago*, I eat. Cannibals or man-eaters.
- Mis-anthropy, μίσω, *misoo*, I hate. Hatred of mankind.
- Phil-anthropy, φιλέω, *phileo*, I love. Love of mankind.
- The-anthropos. θεός, *theos*, God. A title of our Saviour, being God and man.
- ARCHE, ἄρχη, government.—ARCHOS, ἄρχος, a chief.
- A-N-ARCHY, ἀ, a, not, without. Want of government.
- Chili-arch, χίλιαι, 1000. A commander of 1000 men.
- Gene-arch, γέννα, *genca*, a generation. A chief of a tribe or family.
- Hept-archy, ἑπτα, *hepta*, seven. A government under seven chiefs.
- Hier-archy, Ἱερός, *hieros*, holy. An ecclesiastical government.
- Mon-archy, μόνος, *monos*, one. A government under one chief. *Anti-mon-archial*; against government by a single person.

Myri-arch, *μυρίας, μυρίας*, 10,000. A commander of 10,000 men.

Olig-archy, *ὀλιγος, ὀλιγοί*, few. The form of government in which the supreme power is placed in the hands of a few.

Patri-arch, *πατήρ, πατήρ*, a father. The ruler of a family or tribe.

Tetr-arch, *τετρας, τετρας*, four. A Roman governor over four provinces.

ORAMA, *ὄραμα*, a scene, view.

Pan-orama, *πᾶν, παν*, all. A circular painting, having no apparent beginning nor end; from the centre of which the beholder views distinctly the several objects of the representation.—Peri-streptic, from *περίστροφος*, I turn round, I turn about (*peri*, about, and *strepho*, I turn), is a term applied to a Panorama, which the spectator views turning round.

Di-orama, *δι*. This *Orama* differs from the Pan-orama, in being a painting on a flat surface. In viewing the *Panorama*, the spectator is placed, in appearance, in the centre of the object represented, and thus he has a view of all ("pan") around him. In viewing the *Diorama*, he is placed, as it were, at the extremity of a scene, and thus he has a view *across* or *through* that scene. Hence, I presume, the inventor of the term compounded it of the Greek preposition *δια, dia*, through, and *orama*; though from the circumstance of there being two paintings under the same roof (in the building in Regent's Park), it has been supposed the term is formed of *δις, dis*, twice, and *orama*. But it is to be observed, that if several paintings of the same kind were exhibited, each painting would constitute a *Diorama*. To the first meaning, however, it must be confined when only *one* scene is represented, as in an ingenious toy made at Brussels.

Cosm-orama. The exhibition thus named consists of several distinct paintings (seen through a magnifying glass) of different places in each quarter of the world. *κόσμος, cosmos*, signifies "the world."

The Dictionary of Words derived from the Latin is divided into Two Parts. "In the *first*, a list is given of Latin words, to which is added all the English words derived therefrom. Thus one leads to the knowledge of many, as a cluster of leaves or flowers is acquired by only seizing the stem on which they stand. The object of the *second* part is to present an *alphabetical* list of words, with their etymology and definitions; and to point out the value of the prepositions which enter into composition. And, in order to do this with more effect, the words so compounded are contrasted with such as are synonymous." Our limits will allow us to present only one example from each Part.

AEQUALIS, or AEQUUS, equal.

Equal, equalize, equality, equally, un-equal.—Equ-animity.—Co-equal.—Equator, equation.—Equi-lateral, equity.—Equi-nox, equi-noctial.

VIRTUE, from *virtus*, a term used in various significations. In the first place, it signifies goodness, whether of body or mind; but most properly, and usually, and commonly, valour; for valour was reckoned among the ancients as the greatest virtue; hence it came to signify *power*; thus we sing "the *virtues* of plants." These virtues were understood to be certain qualities appropriated and inherent in their constitution, by which they are rendered effectual in the cure of disease. "And Jesus immediately knew that *virtue* had gone out of him." See Mark v. 36. See also Luke vi. 19, and viii. 46. [The word *virtue*, in the Greek translation of the above passage, is rendered by *δυναμις (dynamis)*, which signifies *power*.]

From this sense of the term *virtue* have arisen the adjective *virtual* and the adverb *virtually*. "*Virtual*," says Johnson, "means, having the efficacy without the sensible or material part." Thus we may say, brandy or pepper are *virtually* or potentially hot, not that they are *actually* hot as boiling water, but they produce the sensation of heat. *Virtue*, in its more restrained sense, is used to signify a habit or principle, or doing well.

Moralists usually distinguish four principal, or, as they are usually called, *Cardinal Virtues*, namely, Prudence, Justice, Fortitude, and Temperance.

NOTICES.

EDINBURGH.—The Phrenological Society held its first meeting this session on Thursday, 15th November, in Clyde Street Hall. The following donations were laid on the table, and the best thanks of the Society voted to the respective donors:—Two Parsee Skulls; Skull of a Hottentot; and Skulls of two Roe-bucks (male and female), and of two Grey-bucks (male and female). Presented by Dr Mackintosh.—Six Skulls from the ancient Cemetery of St Giles, Edinburgh, found in September 1832, in digging the foundation of the New Court Rooms on the south side of the Parliament Square. Presented by Charles Maclaren, Esq.—*Théorie des Ressemblances; ou Essai Philosophique sur les moyens de déterminer les Dispositions physiques et morales des Animaux, d'après les analogies de Formes, de Robes, et de Couleurs.* Par le Chevalier de Gama Machado. Paris, 1831. Presented by the Author.—*Journal de la Société Phrénologique de Paris, No. I.* Presented by the Publishers.—Two Peruvian Skulls, from the neighbourhood of Arica. Presented by James Steel, Esq. of H. M. S. Volage.—Chinese Skull, taken from a body in the native dress, found floating in a Chinese river. Presented by William Scott, Esq. Surgeon, H. E. I. C. S.

LONDON.—We observe from the prospectus of the London Institution, that four lectures on Phrenology are to be delivered there by Mr J. L. Levison, on Wednesday the 5th of December, and the three succeeding Wednesdays, at one o'clock.

Dr SPURZHEIM was lecturing in Boston, United States, in October. We shall be glad to receive from our American friends, as well as from himself, an account of his reception and progress in the New World.

PARIS.—Extract of a letter, dated Paris 24th August 1832, from Dr—— to Dr Robert Spittal, Edinburgh.—Yesterday I was present at the Annual Meeting of the Phrenological Society here, and was very much pleased indeed. The Vice-President Las Cases, a member of the Chamber of Deputies, made a very neat opening address, in which he alluded particularly to the Phrenological Society of Edinburgh and Dr Combe, and held up Great Britain, in which there are twenty-three Phrenological Societies, as a pattern to France, in which there are only two. We had then a very good account of the proceedings of the Society by the Secretary Casimir Broussais. Next followed a most excellent demonstration, and application of the general principles of Phrenology, illustrated by casts and skulls, both of men and the inferior animals, by Dr Foissac. A paper by M. Appert, on the application of Phrenology to the amelioration of criminals, came next in succession; and the business was concluded by a phrenological notice by Dr Corbière. There were nearly 300 ladies and gentlemen present, and the meeting went off very well.

FORTSMOUTH.—We learn from the Hampshire Advertiser, of 20th October 1832, that on Tuesday, the 9th of that month, the members of the Hampshire Phrenological Society, and their friends, held a second meeting at the Council Chamber, Old Town-Hall, Portsmouth,—J. E. Atkins, Esq., in the chair. A lecture on the principles of Phrenology was read by the Secretary, Mr J. R. Stebbing; after which Dr Mahony, Mr Tichbourne, and Mr Hay, severally addressed the meeting, and related many facts favourable to the science, arising from trials, made by the sceptical, of the skill of various of its professors.

ANTI-PHRENOLOGICAL FACT.—“Reader, when I was a child, it was not Gall, but some other galling Phrenologist, who, seizing one of the protuberances of my reverend head, thank heaven it was not my nose, deliberately told my aunt Josephine, that the said bump contained the organ of Matrimony. Now, my aunt, not being deep in the science, as deliberately replied, that she did not believe in any organ but the organ of Music; whereat the good man, no way discouraged, immediately commenced feeling for the said organ. Indeed, Sir, cried I, somewhat impatiently; indeed, Sir, I have got no more bumps, and I should not have had that, only I fell down yesterday and knocked my head against the table. My aunt Josephine laughing aloud, the phrenologist was

disconcerted, and I, glad of the opportunity, escaped from the room."—*Four Years' Residence in the West Indies.* By F. W. N. Bayley.

LOO-CHOO HEADS.—The following is an extract from the narrative of Captain Beechy's voyage, p. 483. "Mr Collie (surgeon of the Blossom) in his journal has given a phrenological description of the heads of several Loo-Chooans which he examined and measured, in which proportions, he thinks, the lovers of that science will find much that is in accordance with the character of the people. The article, I am sorry to say, is too long for insertion here, and I only mention the circumstance that the information may not be lost." What has become of the "article" here mentioned? If Captain Beechy thought it not worth inserting in his book, why should it not be sent for publication in our own Journal, if nobody else will print it? The observations of so excellent a phrenologist as our friend Mr Collie cannot fail to be valuable, especially on so interesting a subject as this.

EDUCATION OF THE MIDDLE CLASSES.—In our last Number, we printed "Proposal for Courses of Lectures on Natural History,—Chemistry,—and Phrenology combined with Physiology," issued by a body of the students who had attended Mr Combe's summer Lectures on Phrenology. Having subsequently ascertained that their scheme was very generally approved of, and would be supported by a number of the merchants and others of the middle classes of the community, the projectors, in September, proceeded actively in making the necessary arrangements for Lectures, and with complete success. A preliminary meeting of between 200 and 300 of the subscribers and their friends, male and female, was held in the Waterloo Rooms on the 29th October, when the Report of the interim committee was read, detailing their proceedings, and explaining the nature and objects of the Lectures; and a committee was then appointed for carrying the measure into effect: Dr Murray accordingly now lectures on Chemistry in the Waterloo Rooms, on Monday and Thursday evenings, and on Geology, on the Wednesday evenings, at $\frac{1}{2}$ past 8 o'clock, to large classes; while Mr Combe lectures on Phrenology, in Clyde Street Hall, on Tuesday and Friday evenings, at the same hour, to a crowded audience. In the first week of the Lectures, upwards of L. 150 had been received for tickets, and, as these were necessarily limited, it was obvious, from the demand, that the whole would be very speedily disposed of.

In September, also, a Memorial was prepared, and widely circulated, by the young men in the employment of the Merchants and other Shopkeepers in Edinburgh, and from which the following extract has been taken:—

"*Respectfully Sheweth,*—That the very late hours to which places of mercantile business are kept open in this city, has been a grievance long and justly complained of, particularly by the grocers;—so great a degree of bodily and mental exertion being not only injurious to health, but preventing the young men acquiring that moral and intellectual improvement so necessary to constitute them useful members of society, and to enable them to keep pace with the rapidly increasing intelligence of other classes of the community. That confiding in your desire for their improvement, both as respects their moral and physical condition, and wishing to secure to themselves that consideration in society, of which their want of opportunity to obtain knowledge commensurate with that of other classes threatens to deprive them, your memorialists beg respectfully to propose, That from and after October 8th, the hour of shutting the shops of the drapers, mercers, hosiers, hatters, jewellers, ironmongers, booksellers, stationers, &c. &c. be 8 o'clock P. M., and the grocers, tea and spirit merchants, tobacconists, &c. 9 o'clock P. M., Saturdays excepted." This request having been very properly granted, a considerable number of the young men have enrolled themselves at the School of Arts for instruction in Mathematics, Chemistry, and Natural Philosophy; not a few have joined the evening classes for French and Latin, taught upon a popular and improved plan by Mr Black, late English tutor to the Duke of Bordeaux; the circulating and other public libraries in town have received a considerable accession of members; and, lastly, many both of the masters and men, with their wives and families, attend Dr Murray's and Mr Combe's lectures.

THE
PHRENOLOGICAL JOURNAL.

No. XXXV.

ARTICLE I.

LETTER TO THE EDITOR, ON THE RELATION BETWEEN
CEREBRAL DEVELOPMENT AND THE TENDENCY TO
PARTICULAR PURSUITS;—AND ON THE HEADS OF
BOTANISTS.

SIR,—MANY persons, having a slight knowledge of Phrenology, expect the cultivators of that science to decide on the favourite studies, or particular pursuits and accomplishments of others, by a simple inspection of their heads. It occasionally happens, also, that they who have really studied it fall into the same error, and boldly pronounce judgment on such points, until taught by repeated failure, that development of brain is not an index to specific actions*. I have known a phrenologist tell one person that he was “fond of hunting,” another, that he “rode at a devil of a pace,” a third, that he was “addicted to the use of artificial stimulus;” assumptions founded on great Destructiveness, with a generally large development of the animal organs in the three individuals. Nevertheless, the *fortune-teller* was wrong in each instance. Had he known previously, that an individual did like hunting and hard-riding, such a development of brain, might with perfect truth and consistency have been looked upon as explanatory of the tastes. I have also heard a gentleman told, on the ground of large Eventuality, that he was fond of history and biography, whereas he cared

* Gall and Spurzheim, and the later phrenological writers, are careful to warn their readers against this mistake.—EDITOR.

little about them, but was a zealous chemical experimenter. This taste equally admitted of explanation, by the large size of the organ mentioned; the error lay in the substitution of a particular direction in lieu of the essential power. Unfortunately too many examples of similar failures might be cited, sufficiently discouraging to one commencing his phrenological studies, and looked on as so many "antiphrenological facts" by those altogether ignorant of the science, or incapable of appreciating the difference between an inherent power and the particular application or activity of it*. Not a few persons err from the latter circumstance.

The misconceptions as to the nature and extent of phrenological evidence, drawn from organization, which are thus spread abroad, materially retard the progress of the science, and cause it to be rejected by minds to which a clearer knowledge of it would impart the highest gratification, and prove in the greatest degree useful. In Phrenology, as in Medicine, Political Economy, or any of the higher departments of science, it is very difficult for those little conversant with the particular subject, to distinguish between the errors of individuals and the imperfect state of the science itself. Accordingly, we find the one in our own day, and the others for centuries past, regarded as butts against which every witling is at liberty to discharge his small arrows, though his own or his auditor's ignorance constitutes their only force.

It is by no means my wish to deny, that in many cases of excessive or defective development in certain organs, the old quotation "*poeta nascitur, non fit*" is strictly correct in other things besides poetry; yet I believe, at the same time, that a still greater number tend to verify the equally familiar maxim, "just as the twig is bent, the tree's inclined †." In the lat-

* The capacity of fully estimating this difference is certainly one of the most marked and most important characteristics of *philosophical* minds; but Phrenology, in its present state, affords no satisfactory explanation of it. This capability is strongly manifested in the writings of Franklin, Sterne, Bacon, and Voltaire; less so in those of Cullen, Blackstone, Hume, and Cowper; and still less in the works of Mason Good, Coke, and the poet Thomson.

† This remark holds good only where there is a pretty equal development of all the organs. If any particular group be in excess, either of magnitude or deficiency, the benders of the twig will discover, by experience, that it is a very difficult task to give it an inclination opposite to nature. Phrenology shews the relative proportions of the organs.—EDITOR.

[In answer to this note by the Editor, I may add as an explanation, that an inclination *opposite to nature* was not intended. Such would imply the creation of a power greater than nature, and the attempt be a gross absurdity. The principle contended for is merely, that *nature* admits of various inclinations in her young twigs, and that these inclinations may be different from the direction which the twigs would have taken if left untouched. *Example*:—Form, Individuality, Eventuality, Locality, Language, and Constructiveness

ter cases, organic development will never enable us to say, positively, in what direction the twig is bent; though it may tell us distinctly enough in what direction the latter might or might not have been so guided. The two circumstances, chiefly instrumental in preventing this certainty, are widely different in their origin, though tending to the same result. The one arises from the nature and constitution of our brain and its functions; the powers or faculties being few and simple, their applications many and varied. The other great source of error in predicating particular tastes or pursuits, originates in the nature and objects of those pursuits. Games may be played, sciences may be studied, the routine business of life may be carried on in very different methods. It thus happens, that while we seldom know any man's pursuits or studies from the form of his head*, yet being told of these, we may commonly decide on the department of a science preferred and succeeded in, as well as the manner in which it will be studied. For this purpose, however, it is requisite that we have some idea of the science signified, else our own ignorance of its bearings and objects may still cause error.

Without quitting the history of our own science, may we not find abundant illustrations of these sources of error to the ignorant or the careless? Who, on seeing Drs Gall and Spurzheim, as unknown strangers, could have said, "There are two phrenologists?" Assuredly no one. We might have a strong impression, that if presented to them, it would then be relished; but we could go no farther towards positive assertion. Who, on seeing Sir William Hamilton and Dr Stone, would venture to say, "There goes a pair of antiphrenologists?" We might, in-

large. Is the individual a botanist or an anatomist, an artist or a geographer, a man of literature or a natural philosopher?—H. C. W.]

Reply.—If by "bending the twig" is meant directing "Constructiveness," for example, to performance of the duties of a tailor rather than those of a carpenter, the author's remark is well founded. In short, as each faculty has an extensive field in which it may exercise its functions, it may be directed by external influences into one department of that field in preference to another. This, we perceive, is the author's meaning; but the common interpretation of the words cited is that given by Pope in his own commentary on them, that any individual child may be made an eloquent lawyer, a profound mathematician, a skilful mechanist, or an accomplished musician, just by bending the twig. Phrenology proves that this is a most erroneous opinion. It enables us to designate the great boundaries and subdivisions of the field in which the mind may act with effect, and also to point out departments in which it will not be successful. See an illustration in our 4th vol. p. 634.—**EDITOR.**

* We limit this remark to branches or departments of study. If we observe Constructiveness, Form, Size, Weight, and Individuality, to be large, we may safely predicate a *natural liking* for pursuits, of *one kind or other*, calculated to gratify this combination. These may be, drawing, turning, building, tailoring, or making steam-engines, watches, or opera-glasses; still they will imply construction.—**EDITOR.**

deed, here, have a shrewd guess, that they would be thus ennobled for posterity, if they considered the subject at all; yet many persons, in whom there is an equal *a priori* evidence, have never attended to it. But had we been told of a head like that of Dr Gall, that it belonged to one of the earliest phrenologists, we might then safely enough have affirmed, that he would meet ridicule and opposition with dogged unswerving firmness, and reply to his opponents, like one of his profession in times past, whose discoveries were denied,—“Come and see.” And of the latter named gentlemen we might easily have anticipated, that one would be violent and irascible, the other rash, self-confident, and inconsistent, and that such would be *their mode* of opposing doctrines, if interfered with at all.

Among the disciples of Phrenology, we see one with the observing organs large, and the reflective moderate, seeking the facts and details. A second, in whom the proportions are changed, will readily acquiesce in the principles, but give little attention to special details. Some are skilful manipulators. Others, failing in this, study character by the gestures and actions of those whom they observe. A third set learn the opinions of men whom they wish to read, and draw hence their conclusions. Now every phrenologist knows, that these different tendencies in the manner of studying the same science, are mainly dependent on differences in cerebral organization: the obvious conclusion from which is, that no one form of brain is peculiar to the phrenologist; but that his science presents so many different branches, may be studied by such different methods, and for such varied intents, as to render the most dissimilar brains adapted to it in some, though unequal degree. The same remark may be extended to most other sciences.

Impressed with the mischiefs arising from the contrary assumption, practically acted upon, I am induced to offer a few remarks on the relations between the cerebral development of scientific men, and the science or particular department of a science in which they are observed to excel or be deficient. There will be no claim to novelty of principle in these remarks; but the particular application of established principles is often useful to the younger students in any branch of knowledge. Besides, as previously mentioned, before we can decide on this particular application of general principles, it is requisite that we know something of the bearing and objects of the pursuit on which such applications turn. Being myself a student of the science, I shall, in the first place, select Botany and Botanists for illustrating the position, and on a future occasion may probably take up some other department of knowledge in a similar manner, should the Editor of the Phrenological Journal think the plan sufficiently useful. If the cultivators of other sci-

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In the Philosophy of Botany, the two former become a means only whereby to attain other ends. The influence of soil and climate over vegetation, with the mutual relations between the vegetable kingdom and the rest of creation, are the essential points of research. Plants are no longer looked upon simply as individual objects or groups, calculated only to gratify the collectors of specimens, or the student of names and specific forms. They become an item of the great system of Nature; an index to the past condition of the earth, and a key to the laws now governing it. They constitute one of the links in the circle (not linear series) of causation, where the animal, vegetable, and mineral kingdoms, matter and motion, and property, are inseparably blended, mutually acting on and reacted upon by each other. This department of Botany requires Causality, Comparison (and, allowing Ideality and Wit to be intellectual powers, these also) in a much higher degree than either of the former. But very few botanists prefer it.

Historical, horticultural, medical and economical Botany, are collateral branches, inarching with other studies, and must be referred to these latter when our consideration is their cerebral origin.

Among the sciences, that of botany can only take a low place in the scale of dignity, relating so much to detail and the knowledge of simple names and individual objects, and very slightly exercising the higher intellectual powers, at least in the departments chiefly attended to by botanists. Its classifications, groupings and systems are by some of its votaries assumed to require high philosophical qualities of mind; but, from what has been already said, I presume the phrenologist will join in the popular estimate, and assign its place among those studies not requiring great philosophic power. Of course, it is not to be imagined from this, that all its disciples are men of feeble mind. Too many contrary examples might be immediately adduced to negative such an assumption. Still, after seeing a good many botanists, I have no hesitation in saying, that the average of botanical heads is smaller than will be found in those of several other sciences, as Geology, Moral Philosophy, or Political Economy. And if our attention be limited to the reflective organs, this average will be very decidedly less, though the excess in those of observation may cause an equal, or even a greater number of organs to be marked *large*. In accordance with such general inferiority in size, we see females, and young persons, make more progress in botany than in the other sciences first named. The inhabitants of Scotland have larger brains, larger reflective, but relatively smaller observing, organs than the people of England; and a few years ago it was remarked in an Edinburgh Philosophical Journal, that the botanical

productions of Scotland had been more studied by Englishmen than by Scotchmen. Indeed, the country is indebted to Englishmen for its descriptive Floras. Despite some individual exceptions, the national character of England is unquestionably better adapted to this science than is that of Scotland; yet are there one or two points in which the latter country excels. Its inhabitants are more philosophical and more acquisitive. Accordingly, they have most urged the paramount importance of the Philosophy of Botany, even while the individuals urging it have not had sufficient knowledge of the details to effect much. They also collect specimens with treble zeal and assiduity. Often I have heard Scottish botanists remark, that the English know not how to collect plants; the meaning of which is, that they fail in the quantity gathered, for the eye of an Englishman probably detects and distinguishes plants more readily than does that of his brother botanist of Scotland. It may also be said, that where the English excel the Scots, the French excel the English. But a national character cannot be applied to every individual of the nation; and there are excellent practical botanists of Scottish descent.

The only representatives of botany in the Clyde Street Hall are masks of Sir J. E. Smith, and Roscoe of Liverpool. The latter was not a botanist of much note; literature being his prevailing accomplishment. The mask of the former is cited by Mr Combe as an example of large Language, with a remark that this organ is essential to botanical study. The illustration is happy, since Sir James owed his celebrity as a botanist in a great measure to his Language, aided by adventitious circumstances.

Most persons are aware, that the botanical names of plants are always double, nearly corresponding to the Christian and surnames of men; the name of the individual joined with that of his family. This method of nomenclature was brought into use by the Swede Linnæus, previous to whose time the technical name of a plant commonly consisted of a whole sentence, descriptive of its appearance or properties. The superior precision and facility of the nomenclature adopted by Linnæus soon introduced it into general use; and it then became necessary for all botanists to know with certainty what plant this author meant by his name. In cases of doubt, two plans were followed in acquiring this knowledge; the one, a comparison of the plants with those in the collection of Linnæus; the other, through a reference to the various names applied by different botanical authors to the same kind of plant. For some time after the death of Linnæus, a large number of botanists had scarcely any other object in pursuing the study, than that of

learning the Linnæan names *, or of giving others on the same principle to those plants which were unknown during his life. Smith had evinced an early taste for botany, and his father purchased for him the collections of Linnæus, sold after his death. Our English botanist, of course, became the great referee for names, and this circumstance, exactly adapted to his natural talent † for such a department in the science, soon raised him to celebrity. Had he possessed large Form and Individuality, with only small Language, he would have compared the plants themselves, and rested satisfied with determining their identity in kind, since nothing more would have been required from him. Throughout his botanical writings, however, he has exhibited the strongest tendency to study, and often with great labour and patient research, what name in other authors answered to any given name in the writings of Linnæus. So much so, indeed, that probably most botanists of the present day would give him credit for a far greater knowledge of names than of plants, or of their structure, functions, and uses. Next to his knowledge of names, comes that of species or individual forms. He was not a philosophical botanist. In his mind, the knowing predominate over the reflective organs; and, as already noticed, the organ of Language is decidedly large.

Were we to take the form of Smith's forehead, as the test of a botanist, we should nevertheless widely err in many cases; though several botanists of the present day exhibit a pretty close resemblance in the proportions. As it would be deemed a breach of propriety to point out the special examples among these by name, and not being in possession of the proper physical evidence relating to those of former ages, my further observations must be less individual. To counterbalance this deficiency, I have taken notes of the cerebral development of a number of botanical friends, which are here presented in a tabular form, for the purpose of exhibiting an average deduced from them; the order of sequence is in accordance with the average size.

									Average.	
1.	Individuality,	4	5	4	4	4	4	5	4	4½
	{ Eventuality,	4	5	4	4	4	4	4	3	4
2.	{ Form,	3	4	4	3	4	5	4	5	4
	{ Locality,	4	4	4	4	4	4	4	4	4
	{ Constructiveness,	5	4	4	4	3	4	4	4	4
3.	Language,	4	3	5	3	4	4	4	4	3½
4.	Size,	4	3	4	4	4	4	3	4	3½
5.	Comparison,	4	4	4	3	4	4	3	3	3½
6.	Time,	3	4	4	4	4	3	3	3	3½
7.	{ Weight,	3	3	3	3	3	4	4	4	3½
	{ Colour,	4	3	4	3	4	3	3	3	3½

* See the last Note.

† Smith thus writes of himself; "yet he has ever considered as sacred the very words of Linnæus, where they required no correction."

									Average	
8.	Order,	4	4	4	4	2	3	3	2	3½
9.	Number,	2	3	3	3	4	3	3	4	3½
10.	Tune,	4	3	3	2	3	4	3	2	3
11.	Causality,	4	3	3	3	3	3	2	2	2½
12.	Ideality,	4	3	3	2	2	4	2	2	2½
13.	Wit,	3	3	3	2	3	3	2	2	2½

This table will require explanation. It is well known that Gall and Spurzheim never had any definite scale for expressing the comparative size of organs. In the System of Phrenology by Combe, a numerical scale rising from 1 to 20 is given, adapted to a scale of ten terms expressing the same thing virtually. The former is scarcely ever used. The latter is probably not too minute when applied to the affective and reflective organs; but not being myself sufficiently exercised to this minuteness in estimating development, a scale of five figures only is here adopted, that being the one always used in my private observations, and, on this account, the most familiar; 3 represents the medium size, and answers to *moderate* and *rather full* in the Edinburgh scale. Almost the only difference between these scales of 5, 10 and 20 degrees, rests in the greater precision (if correctly applied) of the more numerous divided one. In estimating the organs in the lower part of the forehead, anatomical difficulties cause a probability of error more than equal to one degree of the ten-scale. In the table, the average column is the *sum* divided by the *number* of developments given, to obtain the mean result. My estimates of Size, Weight, Colour, and Number are not very trust-worthy.

The eight individuals, from whom these notes of development were taken, have shewn an early and decided taste for botany, so as to make it (as far as circumstances allow them to do this) quite the dominant pursuit. The four individuals included in the next table are differently circumstanced. In three of them botany is quite a secondary object; and to the other descriptive botany is little congenial.

						Average
1.	Causality,	4	5	4	4	4½
2.	Locality,	4	3	4	4	3½
	Individuality,	3	3	4	4	3½
		Constructiveness,	4	3	3	4
3.	Language,	3	3	4	4	3½
	Order,	3	4	4	3	3½
	Comparison,	3	4	4	3	3½
	Ideality,	4	4	3	3	3½
4.	Form,	2	3	4	4	3½
	Eventuality,	2	2	5	4	3½
	Time,	3	2	4	4	3½
	Tune,	4	2	4	3	3½
		Wit,	3	4	3	3	3½
5.	Size,	2	2	3	4	2½
	Colour,	2	3	3	3	2½
	Number,	2	2	4	3	2½
6.	Weight,	•	2	3	3	2½

In the first table, Individuality is pre-eminent; it is also among the larger organs in the second. Its use to the botanist is sufficiently obvious, the basis of the science being individual knowledge; and when we consider, that of plants upwards of 50,000 different species are described, without counting subordinate varieties produced by cultivation, climate, &c. the importance of this organ to the botanist will need no additional evidence. Eventuality ranks next among the genuine botanists, but lower in the others. Its general prevalence can scarcely be accidental; and yet its connection with botanical taste (for none of these are entitled to be called physiological botanists) is not quite apparent. Form occupies the same place in both lists as Eventuality. It is one of the most important organs in describing plants, the distinctive descriptions of species being very frequently derived from peculiarities of shape, and a large number of the technical terms relate thereto. Still, if we may generalize from these dozen examples, it is not so important as Locality. The latter organ ranks second in both lists. Constructiveness second in one, third in the other. The relative position of parts occupies a prominent place in botanical classifications and descriptions. In the classes of Linnæus, six out of twenty-four are founded almost solely on this, and it forms an item in the characteristics of half the others. In the modern systems it holds a still more important place. In addition, I believe, the *spirit* of system-making in Natural History to proceed in a great measure from Locality and Constructiveness. Linnæus contended, that natural-historical classifications should resemble maps, and that a linear series could never exhibit the true place of the different imaginary groups in respect to each other. Macleay represents them by circles composed of smaller circles, and these again of tertiary circles, and so on. Fleming adopts division and subdivision in a binary series, as it were branches from one common root or centre, dividing again and again into forks. Almost all naturalists agree, that straight simple lines do not represent the affinities of natural objects. Such system-making has been attributed to Comparison; I think it far more likely to originate in the organs here named.

As all objects and individualized groups must be written and spoken of by name, the use of Language to a botanist is highly requisite. Less so, it would appear, than Individuality; nor is this surprising, since the first requisite for verbal memory is to be looked for in the clearness of our ideas, and the number of objects considerably exceeds that of the words used for names in botanical science; just as we see the number of human beings in a city exceeding the number of different names. In each case, the various combinations of the same words supply names for many more objects than there are words used. Size, though

frequently called into exercise, is only so in the perception of simple proportions. Absolute size and exactness in mensuration are rarely or never required. Though Number is much used in botanical descriptions, it is only in the plainest numerical relations. The four first rules of simple arithmetic amply suffice. Colour is quite a secondary matter, it being almost a botanical axiom, that hue is of no importance in distinguishing plants. Comparison is something above mediocrity in these averages; but it does not seem of much import till we ascend to the philosophy of the science. Time, Weight, Order, Tune, Causality and Wit have little or nothing to do with descriptive botany. Why should Ideality be so low? Whatever difference of opinion may exist as to the exact function of this organ, it has unquestionably some connection with a taste for elegance and beauty, and none of the physical sciences is so directly concerned with objects of elegance and beauty as is that of botany.

The number of developments in the first table is inadequate to establish an exact average; yet, on the whole, the relative size of the organs agrees very well with what we might anticipate; though Eventuality and Ideality may be exceptions to this. The second is introduced merely as a contrast; the four persons only agreeing in their partial taste for botany. The two first may be looked upon as more inclined to philosophical contemplations; the third as a literary historian; the fourth is a medical man fond of his profession. The two latter are merely botanists of species; the two former interest themselves with the relations between botany and other sciences.

Persons deficient in the size of one or more of the organs prevailing in the average of the first table, may attain excellence in botanical science, but it will necessarily be partial. I know a botanist of deservedly high celebrity, in whom the organs marked 1, 2 and 3 in the first table appear to be all well-developed; the upper part of the forehead considerably less; the temperament nervous-bilious. His knowledge of specific forms is very extensive. His pencil depicts them to the life with great ease and rapidity. He gets through an immensity of work, both pictorial and descriptive, combining the two excellencies of great quantity and good quality in the execution of it. A second, in whom Constructiveness prevails, both the observing and reflecting organs (with one or two exceptions) well developed, combined also with large Ideality, is well known for the beauty and accuracy exhibited in his delineations of minute and microscopic objects; but he is not merely a botanist, being also a successful cultivator of polite literature and practical ethics. A third, in whom Language, Form and Individuality (I here speak from rather distant memory) ^d

cidedly prevail over the reflective intellect, is a mere botanist of words and forms. He has been in situations where others have reaped high fame for their philosophical contemplation of nature, and the results of his opportunities, communicated to the public, are in great part composed of learned disquisitions regarding the names under which the plants he saw have been described by different authors, and on the particular variations of form to which the names were applied. A fourth, in whom Form and Language are not large, but Individuality and Eventuality well marked, with pretty full Comparison, evidently prefers the physiology of botany, the actions, functions and uses of plants, and their modifications by culture. A public office obliges him to know and be able to name many plants, which he is exceedingly apt to forget; and when at a loss for a name, he presses his fore-finger between his eye-brows, to all appearance quite unconsciously; a gesture which the phrenologist will know how to interpret.

A naturalist in whom the reflective organs prevail, has written several botanical essays. They relate to the influence of soil, situation and climate over vegetation, and are occasionally blemished by inaccuracy of nomenclature, and the mistaking of one plant for another. Two naturalists with large anterior lobes, and well developed reflecting organs, are constantly throwing out censures against botanists for limiting their attention and exertions to the collecting, naming and describing of individual objects. The unacknowledged literary productions of one of them may be affiliated from this circumstance, when in any way relating to botanical science.

Such individual examples might be given pretty numerously, but as they would merely form further illustrations of what has been already said, it is scarcely worth while to do so. Moreover, several of them being private individuals, whose developments are in the preceding tables, and given under the condition of their not being personally identified with them; it would be a breach of faith to notice any peculiarities that might lead to this. The few examples above cited are in some degree public characters, and (one excepted) not in the tables of development. Enough has been said to give a general idea of the relations between botanical science and particular forms of brain; and also to shew, that no one form of brain is so completely characteristic of botany, that we could decide on the taste merely by cranial inspection. But though this may not be accomplished, we can with tolerable certainty determine what department of the science will be preferred, if studied at all. I have, &c.

HEWETT C. WATSON.

[Some of our readers may recollect that it was the intention of Dr Spurzheim to treat of the organs necessary for the display of particular talents, in the second part of his work on "Phrenology in connection with the study of Physiognomy." The first part of that work was published in 1836, and is occupied by a description of the different varieties of general character which are found in combination with certain forms of head. Along with many valuable observations on physiognomy, and practical directions for the ascertainment of cerebral development, it contains a number of biographical sketches of remarkable persons, illustrated by engravings of heads and skulls. Dr Spurzheim promised to communicate to the world in the second part of this work, besides his observations on talents, already mentioned, those which he had made on what is called Pathognomy or natural language. Unfortunately he has not lived to carry his design into execution; but we fondly hope that he has left behind him manuscripts, which, when published, may in some measure compensate for the loss thus sustained by Phrenology in consequence of his premature death.—EDITOR.]

ARTICLE II.

ON THE PRINCIPLES OF CRIMINAL LEGISLATION.

IN our last number we presented an abstract of the facts contained in Archbishop Whately's "Thoughts on Secondary Punishments," and they appeared to us to amount to a demonstration that the Hulks and transportation to New South Wales not only are inefficient as secondary punishments, but operate as positive bounties inducing crime. We do not anticipate any serious argument against the abolition of both, if more efficacious punishments could be substituted in their place. But, what punishments *can* be substituted with advantage to the community, is a question attended with the greatest difficulties, and to which we now solicit the attention of our readers. We regret that we cannot coincide with the views of Archbishop Whately on this subject, so implicitly as we do in his remarks on the evils of the existing system. As, however, he is a bold thinker, an intrepid advocate of truth, and never afraid of a conclusion which is satisfactorily proved to be sound, we believe that he will commend our independence, and listen to our remarks with candour and consideration.

The first point on which we differ is one of fundamental importance. The Archbishop states his views in the following terms:—

"It is said that those who train young dogs to attack foxes, badgers, and other such vermin, are anxious that they should not be severely bitten in their earliest attempts, which might have the effect of daunting their spirit for ever: they accordingly muzzle or otherwise disable the beast which the dogs are first

set at; and when they have acquired the habit of attacking it, without having formed an association of pain and danger, they will afterwards not be deterred by the wounds they may receive. Now, it appears to me that to hold out impunity to the young, and to first offenders, and thus, as it were, to muzzle the law, till they shall have acquired the habit of defying it, is precisely an analogous kind of training, and just what is best suited to breed up hardened criminals.

“I am inclined to think that in this, and in many other points, important practical errors may be traced to the very prevailing mistake of confounding together two perfectly distinct considerations; the *moral guilt* of an offender, and the propriety of punishing him for the sake of *example*. The theory of punishment, indeed, viz. that it is inflicted for prevention, and not for retribution, is, in the abstract, understood and admitted by almost every one, and is distinctly recognised in our legal enactments. But, in particular cases, there are notions and practices inconsistent with a doctrine so evident, which are by no means uncommon. Irrelevant considerations,—irrelevant I mean, on the supposition, whose truth almost every one admits, that man has no right to think of inflicting vengeance,—are perpetually allowed to influence our judgment.

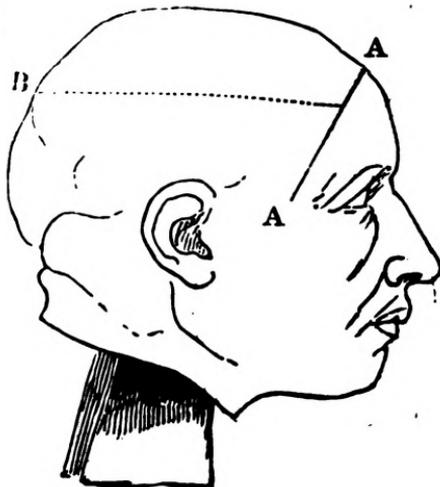
“And the leniency often injudiciously shewn towards youths, and towards any who are supposed to be the seduced, and the instruments of others, arises, I conceive, chiefly from the idea that their fault, in a moral point of view, is less. But if the temptation they are exposed to from the instigation of their elders is strong, it needs the more to be counterbalanced by the fear of punishment. Morally speaking, the strength of temptations from bad education and habits, bad associates, strong passions, ignorance, distressed circumstances, favourable opportunities for crime, &c. may be taken into account as palliations of an offence; but if we make allowance for them, politically, as palliatives in the eye of the law, we are encouraging crime by adding, to all these other incentives, the promise of impunity, and withdrawing the salutary check of fear precisely in the very cases where it is the most needed.”

The general scope of this doctrine appears to us to imply that expediency and the dictates of our moral feelings do not always coincide; and that, in punishing criminals, it is beneficial to the community to disregard “the moral guilt of an offender,” and to “punish him for the sake of *example*,” in a different manner, or in a different degree, from that which we would adopt if the “moral guilt” were taken as the rule. It is a fundamental principle in our creed of morals and philosophy, that, in every instance, the dictates of the moral sentiments, when enlightened, and expediency coincide: and hence, whenever we feel the mo-

ral emotions revolting at any part of our proceedings, we are led at once to question their expediency. Hitherto we have found that, in proportion as our knowledge of facts and consequences have enlarged, our views of utility have harmonized more and more closely with the dictates of enlightened benevolence and conscientiousness; in short, that our moral faculties, our intellectual faculties, and the external world, have been admirably adapted each to the others, and that all coincide when real utility is attained. Dugald Stewart gives a fine illustration of this principle when he says, that Fenelon in his *Telemachus*, by causing Mentor to utter the pure dictates of the moral feelings relative to commerce, anticipated some of the most valuable practical principles, subsequently discovered by political economists.

It is impossible for us to give a more luminous, correct, and profound view of the natural dispositions that predispose to crime, than that recently published in this Journal, vol. vii. p. 385, 493, by Dr Caldwell of Lexington. Several of our observations will necessarily be repetitions of his principles. Men may be divided into three grand classes—1st, Those in whom the organs of the animal propensities predominate over the organs both of intellect and of moral sentiment. In these individuals the base and posterior parts of the brain are very large, while the coronal region, and anterior lobe, or forehead, are deficient in proportion. The following are specimens of this combination :

PROFILE OF HARE.



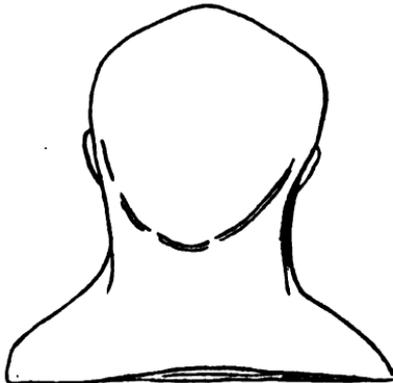
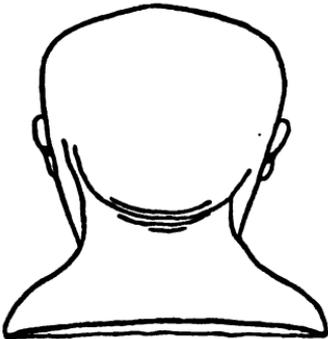
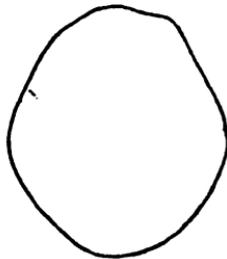
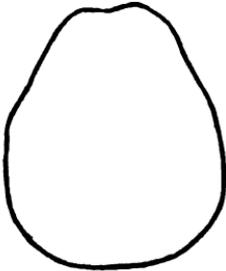
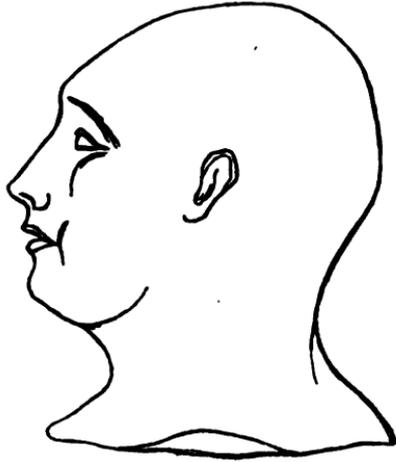
POPE ALEXANDER VI.



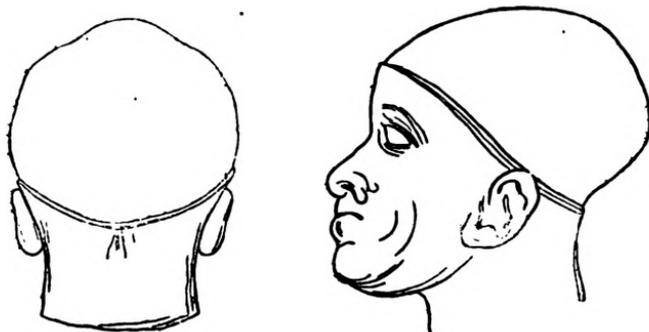
Note.—An account of Pope Alexander VI. will be found in this Journal, vol. iii. p. 590; and of Hare, in vol. v. p. 558, 570.

Three Views of the Head of WIL-
LIAMS, Murderer, described in this
Journal, vol vii. p. 445.

Three Views of the Head of BISHOP
Murderer, described in this Jour-
nal, vol. vii. p. 446.



GESCHE MARGARETHE GOTTFRIED, described in this Journal, vol. vii. p. 561.



Pope Alexander VI. held the highest political rank, and was the Head of the Christian Church. He was a scandal to the Papal chair;—from the earliest age he was disorderly and artful, and his life to the last was infamous. History accuses him of poisoning, simony, false-swearing, reckless debauchery, nay, of incest with his own daughter. Gottfried belonged to the middle rank of life, and moved for many years in respectable society in Bremen. She was a ruthless poisoner, and murdered her own children, her husband, brother, and numerous other individuals, in the course of successive years. Hare, Williams, and Bishop, belonged to the lower ranks, and were all guilty of murder.

From the great predominance of the organs of the animal feelings, individuals thus constituted are naturally subject to strong, grovelling, selfish passions; they have weak impressions of moral duty, limited views of the real relations of the external world, obscure perceptions of the results of their own actions, and feeble powers of controlling their passions, even when they see the fatal consequences of indulging them.

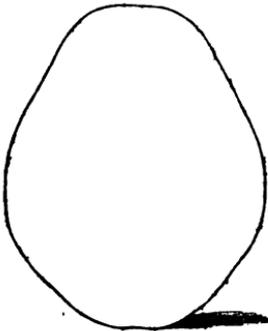
The *second* class of mankind includes those in whom the organs of the animal propensities are large, but in whom the moral and intellectual organs are also considerable in size. The following are examples of this combination :

MAXWELL, described in Combe's System, p. 584.



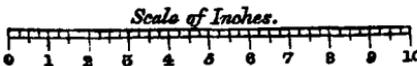
The organs above the asterisks manifest the moral sentiments.

The Right Honourable RICHARD BRINSLEY SHERIDAN, described in this Journal, vol. iii. p. 127.



In individuals thus constituted, the passions are strong, and the natural tendency to immoral gratification is great; but there are also strong controlling powers. There is in them a steadier and more profound perception of what is right, with a greater ability to follow it, than in the first class; but, still, the impulses to vice maintain so strong and constant a warfare against the better principles, that the actual conduct depends greatly on the influence of external circumstances. Sheridan, while prosperous and supplied with money, was ostensibly respectable; and so was Maxwell, while comfortable in his external condition. But when Sheridan became poor, and lost the support of society, his habits sunk with his fortunes, and he became immoral. Maxwell followed the same course. He was originally a town-officer in Ayr, then a soldier, in both of which capacities his conduct was creditable; but after his discharge from the army, being out of work, he became reckless, headed a band of thieves, and was executed.

The accompanying views of the cast of Sheridan's head have been very accurately sketched by an excellent artist of this city, Mr Harvey. The scale is reduced to one-fifth, and applies only to the cuts on this



indulgence of their propensities, the end will be attained to as great an extent as legislation can accomplish it. "We punish a transgressor, not because he has transgressed, but that others may, *by his example*, be deterred from disturbing society;" "we punish a criminal on the same principle that we extinguish a conflagration, to prevent its spreading; or destroy a mad dog, that its bite may not communicate the infection. We seek to check the *example of crime*, and to substitute an *example of terror*." Maxims like these flow naturally from a mind belonging to the third class before described; one in whom the animal feelings exist in vigorous energy, but accompanied by still more powerful moral and intellectual faculties. Such men are capable of profiting by example, and punishment carries terror to their apprehensions, when contemplated even at a distance; but it is a fundamental error to believe that the minds of criminals in general are similarly constituted. In them the agency of animal propensity is prodigiously more powerful, their natural capacity of realizing by anticipation the threatened terrors of the law is greatly less, and their power of acting on that perception, so far as they possess it, is feebler still. The most striking illustration of this condition of mind, was afforded by Mary M'Innes, the keeper of a brothel, executed in Edinburgh some years ago, for murder committed in a fit of passion, on a man who visited her house. The late Dr Andrew Thomson, who attended her in prison when under the sentence of death, and accompanied her to the scaffold, told us that she appeared to him incapable of understanding either the enormity of her crime, or the appalling nature of her situation; and that, to her last hour, she continued to speak as a person who was rather submitting to an overwhelming necessity than undergoing a merited punishment. In her head the moral and intellectual organs are deplorably small, while the animal organs are very large. David Haggart, whose life was one continued series of crimes, occupied himself, while under sentence of death, in writing the history of his life; which is replete with the *spirit* of the thief, and not with the regret or remorse of the criminal about to die. He possessed a good intellect, but deficient moral organs, and large propensities. Our proposition, therefore, is, that this class of human beings is, in a very low degree, capable of being deterred from crime by fear of punishment; and that the theory which prescribes punishment as the preventive of their conduct is essentially erroneous, and cannot prove successful in practice. If they really possess the mental constitution here ascribed to them, they are obviously more becoming objects of compassion than of severity, and are at least as unfortunate as guilty. No one would propose to punish a man

ced, and nevertheless that men of great talents, and unquestionable honesty and philanthropy, should continue to write on criminal legislation, without once adverting to their existence any more than if they were all a dream. Indeed, in consequence of these individuals having neglected to observe the facts, they are to *them* only imaginative speculations. There is this consolation, however, for the humble advocates of Nature and her laws,—that the most splendid talents will never attain sound and permanent conclusions, while they neglect the truths which she presents to their observation. They may rear whatever speculations they please on a basis of their own formation, but time and experience will destroy them. On the other hand, conclusions legitimately deduced from an accurate survey of nature, although despised for generations, are nevertheless true, and capable at all times of being rendered practical. We therefore, calmly proceed in our humble vocation, of expounding for the twentieth or thirtieth time, the real theory of crime, in the hope that sooner or later it will be deemed worthy of consideration.

The vast majority of criminals in this country belong to the first class before described. They are born and grow up with preponderating animal propensities, and are relatively deficient in the moral and intellectual powers. Bred in the lowest rank of life they are generally entirely uneducated, or at least ill educated; they are not broken in to habits of application, industry, and self-denial; they are not supported in any virtuous resolutions which they may occasionally form, by a moral society, or by public opinion; on the contrary, in the circle in which they move, public opinion is directed against morality and industry, in favour of successful villany, and the practice of sensual indulgence. Profanity and profligacy are ever present to their eyes, and example, with its seductive influence, draws them deeper and deeper into the gulf of crime.

Considered abstractly and dispassionately, it is obvious that beings thus constituted and situated, are at least as unfortunate as guilty; and although Archbishop Whately denounces the "false tenderness" for delinquents, which is afloat in the world, we regret that we cannot entirely coincide in his remarks. If we consulted reason and moral feeling concerning the means by which such persons might best be prevented from continuing in crime, the answer would be, by removal of the causes which have produced their criminal tendencies. Legislators, however, consider this to be no direct part of their duty; they apply only punishment, and their leading maxim is, that, if they render the infliction sufficiently certain and severe, so as clearly and forcibly to counterbalance, in the judgment of persons disposed to commit crimes, the gratifications to be derived from

indulgence of their propensities, the end will be attained to as great an extent as legislation can accomplish it. "We punish a transgressor, not because he has transgressed, but that others may, *by his example*, be deterred from disturbing society;" "we punish a criminal on the same principle that we extinguish a conflagration, to prevent its spreading; or destroy a mad dog, that its bite may not communicate the infection. We seek to check the *example of crime*, and to substitute an *example of terror*." Maxims like these flow naturally from a mind belonging to the third class before described; one in whom the animal feelings exist in vigorous energy, but accompanied by still more powerful moral and intellectual faculties. Such men are capable of profiting by example, and punishment carries terror to their apprehensions, when contemplated even at a distance; but it is a fundamental error to believe that the minds of criminals in general are similarly constituted. In them the agency of animal propensity is prodigiously more powerful, their natural capacity of realizing by anticipation the threatened terrors of the law is greatly less, and their power of acting on that perception, so far as they possess it, is feebler still. The most striking illustration of this condition of mind, was afforded by Mary M'Innes, the keeper of a brothel, executed in Edinburgh some years ago, for murder committed in a fit of passion, on a man who visited her house. The late Dr Andrew Thomson, who attended her in prison when under the sentence of death, and accompanied her to the scaffold, told us that she appeared to him incapable of understanding either the enormity of her crime, or the appalling nature of her situation; and that, to her last hour, she continued to speak as a person who was rather submitting to an overwhelming necessity than undergoing a merited punishment. In her head the moral and intellectual organs are deplorably small, while the animal organs are very large. David Haggart, whose life was one continued series of crimes, occupied himself, while under sentence of death, in writing the history of his life; which is replete with the *spirit* of the thief, and not with the regret or remorse of the criminal about to die. He possessed a good intellect, but deficient moral organs, and large propensities. Our proposition, therefore, is, that this class of human beings is, in a very low degree, capable of being deterred from crime by fear of punishment; and that the theory which prescribes punishment as the preventive of their conduct is essentially erroneous, and cannot prove successful in practice. If they really possess the mental constitution here ascribed to them, they are obviously more becoming objects of compassion than of severity, and are at least as unfortunate as guilty. No one would propose to punish a man

for originating in his own person a disease of an infectious nature, although by putting him to death at its first appearance we might save many lives more valuable than his. Yet it would be as becoming to do this, and thereby protect society from physical contagion, as to guard it from moral contagion, by the destruction of a patient defective in his moral constitution. The parallel holds good to a greater extent than might at first be imagined. In both, there is a vicious constitution, of which the disease and crime are merely external manifestations. Each will infect those individuals most readily who are predisposed, or who have feeble or defective organs; and either class will fall into disease or crime by the joint operation of infection and its own constitution, in spite of the severest penalties inflicted on previous patients and delinquents. In cases of crime, as in those of disease, we must look to the removal of the causes, for a remedy to the evils; and expediency will be found to coincide with the results flowing from this principle of action.

It is impossible to mould the form of the brain in juvenile and adult criminals into more virtuous proportions*, and all that society can do, is to withdraw external temptations and provide external restraints, adapted to the mental condition of the persons to be treated.

With a view to withdraw external temptations, the government and higher classes ought to regard the establishment of schools, the encouragement of religion, learning, moral training, savings banks, and all innocent sports and amusements, as the first

* Observation, however, warrants us in saying, that the production of badly proportioned brains is greatly owing to the vicious condition of the parents. After the termination of the war in 1815, a great many men were discharged from the army and navy, long accustomed to a roaming life and ample provisions, who subsequently became destitute and desperate. From the great revolution in trade, consequent on the peace, thousands of families were reduced to abject poverty, and a spirit of fierce animosity against government and the higher classes pervaded the labouring population for several years, and in some districts broke out in acts of open violence. The children produced of parents suffering under these privations, and inflamed by these excitements, would inherit, to a considerable extent, a combination of cerebral organs, which would render permanent in them the dispositions that were only temporarily predominant in the parents. The children, in short, would inherit enlarged organs of the animal propensities, in consequence of the activity of them in their parents, and thus they would be constitutionally liable to acts of passion, insubordination, and dishonesty, to a far higher extent than children produced of the same parents in periods of peace, plenty, contentment, and general enjoyment. The young delinquents, from 12 to 16 years of age, who infest, so extensively, the large towns of Britain, are, in all probability, the shoots of these years. Legislators, by operating on the general mind and condition of the country, have it in their power to influence indirectly the combinations of brain which shall prevail in the next generation; but the extent of this influence is necessarily very limited, because it is only the lowest of the people who are strongly affected by public calamities, and because the individual qualities of the parents, and of the stocks to which they belong, also enter into the constitution of the children.

steps in successful legislation. They should endeavour to create a public sentiment in the lower ranks, and to engage it on the side of virtue. Cheap periodical publications treating of common affairs and local occurrences, ought with this view to be promoted among the people.

We have occasionally seen in the middle and higher walks of life, brains presenting the unfortunate combination of class first, and observed that while external circumstances were favourable, and society smiled, their possessors acted with tolerable fairness, and drew down no striking animadversions on their conduct. They, however, indicated a constant tendency to sink below their original level in business; they preferred the crooked to the straight road; they sought out associates of equivocal habits and reputation, with whom they passed their hours of heartfelt enjoyment and relaxation; and after a variety of oscillations, they generally sunk irretrievably, unless they were borne up by judicious and generous relatives, who fairly took possession of their persons and guided their actions. These men are the "downdraughts" so ably described by Messrs Chambers in their admirable Journal. The cause of their tendency to descend, will be found in their ill proportioned brains. If education, the force of public opinion, and the efforts of relations, are not sufficient to maintain these individuals in their original condition, yet they effect something for their preservation from crime, for it is a rare occurrence that they commit offences which bring them into the hands of justice. We have seen some of them, who swindled, falsified, and acted criminally, in every form that the law could not reach, but on whom education, the sentiment of shame, and the ties of society, operated effectually to the effect of deterring them from pursuits denounced as penal by act of Parliament, or punishable as crimes at common law. If these men had been born in a lower rank, they would have found their way directly to the hulks or the gallows. The same causes that preserve them from these ends, would protect men of similar natural dispositions in the lower ranks, if equally steadily applied. In short, criminals are in society, what weeds are in agriculture; they are by nature *weeds*, and they flourish in a poor and ill cultivated soil. The most effectual means of removing noxious vegetables from the laud are draining, ploughing, harrowing, and manuring. In vain should we burn the mature products, with a view to prevent the growth of another crop. In like manner, brains of the first class, are moral weeds; and the social field which produces them most abundantly, is that of poverty and ignorance. It must be drained of suffering, misery, and vice, cultivated by teaching, and enriched with knowledge, before such brains will cease to grow and to produce crime as their natural fruit. However distant we may be at present from realizing such a condition as

this, we ought to make up our minds to approach it as speedily as possible, assured that we shall continue to suffer the evils of crime, until we practically attain it.

In the actual condition of society, *restraint* is the next means to be used for the prevention of crime ; and here our principles lead us to results widely different from the existing practices of society. The *natural* punishment of crime and criminal dispositions, consists in that extent of restraint, suffering, and privation, which is indispensable to the protection of society, and the criminal himself, from the consequences of his abuse of his propensities. The notions of retributive and exemplary punishments at the hands of man, are equally excluded in our system. If an individual labour under a delicate constitution, extremely liable to inflammation from mental excitement and exposure to atmospherical influences, it is an evil for him to abstain from active pursuits, and to remain chiefly at home ; but it is the least of two evils. In like manner, when an individual possesses a brain like Haggart's, or Hare's, or Bishop's, it would be a source of suffering to him to be locked up in a house of industry, compelled to labour and to learn, and prevented from abusing his propensities ; but, taking his actual life and his death into consideration, as the other alternative, it would be the least of two evils. This is the grand practical principle that must be adopted and acted on, before a successful result in criminal legislation can be reached. The interest of the public and of the criminal coincide in nature, and it is only false theory that makes them appear opposed. The measure of the restraint ought to bear reference not so much to the amount of crime actually committed, as to the degree of criminal tendency in the individual ; and the motive of it ought neither to be vindictive nor exemplary, but moral and benevolent. In short, persons having brains of the first class, ought to be viewed as moral patients, and treated as such, rather than as criminals ; and the form of their brains, combined with their actual manifestations of criminal tendencies, ought to be viewed as symptoms of moral deficiency, sufficient to warrant their being subjected to treatment. The privations necessarily attendant on this treatment, and the moral influence which the exhibition of it would exercise over all minds, by leading them to view crime as disease, and by exciting their manly and energetic feelings to struggle against it, would operate powerfully in determining individuals from infringing the law, and the object of those who advocate punishment for the sake of example, would, in this manner, be attained more effectually than by the blind infliction of suffering unmitigated by moral considerations.

To readers who do not perceive Phrenology to be founded in nature, this must appear a most preposterous speculation ; but

if the facts exhibited in the commencement of this article hold generally true, which is our proposition, it assumes a different aspect. Experience has established that all modes of criminal legislation hitherto adopted have been unsuccessful, and hence it is neither unnatural nor absurd to expect, that a successful method should be widely different from them both in principle and practice. That Phrenology should lead to new views and practices is also not improbable, seeing that the relation between the size of particular organs and the strength of particular mental tendencies, is a fact of the most momentous importance in the philosophy of human nature, and one so new and unexpected, that it appears incredible even to the best informed philosophers, until they have appealed to nature and obtained evidence of its truth. But its importance and novelty are the circumstances that warrant us to expect new results from its practical application. Society may be far from adopting it in practice; but its principles ought nevertheless to be strenuously urged, and public attention arrested to its value. We may call long and loudly before we shall be listened to; but if we speak with the voice of truth, our words will at length penetrate the dullest ear, and awaken the obtusest understanding. It is interesting to observe that practical experience leads humane and enlightened minds to the same conclusion as that reached by means of Phrenology. In vol. iv. p. 559, we gave an account of Glasgow Bridewell founded partly on official communications, by Mr. Brebner the superintendent, and partly on our own observations made during a visit to it. So many of these remarks are applicable to the present subject, that we beg leave to refer to them in detail, and reprint them to save trouble to the reader. Mr. Brebner favoured us with the following Tables of commitments.

Crimes and Offences.

	Year ending 31st December 1865.			Year ending 31st December 1866.		
	Males.	Females.	Total.	Males.	Females.	Total.
Number of commitments during the year,	558	703	1261	688	713	1401
Deduct recommitments of the same individual in the currency of the year,	101	279	380	124	281	405
Remains net number of different persons,	457	424	881	564	432	996
Whereof in custody for the first time,	360	209	569	444	189	633
Old offenders,	97	215	312	120	243	363

“ He has observed that offenders committed for the first time, for only a short period, almost invariably return to Bridewell for new offences ; but if committed for a long period, they return less frequently. This fact is established by the following table, framed on an average of ten years, ending 25th December 1825.

Of prisoners sentenced for the first time to

14 days' confinement, there returned for new crimes,			
about.....	.....	75	per cent.
30 ditto ditto.....	.....	60	ditto.
40 ditto ditto.....	.....	50	ditto.
60 ditto ditto.....	.....	40	ditto.
3 months' ditto.....	.....	25	ditto.
6 ditto ditto.....	.....	10	ditto.
9 ditto ditto.....	.....	7½	ditto.
12 ditto ditto.....	.....	4	ditto.
18 ditto ditto.....	.....	1	ditto.
24 ditto ditto.....	.....	none.	ditto.

“ During the ten years 93 persons were committed for the first time for two years, of whom not one returned.

“ Mr Brebner conceives that punishment must never be lost sight of. The effect of the two years' confinement he attributes partly to the fear of punishment, and partly to the habits of order and industry acquired during it. When prisoners come back two or three times, they go on returning at intervals, for many years. He has observed that a good many prisoners committed for short periods for first offences, are afterwards tried before the High Court of Justiciary, and transported or hanged.

“ These results confirm the doctrine, that individuals cannot change their character and conduct by a mere act of volition, but that their minds must be operated upon by long-continued influences, and gradually ameliorated ; just as disease cannot be removed from the body by a spell, but by a sanative process, requiring both attention and time for its completion. The present practice is founded upon ideas of punitive justice, which appear, at first sight, natural and beneficial, but which do not stand the test of reason and rigid analysis. A boy picks a gentleman's pocket of a handkerchief, and is sentenced to fourteen days' confinement in Bridewell ; which seems a moderate and just punishment for a trivial offence ; and if any one were to propose to imprison him for two years, the extravagance of the infliction, in proportion to the crime, would startle the public mind, and he would become the object of universal sympathy. Yet, if the real welfare of the boy be kept in view, and if we believe the foregoing facts, we shall find it difficult to resist the conclusion, that the sentence of fourteen days is, in its ultimate results, attended with far greater severity, and more positive

injustice, than would accompany confinement for two years. The offender, in the former case, becomes familiarized with crime, almost invariably returns to Bridewell, and proceeds from step to step till he is transported or hanged; in the latter case, his whole habits are changed, and so deep an impression is made on his mind, that he very rarely re-appears in the criminal calendar. We say rarely, because the circumstance of his not afterwards becoming an inmate in Glasgow Bridewell is no proof of his entire reformation; he may have removed to another territory, where he thinks the law will be administered with less severity. But if the great majority of those confined for long periods did not abandon their criminal pursuits, some would undoubtedly find their way back to their old quarters; and as none appear to return, we may safely infer that many are permanently reformed.

“ It seems to us, then, that a sentence of fourteen days for a first offence is, in its ultimate consequences, more prejudicial to the welfare of the criminal than one for a long period; and yet there appears an evident absurdity in proposing to punish a grave delinquency with imprisonment for fourteen days, and a trivial one with confinement for two years. But this just proves that there is an error in the *principle* on which criminal justice is administered. The absurdity arises from this circumstance, that the criminal law regards every offender as a voluntary devotee to crime, and occupies itself exclusively in administering a certain quantity of suffering for a certain degree of guilt, without the least reference either to the causes of the transgression or the consequences of its own treatment. If this principle were sound in nature, it would be successful in practice. The infliction of fourteen days' confinement would not, in its general effects, turn out more severe than imprisonment for two years. In short, the facts contained in the table of “prisoners returning” could not happen.

“ On the phrenological principle much greater consistency is obtained. According to it, no man can become criminal unless from predominance of the criminal organs over the moral and intellectual, or from strong external temptation. Neither of these are voluntary conditions on the part of the offender; he is therefore to be viewed as unfortunate; and, that he may be cured, the *cause* of his depravity must be removed. On this principle, pocket-picking is one symptom of moral disease, lifting tills another, house-robbery a third, swindling a fourth, and so on. The extent and depth of the disease are to be gathered from the whole symptoms and condition of the patient, and the sanative process ought to be conducted with reference to these. A boy whose father is out of work, and who has tasted no food for twenty-four hours, may steal a loaf from a baker's basket

standing temptingly on the street; another boy, well-fed, clothed, and educated, may pick a pocket, and drink the produce of his depredation. Both of these acts are thefts; but the one may happen with a boy of very considerable natural morality, who would be completely protected from offending again by removal of the temptation; in other words, by being supplied with food. The other indicates a decided deficiency of natural morality, with great strength of depraved appetite; and to protect the offender from repetition of his crime, his mind would require to be subjected to a long course of discipline, one part of which will necessarily consist of measures for abating his evil tendencies, and another of means for elevating his moral and intellectual principles. According to this view, the treatment of each criminal would bear reference to his natural depravity, and not depend exclusively on the external form in which his evil qualities manifested themselves. One man may fall senseless to the ground through inanition, and another from apoplexy. What should we think of a physician who should treat both in the same way? The case of the mind is parallel; and it is only gross ignorance of mental philosophy that can perpetuate the present system of criminal legislation.

“ We have been assured by an enlightened friend connected with the administration of the criminal law in Scotland, that the imperfection of the practices now in use is seen, felt, and greatly deplored by almost every judge in the country, from police-magistrates up to the president of the High Court of Justiciary; and that, if the public mind were enlightened, and brought to desire a thorough reformation with the introduction of a rational treatment, the judges would hail it with pleasure. Mr Brebner admitted, that a boy confined for a long period for his first offence was really more fortunate than one confined only for a few days; but he objected to the apparent injustice of long imprisonment for slight offences. The injustice, however, is obviously only apparent; the real severity is in the short confinement. No doubt, as long as offenders are committed with the view of punishment exclusively, Mr Brebner's objection is unanswerable; and the principle of cure or reformation must be adopted, before consistency between intention and result can be obtained. In the Glasgow Bridewell, every thing that can be done, in the way of restraining evil tendencies, appears to be accomplished. The solitary confinement, regular employment, and mild treatment of the prisoners, are well calculated to allay the excessive activity of the animal propensities; but we repeat, that much is wanting to elevate their moral and intellectual faculties. The effects produced by long confinement, even with this deficiency, however, show forcibly how much good might be accomplished by a well-conducted penitentiary.”

We do not maintain that the present practice of penal infliction is *entirely* useless; on the contrary, we have no doubt that it deters many men belonging to the second class, or those in whom the animal, moral, and intellectual organs, are nearly in equilibrio, from crime. These men are liable to strong temptations, but they possess powerful means of resistance, and a strong external motive, such as the fear of punishment will unquestionably operate powerfully in casting the balance in favour of morality. Archbishop Whately has clearly proved that the Hulks and Transportation, so far from being objects of terror to such men, actually operate as inducements to them to commit crime; and as this was his leading object, and a very important one, we accord the highest praise to the manner in which he has collected and expounded the evidence bearing on it. Practically, he has fully and successfully accomplished the main object of his publication; and in our last number we presented the strength of his argument without qualification or modification, because we heartily concurred in it. In the present article we have endeavoured to shew, that when the Hulks and Transportation shall be laid aside, mere severity of infliction will not suffice to deter the evil disposed from committing crime, but that profounder principles must be brought into operation. The prospect of being seized, shut up, and treated for a series of years as a moral patient, forced to labour and to practise morality, would operate as a restraining motive on this class of minds more effectually than the infliction of mere suffering and privation; so that our method of treatment does not exclude the idea of punishment. It only substitutes natural and concomitant punishment, for artificial and direct infliction. A man who falls accidentally and breaks his leg, suffers an indirect punishment in pain and confinement for his carelessness. It is certain that this chastisement renders men in general more careful to avoid injuring their limbs. We would present punishment to criminals in an analogous form,—as the natural concomitant of their immoral dispositions, which render it necessary to restrain their persons and direct their actions. The moral feelings have now become so active in society, that *mere suffering* will not be tolerated as a practical means of deterring from crime; and we venture to predict that if the Legislature, led astray by the proof that the Hulks and Transportation are not dreaded, shall enact merely some more painful infliction on offenders, it will not be steadily carried into execution, and even if it were, it would fail in preventing crime. The tread-mill has been laid aside in some prisons on account of the pain which it produced to the criminals. The whole tendency of society is towards the adoption of humane and moral means for the amelioration of the people of every grade, and the compassion so generally felt for

criminals, is only one form of the growing civilization which is the glory of our age. As phrenologists, we maintain that the moral faculties are here pointing instinctively to their legitimate results; and we hail their influence with joy, because we perceive that the constitution of creation is in harmony with their dictates, and that they will lead us to sound and successful practical conclusions, if fairly allowed to guide all our social arrangements.

Owing to the length of this article, we are under the necessity of concluding without adverting to Archbishop Whately's proposal to punish insane criminals, or to the question of expense which would attend a right mode of treatment. We shall probably revert to these topics in our next Number.

ARTICLE III.

DEATH OF DR SPURZHEIM.

It is with deep feelings of regret that we announce the death of this distinguished leader of Phrenology, and most gifted and excellent man. At a meeting of the Phrenological Society, held at Edinburgh on the 13th of December 1832, the President, Mr Simpson, made known this melancholy event in nearly the following words:—

“GENTLEMEN,—During the twelve years of this Society's existence, no communication has ever been made to it so afflictive as that which it is now my painful duty to make to you. Dr Spurzheim is no more! He died of fever, brought on by over-exertion in his great vocation, at Boston in the United States, on the 10th day of last month!

“The death of Dr Gall, the great founder of Phrenology, was not without its alleviations. *He* had run his course,—had done all that seemed, in the decrees of the All-wise, allotted him on earth to do, and fell ‘like a shock of corn fully ripe.’ Above all, Dr Spurzheim, his great pupil, survived, heir of all his master's wealth, and richer than even that master in treasures of his own. But Dr Spurzheim himself is now snatched away,—in the midst of his usefulness,—at the summit of his power,—about to pour the true philosophy of man, like a flood of light, on the transatlantic world. This is indeed a blow, almost devoid of alleviation. And yet hope deserts us not. To his own genius we owe the discovery of the organ of Hope, and a beautiful exposition of its functions. As we bend over his early grave, a ray breaks forth even from that dark abode. America has celebrated his obsequies with public honours, and ranks him

with the illustrious dead. Europe will sanction the award. His philosophic page will live, and even pride and prejudice will look into the philosophy, when the philosopher, whom they shunned when alive, is no more. Galileo, Newton, Harvey, were all destined to teach from the tomb,—so are Spurzheim and Gall; they, too, are among the great departed, 'who are dead, yet speak,' and many a kindred genius will yet arise to listen to their voice. The minds already labouring in the great work, by them bequeathed, will be stimulated by the very thought, that they are bereft of their leaders. A hand to grasp *all* the inheritance may not be; but there does live a prophet who will wear gracefully the mantle that has now descended upon him. May all of us, however humble each, make redoubled exertions,—do that which our teacher would have urged us to do with his dying accents,—promote by all that in us lies, the CAUSE for which he lived, and in which he died. *His* labours were as expansive as they were indefatigable,—no scope was too great for them,—he had gone to add the New World to the Old in one wide empire of truth. Alas! that America's first tribute to her illustrious guest should be a grave and a monument! Be her's the care and custody of his honoured remains;—the spirit of his genius is everywhere,—his memory is the cherished legacy of the human race."

Mr Combe then read to the Society the following letters which he had received from America, on the occasion of Dr Spurzheim's death.

From NAHUM CAPEN, Esq.

"DEAR SIR,

BOSTON, November 15. 1832.

Though I have not the honour of a personal acquaintance with you, I trust the occasion of this letter is ample apology for the liberty I assume.

Perhaps the sad and melancholy news may reach you before this letter,—but it is with the deepest feelings of grief that I state, that Dr Spurzheim is no more!

He died in this city on the 10th instant, at 11 o'clock P. M., after an illness of about three weeks. On the 17th September he commenced a course of lectures on Phrenology in this city, and soon after another course at Harvard University, Cambridge. These lectures occupied six evenings in the week. He delivered, besides, a course of five lectures before the Medical Faculty on the anatomy of the brain, in the day-time.

The subject having met with the most favourable reception,—he laboured with great earnestness and pains to elucidate its principles. He being personally admired by our citizens, his time and presence were in constant demand. Added to these continued engagements, our peculiarly changeable climate had

an unfavourable influence on his constitution. Sudden changes exposed him to cold; and an incautious transition from a warm lecture-room to the evening air was attended with debilitating effects. This variety of causes brought on at first slight indisposition, which, if it had been attended to, might have been easily checked. Regarding his illness of less consequence than the delivery of his lectures, he exerted himself for several days, when prudence required an entire cessation from labour. THIS WAS THE FATAL STEP: cold produced fever, and this *imprudence* seemed to settle the fever in the system.

He was confined to his room about fifteen days, which time his disease gradually assumed a more alarming aspect until death. He was averse to all active medical treatment from the beginning, and resorted to simple drinks and frequent injections.

The most skilful of the medical faculty in this city were constant in their attendance upon him, and we had two or three physicians with him constantly, both day and night. The interest, the exertions, and the strong desire, to save the life of so valuable a man were deep and sincere in the hearts of his friends. All within the power and reach of feeble man was extended for his relief;—but, alas! it was the will of Divine Providence that he should quit, for ever, the scene of his labour, love, and glory. I enclose a paper containing an account of his illness by Dr Jackson.

His death has cast a gloom over our city. It is not lamented with the cold formality of the world; it produces grief of the most poignant character, and it is expressed in the deepest tones of afflicted humanity. Although he had been with us but a few weeks, his virtues and worth were known and acknowledged. His amiable manners; his practical knowledge; his benevolent dispositions and purposes; his active and discriminating mind, all engaged the good opinions of the prejudiced, and won the affections of the candid. Alas! how inexplicable are the decrees of Divine Providence.

His body has been examined by the Medical Faculty (as per statement of Dr Jackson), and embalmed. This was thought advisable, in case his relations should have a desire to remove it. Casts of his head and brain have been taken, and his heart and lungs are also preserved.

Saturday next (day after to-morrow), the last solemn offices are to be paid to this distinguished man in a public manner. An eulogy by Dr Follen, German professor of Harvard University, will be delivered, and other services to correspond and suitable to the occasion, an account of which I will transmit as soon as published. I am truly, your servant and friend,

NAHUM CAPEN,

of the Firm of Marsh, Capen and Lyon, Booksellers."

From Dr ROBERT M'KIBBIN.

SIR,

NEW YORK, 16th November 1832.

Having some years since had the honour of occasional correspondence with you, while residing at Belfast, I presume I may, without further apology, address you on the present occasion, as I am well aware how much you feel interested in all that concerned Dr Spurzheim, and that none can more adequately appreciate his loss.

His lamented death took place at Boston, at 10 o'clock on the evening of the 10th instant. He had been lecturing to a very numerous class (as you may have heard) in Boston, and on the alternate day in Cambridge: his class in Boston consisted of 300 to 600, according to the state of the weather, &c., and that at Cambridge of about 70. His illness continued for some time after having been chilled, and he persisted in lecturing, until, in the last lecture or two, he was quite *obscure* and confused, and evidently labouring under great weakness. No persuasion of his friends, however, could prevail on him to desist, until the Wednesday-fortnight before his decease, when the fever had increased so much as to confine him to his bed. He would use no remedies, though urged to do so by the medical gentlemen who most anxiously attended him: Lavements were the only things he would use, and he objected that the British and American practice was too active, unfortunately forgetting the climate he was in. The symptoms were very obscure in the accession, but they gradually assumed the form of synochus with great nervous depression, and he gradually got worse, until the fatal catastrophe occurred.

I accidentally arrived in Boston on the night of his decease, but not having heard of his illness, I did not see him alive. I went the next morning too late to see him living, but in time to witness the kindness of the Bostonians, a meeting having been at that time convened to arrange for the intended funeral, and such other matters as would shew their respect for the illustrious deceased. Mr Quincy, the president of the College, and most of the professors, with the eminent medical and other scientific gentlemen, were present, and their conduct did infinite credit to the parties.

A committee was appointed to make arrangements for the inspection and embalming of the body, so that his friends, if anxious, might have it removed; another to take charge of his effects; and a third to make arrangements for a public funeral, and any other tribute of respect they could devise. Agreeably to this plan, the body was removed to the college, and on Mon-

day a post-mortem examination took place, at which a number of medical gentlemen were present. There were some traces of increased vascularity in the arachnoid and pia mater, and adhesion of the colon to the peritoneum in the right iliac region. I shall send you my notes of the dissection first opportunity, as I have only a few minutes now. Casts of the head, brain, &c., were being prepared, and several sketches made by different artists, of the face, and one was taken by Mr Audubon, the ornithologist.

The funeral will take place from one of the churches in Boston on Saturday, and an oration will be delivered by Professor Follen, a countryman of Dr Spurzheim. He will be deposited in one of the vaults in the beautiful cemetery at Mount Auburn, in a leaden coffin, and if his friends do not wish him removed, a monument will be erected in the same place for him.

Dr Jackson has kindly promised to send me the case, which he intends publishing; and the oration will likely be printed also. If so, I shall endeavour to procure them with any other particulars, and forward them by some early opportunity to you. I have also a little of his hair which I removed, and shall send you a part. I regret I had not leisure to send you a more correct as well as detailed account, but the packet is just going off, which you will please to consider my excuse for this scrawl. I need not say to you how useful he would have been in this country;—here was a rich field, and a noble harvest for his exertions, and here his opinions would have gained ground. He was to have lectured in all the towns;—even the villages were preparing to ask him, and the good he would have done is incalculable. To science his loss is vast,—to Phrenology more particularly, as his manner of gaining friends was peculiarly fortunate, and much assisted the really useful part of his instruction. Here in Boston, every person who had been acquainted with him seemed to have formed those warm attachments with which he was so often favoured, and he is mourned not only as a public loss, but as the friend of each. I hope to give you a more satisfactory account, at an early opportunity, and am with much respect, your obedient servant,

ROBERT M'KIBBIN, M. D.

The following resolutions were moved by Mr Combe, seconded by Mr Dun, and adopted unanimously by the Phrenological Society:

“*First*, That this Society have heard the communication now made with sentiments of the most heartfelt regret. While they deplore the premature death of Dr Spurzheim as by far the great-

est loss which the philosophy of mind and man could, in their present state, sustain, they lament it as an especial bereavement to themselves of a valued and beloved benefactor and friend.

“*Secondly*, That this Society feel deeply, and, considering their intimate and affectionate relation to the illustrious deceased, gratefully, the intense concern manifested by the citizens of Boston over his sick-bed,—the public sorrow for his loss,—and the intended honours to his remains and his memory; and they experience comfort in the reflection, that, since it was in the Divine decrees that that great man was so soon to be taken away,—he did finish his mortal career in the midst of a people enlightened enough to discern his distinguished talents and worth, and duly to appreciate the philosophy which he had come among them to teach.

“*Third*, That an extract of this minute be sent to Dr M’Kibbin and Mr Nahum Capen, with the thanks of the Society for their kind attention in making their communications.”

A copy of the minutes of the Society, containing these resolutions, was transmitted to Boston.

The honours paid by the Americans to Dr Spurzheim’s memory, reflect on them the highest credit. They will hereafter boast, and justly, of the kind reception and honourable sepulture which they gave to this distinguished individual. Dr Spurzheim’s whole life has been devoted to the study and teaching of the physiology of the brain, and philosophy of mind. His merits were recognised by many adequate judges in this country, and his doctrines continue rapidly to extend and establish themselves in Britain. He and Dr Gall are now both numbered with the dead. The envy and dislike which, in the minds of some men not destitute of talents, obstructed the reception of their discoveries, will subside, and justice will speedily be done to them by all. The Americans have formed a high and just estimate of Dr Spurzheim’s character and talents, in which we cordially coincide. The Boston Atlas contains the following remarks:—

“Dr Spurzheim was a profound thinker, and an uncommonly careful observer. Phrenology was the pursuit of his life: but, in teaching and defending a new science, he rendered anatomy and physiology such aid, and has given them such impulse, that his memory is entitled to the highest respect on that account alone.

“Dr Spurzheim was the pupil and friend of the celebrated Gall, the man who originated a doctrine never known before he announced it to the world. Together they commenced the study of the brain, and made discoveries which, though sneered at by ignorant pretenders, are fast overturning the old notions of the anatomists on the subject of its organization.

“ To the medical gentlemen of Boston, his demonstrations of the brain were highly satisfactory, and will long be remembered.

“ As an author he has been certainly industrious. As a lecturer he had no equal—being most perfectly at home before his numerous hearers. Though a German, he spoke the English language with peculiar fluency and correctness, being both choice of words, and happy in expressing his ideas. In no one instance did he ever bring a note or manuscript in sight. His manner was to pursue a strictly methodical course,—and such was the astonishing variety of learning brought in illustration of the immediate subject of discourse, that the audience was always both instructed and delighted.

“ In stature he was about six feet high, of a large frame, and muscular. His countenance was open and generous, and honesty and benevolence were certainly discoverable in his face.

“ Dr Spurzheim’s head is one of the finest that could possibly be selected to sustain the doctrine to which he had devoted his whole life.”

Phrenology is essentially the science of morals, and Dr Spurzheim practised the doctrines which he taught. He was eminently virtuous, and uniformly denounced vice as the parent of misery. He had profound sentiments of religion, in harmony with reason. He was simple in his tastes ; eminently kind, cheerful and liberal in his dispositions ; capable of warm and enduring attachments ; and in his habits temperate, active, persevering, and laborious.

JOHN GASPAB SPURZHEIM * was born on 31st December 1776, at Longuich, a village near Treves, on the Moselle. His parents cultivated a farm of the rich Abbey of *St Maximin de Treves*, and he received his college education at the University of that city. He was destined by his parents for the church ; but in 1799, when the French invaded that part of Germany, he went to Vienna to study medicine, and there became acquainted with Dr Gall. He entered with great zeal into the consideration of the new doctrine, and, in 1800, first attended a private course of Gall’s lectures, which had been repeated from time to time during the four preceding years. He continued the pupil of Dr Gall till 1804, at which period he was associated with him in his labours, and his character of hearer ceased †.

Having completed his medical studies, he and Dr Gall (in consequence of an order of the Austrian Government, prohibiting all private lectures unless specially permitted), left Vienna in 1805, for the purpose of travelling together, and pur-

* In some of his works he takes the name of *J. G. Spurzheim* ; in others *G. Spurzheim* ; and in others *J. Spurzheim*.

† *Essai Philosophique sur la Nature Morale et Intellectuelle de l’Homme*, par G. Spurzheim, M. D. Appendix, p. 213.

suings, in common, their researches into the anatomy and physiology of the nervous system; and from 1805 to 1807, they visited many of the chief towns of Germany, France, Prussia, and Denmark*. In the year last mentioned, Dr Gall finally settled at Paris, and, assisted by Dr Spurzheim, gave his first public course of lectures. In 1806 they resolved to communicate to the French Institute the results of their anatomical investigations: The chief of the anatomical department of that learned body was then M. Cuvier; and he was the first of its members to whom they addressed themselves.

"M. Cuvier," says the late excellent Mr Chenevix †, "is a man of known talents and acquirements, and his mind is applicable to many branches of science; but what equally distinguishes him with the versatility of his understanding, is the suppleness of his opinions. He received the German Doctors with much politeness. He requested them to dissect a brain privately for him and a few learned friends; and he attended a course of lectures given purposely for him and a party of his selection. He listened with much attention, and appeared well-disposed toward the doctrine; and the writer of this article heard him express his approbation of its general features, in a circle which was not particularly private.

"About this time the Institute had committed an act of extraordinary courage, in venturing to ask permission of Buonaparte to award a prize medal to Sir H. Davy, for his admirable galvanic experiments, and was still in amaze at its own heroism. Consent was obtained; but the soreness of national defeat rankled deeply within. When the First Consul was apprized that the greatest of his comparative anatomists had attended a course of lectures by Dr Gall, he broke out as furiously as he had done against Lord Whitworth; and at his levee he rated the wise men of his land for allowing themselves to be taught chemistry by an Englishman, and anatomy by a German. *Sat verbum.* The wary citizen altered his language. A commission was named by the Institute to report upon the labours of Drs Gall and Spurzheim. M. Cuvier drew up the report. In this he used his efforts, not to proclaim the truth, but to diminish the merits of the learned Germans. Whenever he could find the most distant similarity between the slightest point of their mode of operating, and any thing ever done before, he dwelt upon it with peculiar pleasure. He even

* The names of these are specified in the Transactions of the Phrenological Society, p. 13. Some account of the progress of Gall and Spurzheim at this period will be found in our 6th volume, pp. 305, 306.

† Article "*Gall and Spurzheim—Phrenology,*" in the Foreign Quarterly Review, vol. ii. p. 15. Chenevix was a friend of Dr Spurzheim, who, in the preface to his "*Manuel de Phrenologie,*" recognises the accuracy of the statements made in the article quoted.

affected to excuse the Institute for having taken the subject into consideration at all, saying that the anatomical researches were entirely distinct from the physiology of the brain, and the doctrine of mental manifestations. Of this part of the subject Buonaparte, and not without great cause, had declared his reprobation; and M. Cuvier was too great a lover of liberty not to submit his opinion to that of his Consul. His assertion, too, that the anatomy of the brain had nothing to say to its mental influence, he knew to be in direct opposition to fact; but even the meagre credit which he did dare to allow to the new mode of dissection, he wished to dilute with as much bitterness as he could."

Gall and Spurzheim's memoir to the Institute was presented on the 14th of May 1808. The report of the commission (of which a translation will be found in the *Edinburgh Medical and Surgical Journal* for January 1809), was subscribed by MM. Tenon, Sabatier, Portal, Pinel, and Cuvier. The memoir was soon afterwards published, with remarks on Cuvier's report, under the title of "*Recherches sur le Système Nerveux en général, et sur celui du Cerveau en particulier; Mémoire présenté à l'Institut de France, le 14 Mars 1808; suivi d'Observations sur le Rapport qui en a été fait à cette Compagnie par ses Commissaires. Par F. J. Gall et G. Spurzheim;*" 4to, Paris, 1809. In this work the sections of the memoir are given separately, each being followed by a reply to the objections made against it by the commissioners. In 1810 was commenced the publication of the "*Anatomie et Physiologie du Système Nerveux en général, et du Cerveau en particulier. Par F. J. Gall et G. Spurzheim;*" a work which was not completed till 1819. The third and fourth volumes were published after Spurzheim's separation from Dr Gall, and bear the name of the latter alone. It is illustrated by a splendid folio atlas, containing one hundred plates.

In June 1813, M. Spurzheim paid a visit to Vienna, where he took his degree of doctor of medicine; after which he proceeded to Britain, and arrived there in March 1814. During his stay, he published, in English, "*The Physiognomical System of Drs Gall and Spurzheim,*" 8vo, London, 1815; "*Outlines of the Physiognomical System,*" 12mo, London, 1815; and "*Observations on the Deranged Manifestations of Mind, or Insanity.*" 8vo, London, 1817. The first of these works met with no very gentle treatment from the periodical press of Britain, and in particular was virulently attacked in the 49th Number of the *Edinburgh Review*, by the late Dr John Gordon, who applied to it, and the doctrine which it expounds, the epithets of "trash," "despicable trumpery," "a collection of mere absurdities, without truth, connexion, or consistency," and "a piece of thorough quackery from beginning to end."

“The intention of Dr Spurzheim,” says Mr Chenevix, in the article already quoted, “always was to visit the Scottish Athens, but this article confirmed it. He procured one letter of introduction for that city, and but one; that was to the reputed author of the vituperating essay. He visited him, and obtained permission to dissect a brain in his presence. The author himself was a lecturer on anatomy, and the dissection took place in his lecture-room. Some eyes were a little more, or a little less, clear-sighted than others, for they saw, or thought they saw, fibres. A second day was named. The room was as full as it could be, particularly as an intermediate bench was reserved for Dr Spurzheim, to carry round the subject of inquiry to every spectator. There, with the *Edinburgh Review* in one hand, and a brain in the other, he opposed fact to assertion. The writer of the article still believed in the *Edinburgh Review*, but the public believed the anatomist; and that day won over near five hundred witnesses, to the fibrous structure of the white substance of the brain, while it drew off a large portion of admiring pupils from the antagonist lecturer.

“Thus aided by success, Dr Spurzheim opened a course of lectures on the anatomy and the functions of the brain, and its connexion with mind. He used to say to the Scotch, ‘You are slow, but you are sure; I must remain some time with you, and then I’ll leave the fruit of my labours to ripen in your hand. This is the spot from which, as from a centre, the doctrines of Phrenology shall spread over Britain.’”

The criticisms to which we have alluded called forth from Dr Spurzheim an “Examination of the Objections made in Britain against the Doctrines of Gall and Spurzheim,” 8vo, Edinburgh, 1817; in which a complete exposure was made of the ignorance and reckless presumption of the reviewers. During his residence in the United Kingdom, Dr Spurzheim delivered lectures in London, Bath, Bristol, Dublin, Cork, Liverpool, and Edinburgh. Having returned to London in 1817, he delivered there another course of lectures, and became a licentiate of the Royal College of Physicians in that city. In the month of July in the same year he went to Paris, where he continued his labours till 1825, making extensive observations on man in a state of health and disease, and contributing largely to the advancement of the science of human nature. At Paris he delivered two courses each year, on the Anatomy, Physiology, and Pathology of the Brain and of the External Senses. There also he published, in 1818, his “Observations sur la Folie, ou sur les Dérangemens des Fonctions Morales et Intellectuelles de l’Homme,” with two plates; and “Observations sur la Phrænologie, ou la Connaissance de l’Homme Moral et Intellectuel, fondée sur les Fonctions du Système Nerveux,” with seven plates; and, in 1820,

his "Essai Philosophique sur la Nature Morale et Intellectuelle de l'Homme;" all 8vo. His English work, entitled, "View of the Elementary Principles of Education, founded on the Study of the Nature of Man," 12mo, appeared at Edinburgh in 1821, and was reprinted, with considerable additions, in 8vo, at London in 1828. A French edition was published at Paris 1822. "In 1824, the French government, as wise as that of Austria had been, prohibited the delivery of all lectures without its special permission; and Dr Spurzheim was obliged to confine himself to private conversations at his own house*." Disgusted by this proceeding, he listened, in 1825, to the solicitation of his friends in London, and again visited that city, where he delivered two courses of eighteen lectures on Phrenology, in March and April of that year, besides several courses of dissection of the brain at St Thomas's and St Bartholomew's Hospitals, and in some of the medical schools. On this occasion, the manner in which he was noticed by the periodicals, particularly the *Medico-Chirurgical Review*, the *Lancet*, and some of the London newspapers, shewed that a great change had taken place respecting him in the public mind.

During his residence in London, he published two valuable works, "Phrenology, or the Doctrine of the Mind, and of the relations between its Manifestations and the Body," with fifteen engravings, and "A View of the Philosophical Principles of Phrenology," both 8vo. 1825†. In these works, which, like the "View of the Elementary Principles of Education," are extended editions of some of the principal chapters of the "Physiognomical System," the comprehensiveness and profundity of intellect, the accuracy and assiduity of observation, and the purity of moral feeling, which distinguish all Dr Spurzheim's writings, are conspicuous; and they will be a monument by which posterity will judge correctly of the admirable character and talents of this great phrenologist. He subsequently returned to Paris.

The impression made during his residence in England continued to increase after his departure, and at length procured him an invitation once more to visit London: with this he complied, and, in the beginning of 1826, delivered a course of lectures to an overflowing audience, in the London Institution, besides giving private lectures in the evening.

In this year he brought out two most useful publications, "Phrenology in connexion with the Study of Physiognomy. Part I. Characters;" with thirty-four plates, 8vo, to which we have

* Foreign Quarterly Review, vol. ii. p. 17.

† These two publications were reviewed in this Journal, vol. ii. p. 619, and vol. iii. p. 269; and the "Principles of Education" in vol. i. p. 578, and vol. vi. p. 163.

already adverted on page 109 of this number*; and "The Anatomy of the Brain, with a general View of the Nervous System, with eleven plates," 8vo.† After the publication of these works he returned to Paris, but his stay was short; for soon afterwards, he formed the resolution of leaving France, and settling permanently in England: and having accordingly removed to Britain, he paid, towards the end of 1826, a visit to Cambridge, at the University of which he was received with distinguished respect. The use of one of the public lecture-rooms was granted to him by licence of the vice-chancellor; and his audience, which comprised men of the first name and influence in the university, exceeded one hundred in number. He lectured on a dissection of the brain more than once in the lecture-room of the anatomical professor. He was feasted in the college-halls every day he was there, and made a most favourable impression on the anatomical and medical professors. He subsequently lectured in Bath and Bristol, with complete success; the managers of the Literary Institution at each place acknowledging that no lecturer had filled them to such a degree: The interest increased with each lecture, and the last was in general the most numerously attended. In April 1827, he again gave, at the London Institution, a course of lectures, which was attended by upwards of seven hundred auditors; while at his house in Gower Street, he held himself in readiness once a-week to answer any question or objection concerning Phrenology. In the course of this year he published at London a small work entitled, "Outlines of Phrenology; being also a Manual of reference for the Marked Busts." Having been invited by the Hull "Society for Phrenological Inquiry" to lecture in that town, he there commenced a demonstrative course on 6th December 1827. At Hull, he visited the workhouse, the "Refuge for the Insane," the grammar-school, and the town-gaol, at each of which he exhibited specimens of his power of predicating character from inspection of the head‡. After receiving the compliment of a dinner from the Hull Society, Dr Spurzheim, at the earnest request of the phrenologists of Edinburgh, proceeded thither in January 1828, and delivered a course of popular lectures, which was attended by two hundred ladies and gentlemen. He delivered also a separate course on the anatomy, physiology, and pathology of the brain, to eighty medical gentlemen, of whom four-fifths were students. By solicitation, he repeated his popular lectures, and the second course was attended by seventy auditors. A great difference was observable in the manner in which his audiences listened to his lectures in 1817 and 1828. On the

* See also Phren. Journal, iii. 578.

† Analyzed *ibid.* iv. 83.

‡ See an account of Dr Spurzheim's visit to Hull, from the pen of Mr J. L. Levison, in our 5th volume, p. 82.

former occasion, the authority of the Edinburgh Review was paramount, and a fixed smile of incredulity sat on the countenance of many of his hearers: they were on the watch for something extravagant, and were disappointed rather than gratified by the force of his demonstrations, and the soundness of his arguments. In 1828, his auditory yielded readily and cordially to the impression of his talents: they listened with the most profound attention and sincere respect; they felt his power to enlighten and instruct them; and, in consequence, they opened their minds to receive positive ideas, and were richly rewarded. On the medical students, his lectures had a most beneficial effect: his dissections were minute and most sedulously demonstrated: he succeeded in disabusing them of the misrepresentations about him and his doctrines, dealt out to them every season by some of their teachers; enabled them to judge for themselves of the truth as well as dignity of the attacks which continued to be made, *ex cathedra*, on phrenology and phrenologists, and taught them how to prosecute the science for their own satisfaction. On 25th January 1828, the Phrenological Society gave Dr Spurzheim a dinner, at which he expressed his great delight at the unlooked-for progress which his science had made:—"Dr Gall and myself," said he, "often conversed together about the future admission of our doctrines: Though we relied with confidence on the invariable laws of the Creator, we, however, never expected to see them in our lifetime admitted to such a degree as they really are." Dr Spurzheim honoured the Society by attending one of its meetings, at which he gave, at great length, many valuable practical directions for ascertaining the development of the intellectual organs, and answered, very satisfactorily, the objections of antiphrenologists regarding the frontal sinus. While in Edinburgh, he visited the City Lunatic Asylum, and the Hospital for the Children of Paupers, in presence of Dr Hunter the surgeon of the establishment, the Hon. D. G. Halyburton, Dr Combe, and several other gentlemen, and pointed out a number of cases in which there was a remarkable correspondence between character and cerebral development. The reader will find the details of this subject in the 5th volume of this Journal, p. 142.

In consequence of a special requisition, Dr Spurzheim proceeded from Edinburgh to Glasgow, where he delivered a popular course, which was attended by 250 ladies and gentlemen,—and a professional course, attended by 60 medical practitioners and other individuals. It was during his residence in Edinburgh and Glasgow, that the correspondence published in our Fifth Volume took place between him and Sir William Hamilton, on the subject of the frontal sinus and other matters connected with Phrenology. Five times did he challenge Sir William to meet

him before the public, that the arguments of both might be openly heard and considered; and thus often did the learned Baronet decline such a controversy.—Both in Edinburgh and Glasgow, Dr Spurzheim and his wife, who accompanied him, were received in private society in the most cordial and attentive manner by persons of the first respectability in those cities; and both left a deep impression of their individual worth on all who enjoyed the pleasure of their acquaintance. In 1828 appeared Dr Spurzheim's "Sketch of the Natural Laws of Man," 12mo, a work which, in spite of the disadvantage of its catechetical form, and some too unqualified expressions in the preface, will be highly appreciated by enlightened and philanthropic minds*.

After his return to London, Dr Spurzheim continued to spread abroad a knowledge of his science with unabated zeal. On the 14th May 1829, a paper of his on the brain was read before the Royal Society, who, however, refused to give it a place in their Transactions. It was published by Dr Spurzheim as an Appendix to his work on the Anatomy of the Brain, along with some unceremonious but well-founded "Remarks on Mr Charles Bell's Animadversions on Phrenology †."

In the course of the year 1829, he lectured in Manchester, Liverpool, Bolton, Bakewell, Derby, Nottingham, Sheffield, Wakefield, Leeds, and other towns in England. Towards the end of this year, he was bereaved of his excellent wife, to whom he was warmly attached, and whose death was a severe wound to his affections. By this lady were executed the drawings by which his later publications are illustrated, and also the lithographic engravings of his work on Physiognomy. In consequence of this loss, he was prevented from lecturing during the winter 1829–30; but having been invited to Dublin by the Phrenological Society of that city, he went thither in the succeeding April, and gave a most successful course of lectures at the Dublin Institution. At the request of a number of medical gentlemen, he delivered also a course on the anatomy, physiology, and pathology of the brain, at the School of Anatomy, Medicine, and Surgery, in Park Street. During his stay in Dublin, the Royal Irish Academy, by an act which reflected equal honour on themselves and on Dr Spurzheim, added his name to the list of their honorary members. In 1831, he again visited and lectured in Dublin, after which he went to France to spend the summer and autumn. During the winter he lectured in Paris; and, in the beginning of 1832, published a small

* A very full abstract of this "Sketch" will be found in the *Phrenological Journal*, vol. v. p. 325.

† These "Remarks" were reprinted in our sixth volume, p. 606.

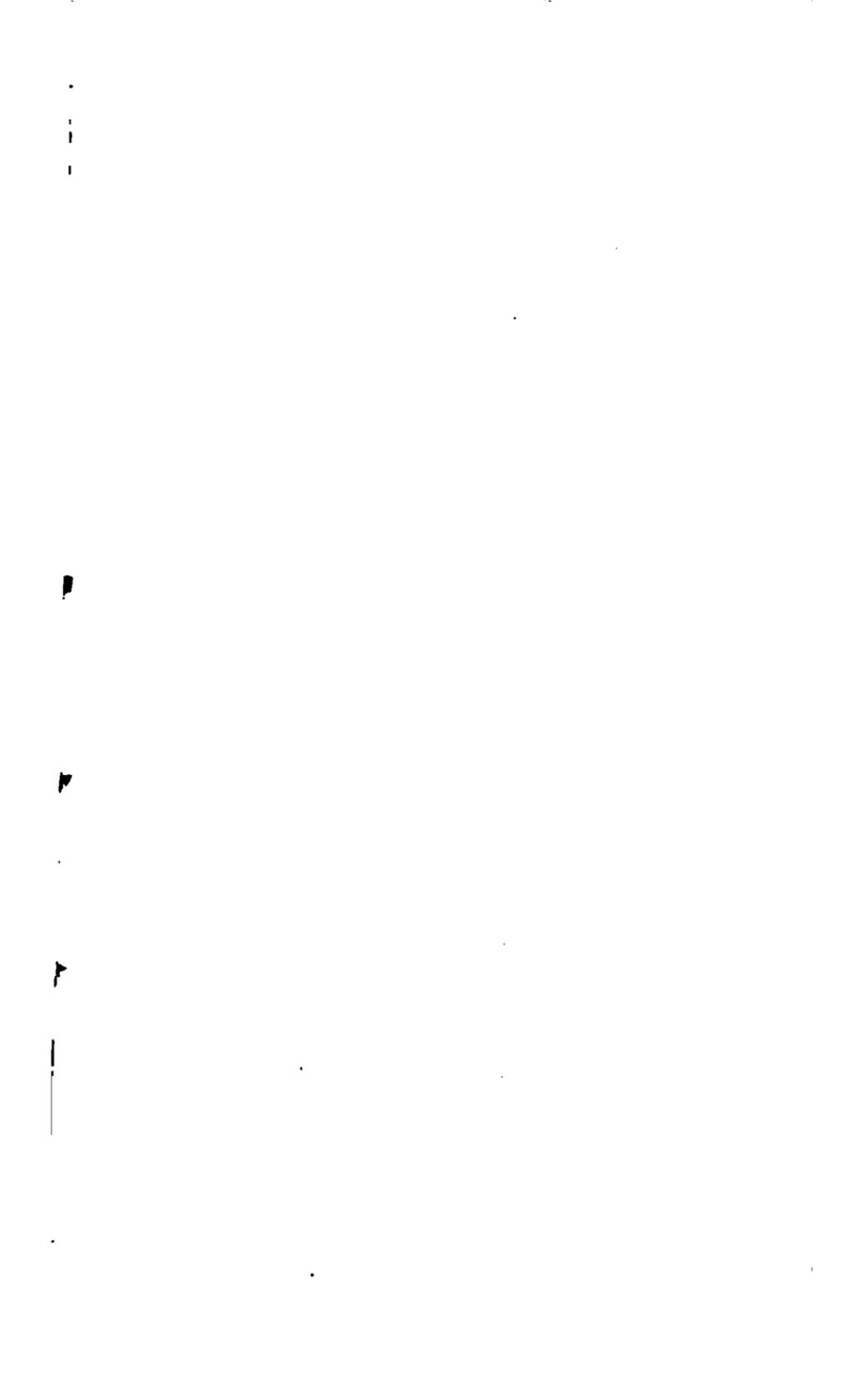
“Manuel de Phrenologie,” was
 Having received pressing invita-
 the resolution of disseminating
 for which he embarked at H
 mournful issue of this exped
 We hear that he has appointe
 near London, his executor and
 ed to the son of that gentleman
 and books. Mr Holm intend-
 present notice is hastily drawn
 possessa. We shall present a ma
 racter, and of the effects of his
 of his Life by Mr Holm.

When Dr Spurzheim last year
 Macdonald executed an admir
 of life, and combining the most
 and grace of an antique. It
 seen, and the mind of the phil
 its strength and simplicity. Th
 a man whom posterity will un
 mire. The portrait, of which
 article, was painted by Mr Will
 of the Phrenological Society,
 take impressions from the plat
 and measurements of Dr Spurz
 1828, taken by Mr Combe and

DEVELOP

1. Amativeness, full, or ra. large,	18
2. Philoprogenitiveness, large,	16
3. Concentrativeness, ra. small,	8
4. Adhesiveness, rather large,	16
5. Combativeness, rather full,	12
6. Destructiveness, very large,	20
7. Secretiveness, large,	18
8. Acquisitiveness, rather large,	16
9. Constructiveness, ditto,	16
10. Self-Esteem, large,	18
11. Love of Approbation, ditto, or very large,	18
12. Cautiousness, rather large, or large,	17
13. Benevolence, very large,	20
14. Veneration, ditto,	20
15. Firmness, ditto,	20
16. Conscientiousness, ra. large, or large,	17

• The numbers on the right indicate
 the scale adopted by the Phrenological
 System, p. 55.



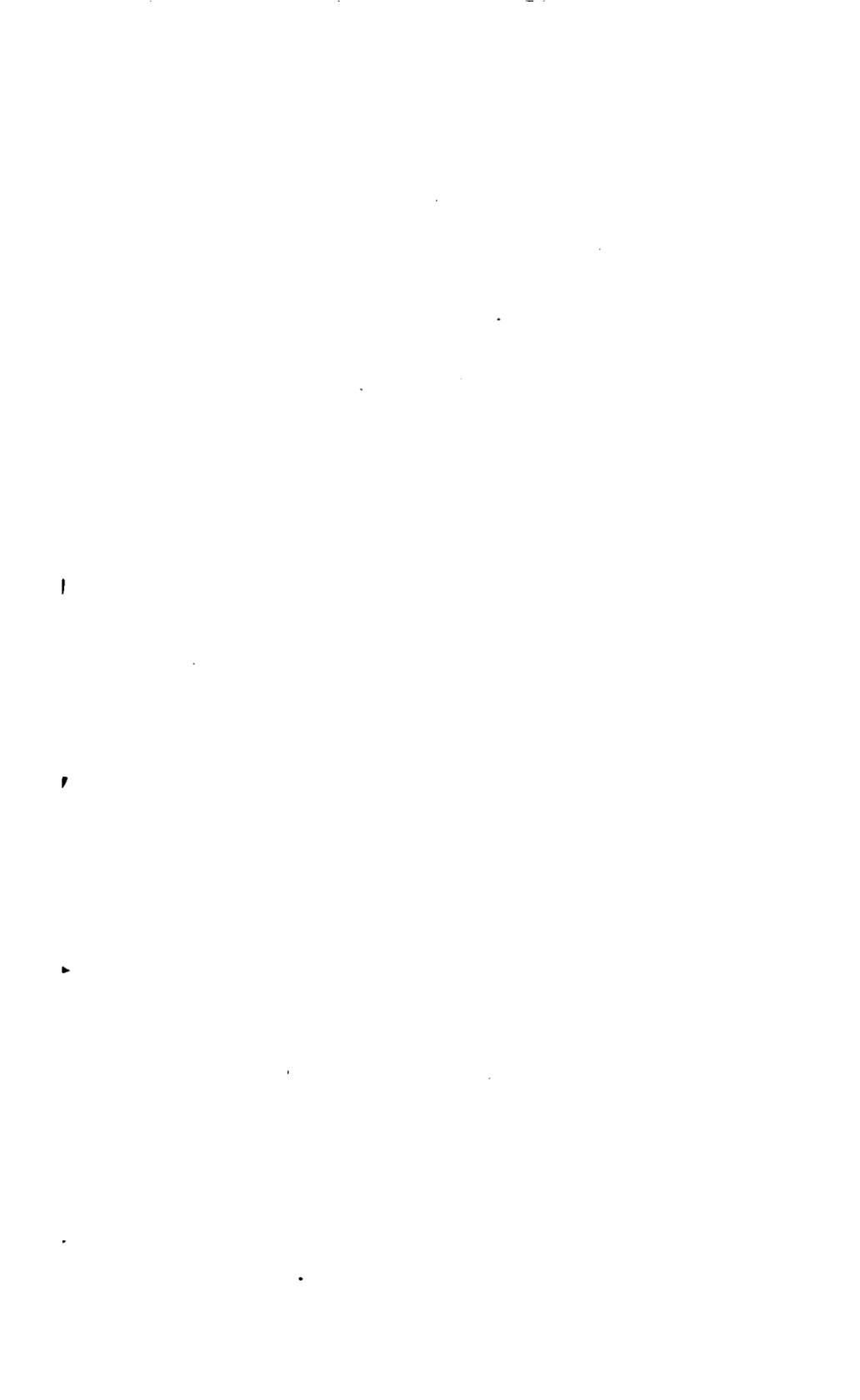
“Manuel de Phrenologie,” which is the last of his works. Having received pressing invitations from America, he formed the resolution of disseminating his doctrines in the New World, for which he embarked at Havre on 20th June 1832. The mournful issue of this expedition has already been detailed.— We hear that he has appointed I. D. Holm, Esq. of Highgate, near London, his executor and administrator, and has bequeathed to the son of that gentleman his collection of busts, skulls, and books. Mr Holm intends to become his biographer. The present notice is hastily drawn up from such materials as we possess. We shall present a more particular estimate of his character, and of the effects of his philosophy, after the publication of his Life by Mr Holm.

When Dr Spurzheim last visited Edinburgh, Mr Lawrence Macdonald executed an admirable bust of him, exactly the size of life, and combining the most perfect likeness with the majesty and grace of an antique. It is by far the best which we have seen, and the mind of the philosopher is portrayed in it in all its strength and simplicity. This bust is now a classical relic of a man whom posterity will unquestionably reverence and admire. The portrait, of which an engraving accompanies this article, was painted by Mr William Stewart Watson, a member of the Phrenological Society, who has kindly permitted us to take impressions from the plate. The following development and measurements of Dr Spurzheim's head were, on 3d March 1828, taken by Mr Combe and Mr Walter Tod :

DEVELOPMENT. *

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

* The numbers on the right indicate the size of the organs according to the scale adopted by the Phrenological Society, and described in Combe's System, p. 95.





ENGRAVED BY T. H. BROWN.

MEASUREMENTS.

	Inches.
From Occipital Spine to Individuality,	7½
..... Concentrativeness to Comparison,	7½
..... Ear to Occipital Spine,	4½
..... Individuality,	5½
..... Firmness,	6½
..... Benevolence,	6
..... Destructiveness to Destructiveness,	6½
..... Secretiveness to Secretiveness,	6½
..... Cautiousness to Cautiousness,	5½
..... Ideality to Ideality,	5½
..... Constructiveness to Constructiveness,	5½

Although the name of GALL, as the discoverer of the physiology of the brain, must ever stand alone and pre-eminent, it cannot be denied that to Dr Spurzheim belongs the all but equal glory of having consolidated and reduced to a scientific form the materials collected by his great instructor. In the physiological and philosophical department, Dr Spurzheim applied himself most successfully to the elucidation of a great number of the fundamental powers of the mind, and did much in pointing out the special and primary faculties connected with many of the individual organs whose manifestations had been ascertained by Dr Gall. In another important branch of the science, namely, its connexion with the anatomy of the brain, the merit of discovery must, doubtless, be conceded to Dr Spurzheim. He has stated in the Appendix to the *Essai Philosophique*, "that it is he who has made all the anatomical investigations, and has given its form and consistence to the anatomical part of the system." He farther mentions, that, during the various journeys which he made in company with Dr Gall, it was he who kept a record of their observations; that the designs for the anatomical plates in the great work published under their joint names, were all made under his superintendence, from preparations made and pointed out by himself; that the plates themselves were corrected under his direction; and that the written descriptions, and all the anatomical details, were furnished by him. Some additional remarks on this subject will be found in the preface to his work on the *Anatomy of the Brain*. In these two works, to use his own expression, he "settled his anatomical account with Dr Gall," by whom his statements were never contradicted. Without entering farther into the details of this subject, we may refer the reader, for additional information, to the second volume of this *Journal*, p. 185, and also to vol. v. pp. 305, 422, and vol. vi. pp. 307, 309*. In the two last articles referred to, Dr Spurzheim asserts his own claims; and the following quotation, though it

* The reader may also look into the *Foreign Quarterly Review*, ii. 21; and at the Introduction to Spurzheim's "*Observations sur la Phrenologie*."

formerly appeared in our pages, gives so comprehensive an account of his improvements and discoveries, and is so short, that little apology is necessary for inserting it again on this appropriate occasion :—

“ Dr Gall, being the first founder of Phrenology, remains immortal. The success of his labours, too, was immense : he discovered the situation of twenty-six phrenological organs ; I say twenty-six, instead of twenty-seven, because his organ of verbal memory and that of language are to be considered as one. But his talent and the sphere of its operation had their limits, and, since our separation in 1818, Dr Gall has made neither a new discovery in Phrenology, nor a step towards its improvement.”—“ The whole of the physiological doctrines, as expressed by Dr Bischoff * and Mr Bloede in 1805, are Dr Gall's exclusive property ; but every new addition from that period up to 1818, belongs to us in common, because we pursued our inquiries together.

“ My special rectifications of Phrenology and new physiological discoveries, begin with our separation from each other in 1818. They concern particularly the discovery of eight new organs, and the analysis of the special powers of the mind ; whilst Dr Gall mostly confined himself to the comparison of talents, characters, and certain modes of acting, with individual cerebral portions. He admitted in every power of the mind the same modes of action,—for instance, perception, memory, judgment, and imagination ; whilst I classify the mental powers into orders, genera, and species, and examine the common and special modes of acting of the different faculties. Further, Dr Gall ascribed to the senses the notions which the mind acquires of existence, and of the physical qualities of external objects, whilst I think those operations of the mind to be dependent on cerebral organs. I therefore speak of immediate and mediate functions of the external senses : in the former, the mind takes cognizance by the assistance of the senses alone ; in the latter, it is assisted, besides the senses, by cerebral organs. In general, my philosophical views in Phrenology differ widely from those of Dr Gall.—The moral and religious considerations of phrenology, too, as they are taught in Great Britain, are conceptions of mine. Dr Gall never endeavoured to point out the standard of natural morality.—In the natural language I discovered several principles in addition to that found by Dr Gall : that the movements of the head, body, and extremities, are modified by the seat of the organs in action. Moreover, in the practical part of Phrenology, and in examining the development of the special organs, I began to pay more attention to the

* We intend to take an early opportunity of noticing Bischoff's work,—*Darstellung der Gallischen Gehirn-und Schädel-Lehre.* Berlin, 1805.

breadth of the organs than Dr Gall was accustomed to do, and directed phrenologists to attend to the individual regions of the head, in reference to the three lobes of the brain, and to the three regions of the animal propensities, the human sentiments, and intellectual faculties, rather than to the protuberances and depressions to which Dr Gall attached himself almost exclusively. In short, the comparison of Dr Gall's works with my publications on Phrenology, on its philosophical principles, on education, insanity, and other matters, will best shew how much I have contributed to extend and improve Phrenology, and to forward its study*."

We conclude with the following extract from the speech of Mr Combe, on proposing the health of Dr Spurzheim at the dinner formerly mentioned, given to him by the Phrenological Society, at Edinburgh, on the 25th of January 1828. The sentiments which it embodies will find an echo in the breast of every reader who has had the felicity of enjoying the personal acquaintance of Dr Spurzheim, or who is able to appreciate the mighty importance of the truths unfolded in his works.

"On a former occasion, I have said, how would we rejoice to sit at table with Galileo, Harvey, or Newton, and to pay them the homage of our gratitude and respect; and yet we have the felicity to be now in company with an individual whose name will rival theirs in brilliancy and duration; to whom ages unborn will look with fond admiration, as the first great champion of this magnificent discovery; as the partner in honour, in courage, and in toil, with Dr Gall; as the rival in genius of him by whose master-mind the science of man started into existence. Dr Spurzheim, gentlemen, is an historical personage;—a glory dwells on that brow which will never wax dim, and which will one day illuminate the civilized world. His greatness is all moral and intellectual. Like the sun of a long and resplendent day, Dr Spurzheim at his rising was obscured by the mists of prejudice and envy, but in ascending he has looked down upon and dispelled them. His reputation has become brighter and brighter as men have gazed upon and scrutinized his doctrines and his life. No violence and no anguish tarnish the laurels that flourish on his brow. The recollections of his labours are all elevating and ennobling; and in our applause he hears not the voice of a vain adulation, but a feeble overture to a grand strain of admiration, which a grateful posterity will one day sound to his name."

* Note 3. by Dr Spurzheim to the reprint of "Phrenology, Article of the Foreign Quarterly Review, by Richard Chenevix, Esq. F. R. S., &c. London, 1830." The Notes to this publication were reprinted in our sixth volume, p. 304.

ARTICLE IV.

CASE OF MORBID ACTIVITY OF DESTRUCTIVENESS. Communicated by Dr OTTO of Copenhagen.

IN his "Magazine für Gerichtliche Arzneykunde," vol. i. No. 3. 1831, *Dr Wildberg* relates the following remarkable case:

A plethoric man of letters, fifty-one years old, who for some time had suffered from indigestion, blind piles, obstipation, and other disorders of the bowels, and at the same time had frequent congestions of blood in the head, which manifested themselves by frequent headach, fell gradually into a deep hypochondriac state, which made him almost unable to follow his ordinary literary pursuits. His eldest daughter, a girl seventeen years old, whom he loved most tenderly, was the only one who was able now and then to disperse his gloomy thoughts and to exhilarate him; and she was therefore accustomed to visit him frequently in his room, and to walk out with him.

One day, when she had gone to his room as usual, the horrible thought to murder her suddenly arose in his mind. He was himself so much frightened by this, that he most earnestly entreated her to leave him. As soon as he found himself alone, he burst into tears, and was for a long time unable to compose himself, until he took the resolution, on the immediately following day, to make a journey, in order to relax his mind. He returned after five days, in somewhat better spirits; but, as soon as his daughter made her appearance again, the same horrible thought to kill her seized him, and arose every time he saw her, however much, as a religious man and a tender father, he shrunk from the idea. He now removed every thing which might hurt her, and carefully avoided being alone with her. Notwithstanding this, the dreadful thought returned every time he saw her; and the abhorrence that always accompanied it increased his sufferings exceedingly. He prayed frequently to God, that he might be strengthened and freed from this torture of mind. Frequently he hurried out of the house, and strolled about for a long time. He lost his appetite, and had restless nights, disturbed by frightful dreams. At last he had recourse to *Dr Wildberg*, and told him all his misery. *Dr Wildberg* found all his intellectual faculties sound. He persuaded the daughter under some pretext to leave the house for a short period, and ordered the patient medicines fitted to act upon the languid and obstructed state of the bowels; and after the lapse of eight days the man was better, and longed for his beloved daughter. She did not return, however, till after other eight days, "and I was then (says *Dr Wildberg*) a witness to the affecting joy with which the father received her." From this time the dreadful thought never again arose, and he spoke frequently of having

been in a most painful situation, when the impulse to kill struggled with his aversion to the deed.

Who does not see here a disordered *Destructiveness*, brought into morbid activity by congestion of the blood in the head, which, again, was produced by the obstructed state of the bowels, and ceased with its removal? The organs of the Intellectual Faculties, of the Moral Sentiments, and of the Domestic Affections, remained perfectly sound: hence the clear perception which the patient had of the unhappy propensity under which he laboured, and hence the strenuous efforts made to resist it. How are cases like the foregoing (and their number is very great) reconcileable with the notion that the *whole* brain is employed in the manifestation of each individual faculty?

ARTICLE V.

ON THE AMERICAN SCHEME OF ESTABLISHING COLONIES OF FREE NEGRO EMIGRANTS ON THE COAST OF AFRICA, AS EXEMPLIFIED IN LIBERIA.

It is a direct consequence of the ignorance which prevails in society of sound practical principles of human nature and its relations, that, in public affairs, controversy takes the place of deliberation, decision, and action. Till such principles shall be adopted and acknowledged as standards, the schemes and doings of man must, from their first conception to their last consequences, be an inextricable mass of disputation,—a chaos of conflicting impulses, feelings, and prejudices. The *business* of the most enlightened legislature is *debate*; and parties marshal themselves for combat, each in its own impregnable position, from no two of which do social and national affairs present an aspect approaching to similarity. In Mr Combe's work on "the Constitution of Man, considered in relation to external objects," which offers the practical philosophy for human guidance which is so lamentably wanted, but which is making its way to an assured prevalence, there is a passage strongly impressed on our mind. "We require only," says Mr Combe, "to attend to the scenes daily presenting themselves in society, to obtain irresistible demonstration of the consequences resulting from the want of a true theory of human nature and its relations. Every preceptor in schools, every professor in colleges, every author, editor, and pamphleteer, every member of parliament, councillor, and judge, has a set of notions of his own, which, in his mind, hold the place of a system of the philosophy of man; and although he may not have methodized his ideas, or even acknowledged them to himself as a theory, yet they constitute a standard to him, by which he practically judges of all questions in morals, politics, and religion;

he advocates whatever views coincide with them, and condemns all that differ from them, with as unhesitating dogmatism as the most pertinacious theorist on earth. Each also despises the notions of his fellows, in so far as they differ from his own. In short, the human faculties too generally operate as instincts, exhibiting all the confliction and uncertainty of mere feeling, unenlightened by perception of their own nature and objects. Hence public measures in general, whether relating to education, religion, trade, manufactures, the poor, criminal law, or to any other of the dearest interests of society, instead of being treated as one general system of economy, and adjusted each on scientific principles in harmony with all the rest, are supported or opposed on narrow and empyrical grounds, and often call forth displays of ignorance, prejudice, selfishness, intolerance, and bigotry, that greatly obstruct the progress of improvement. Indeed, unanimity, even among sensible and virtuous men, will be impossible, so long as no standard of mental philosophy is admitted to guide individual feelings and perceptions. But the state of things now described could not exist, if education embraced a true system of human nature and its relations. If Phrenology be true, it will, when matured, supply the deficiencies now pointed out."

Broad as the satire is, that the affairs of society are as yet a ceaseless controversy, we are sometimes apt, for a moment, to forget this inconvenient fact, to expect exceptions, and too rashly to count upon unanimity in what appear, to us at least, very self-evident propositions for social benefit. We confess we did commit this oversight with regard to the settlement of Liberia. If ever there was a human act which seemed to satisfy all our feelings and faculties, it might have been expected to be the first projection and effective realization of that admirable scheme, whose very essence appeared to us to be brotherly love and peace. In a former number,* we adduced Liberia as an example, unique on the face of the earth, of a community based on peace and Christian good-will; and while we unsuspectingly indulged in a luxurious contemplation of something like a realization, in our own day, of the paramount truth which Phrenology and Christianity have both made plain, that the Creator has connected happiness, social as well as individual, with the supremacy of the moral sentiments and intellect over the animal propensities, in the mind of man, we did not even glance at the American Association, to which is due the merit of the beautiful experiment, nor dreamed that any friend of justice and mercy could have found a fault in the motives or the acts of that society upon which to hang a censure. We had returned with fresh pleasure to the subject of Liberia,† when investigating the subject of the Negro's capacity for freedom

* Vol. vii. p. 531.

† Vol. viii. p. 87.

and free labour, and it was after our observations were in types, that we heard that Liberia—yes, even Liberia—was a controversy! that against the American colonizationists, there had risen up certain clamorous and even abusive opponents, who imputed to them sinister designs, hypocritical professions, mischievous intentions, cowardly fears, oppression, cruelty, treachery, and infidelity! In our then total want of information on the grounds of these astounding accusations, suspecting, from the incredible aggravation of the imputations, that feeling more than intellect was operating, and judging of the American Society by its fruits, we could not believe that so fair a child as Liberia could have such a parentage; and we published our continued approbation, resolving to presume favourably of the Society, till irresistible evidence should constrain us to believe the monstrous charges preferred against it.

We have now seen the articles of impeachment, and perused what is called their evidence; and our original surprise at the possibility of accusations at all, is fully equalled by our amazement that, by persons educated above the pitch of a village school, such abject futility, such unqualified drivelling, could have been actually printed and published.

We are struck with the important fact, that the writers against the Liberian scheme, and their followers, are all, as far as we know, what are termed *Immediatists*, in the slavery abolition question;—the “*ruat cælum*” philanthropists, who prefer justice with ruin, to justice without it; who, in America, are rendering more difficult and more distant the slave's complete deliverance, by embarrassing the legislatures in their views of its safety and certainty; and in England, are fortunately disregarded by a government that has resolved on measures at once more wise, and more efficiently philanthropic. The outcry against the Colonization Society originated in America, and has been echoed on this side of the water, with a disregard of fact, a want of fairness, an absence of logic, and a confusion of thought, in every way worthy of the class of minds which fail to see, in the sudden discharge of 800,000 Negroes in the British West Indies, and two millions in the United States, dislocation of the frame of society in those countries, and ruin and misery to the very objects of their misplaced benevolence.

The managers of the impeachment are, a Mr Charles Stuart, the author of a pamphlet published at Liverpool, and a Mr Lloyd Garrison, a pamphleteer in America; and although the anti-slavery periodicals, the Reporter and Record, have, with little credit to their discernment, joined in the clamour, they have pinned their faith to Messrs Stuart and Garrison, and produced nothing beyond extracts from their pamphlets; while a Mr James Cropper, of Liverpool, writes a letter to Mr

Clarkson, in which, after several sweeping and unsupported averments, abusive epithets, and much matter, of no application to the subject, he concludes with recommending Mr Stuart's pamphlet, to which his letter is printed as a sort of preface. This pamphlet is called "Prejudice Vincible, or the Practicability of conquering Prejudice by better means than by Slavery and Exile, in relation to the American Colonization Society." We have read it with all the attention and impartiality in our power, and have been unable to form any other opinion of it than this,—that, while it manifests a marked spirit of special-pleading and unfairness, it fails to substantiate its averments in point of fact, and not less to establish their relevancy to warrant the inferences drawn from them. In other words, it fails to prove the charges against the Society, and if it had succeeded, it would have left untouched the absolute good of the colony of Liberia.

The author quotes the two fundamental articles of the Society's constitution fairly enough:

"1st, The Society shall be called the American Society for colonizing the *Free* People of Colour of the United States.

"2d, The object to which its attention is to be *exclusively* directed, is to promote and execute a plan for colonizing (with their consent) the *free* people of colour residing in our country, to Africa, or such other place as Congress shall deem most expedient." We regret the alternative as to place, for it tends to weaken the grand argument for the scheme, that it will give a beginning to the civilization of Africa. *De facto*, however, Africa has been chosen, and the reservation, we have reason to think, was a mere deference to Congress, as matter of form.

Mr Stuart, unwilling, it would appear, to trust himself with a moment's charitable reflection on these articles, at once puts the worst construction upon them. "The broad facts of the case," he says, "are these: The whole population of the United States is about 18,000,000. Out of this, upwards of 2,000,000 are held in a most degrading and brutal state of personal slavery, under laws worse than even those of the wretched slave colonies of Great Britain.

"Out of the whole, 880,000, though *free*, are in most cases *only partially so*; and are exposed to an exceedingly malignant and destructive persecution, merely because they have a skin differently coloured from the remaining eleven and a half millions of their fellow-subjects.

"Both these two persecuted classes are rapidly increasing. Their increase terrifies the slave party, and fills them with anxious musings of danger.

"The glaring contradiction of a *free* people being a *slave-holding* people; of eleven or twelve millions of men, calling them-

selves the most free in the world, keeping upwards of 2,000,000 of their unoffending fellow-subjects in the most abject and degrading slavery, affects many, and urges them to seek a remedy. The word of God stands out before others, and bids them blush and tremble at the guilt and danger of their country; while the smothered cry of the oppressed and unoffending poor rises incessantly to God against her.

“From this state of things it was that the American Colonization Society arose; by this state of things it is that the American Colonization Society subsists. It is agreeable to the slave-master, for it calms his fears. It offers a *remedy* to the man who mourns over the dishonour and inconsistency of his country; and to the man who fears God, it commends itself by pretending to do all that it can for the unoffending poor.”

Bold averment, and utter irrelevancy to the question, “are alike conspicuous in what we have quoted.” The author proceeds: ‘The views of its advocates are frankly expressed in its own constitution, as above quoted, and in its own *reports*. I refer to them all, particularly to the three last, 13th, 14th and 15th, and submit from *them* the following quotations.’

Before giving the quotations, we beg to premise, that we have perused the 13th, 14th and 15th Reports alluded to, and we have not found the passages in these reports. On reading the matter published with the reports, we have found them forming parts of the speeches of members of the Society, which, as such, have been printed in the *res gesta* of their meetings, without being imputable to the Society. It became Mr Stuart to have candidly stated, that he took his quotations from the speeches of individuals over which the Society had no control, and not from its reports, by which alone it should be judged of. This was due to his readers, that at least they might have so important a distinction before them, and its omission, which could not be accidental, is an example of that unfair partialism with which we have charged the writer.

The passages are,

“1. 13th Report, page 44:—The present number of this unfortunate, degraded, and anomalous class of inhabitants cannot be much short of half a million, and the number is fast increasing. They are emphatically a mildew upon our fields, a scourge to our backs, and a stain upon our escutcheon. To remove them is mercy to ourselves, and justice (!!!) to them.”
15th Report, page 24:—“The race in question were known, as a class, to be destitute, deprived, the victims of all forms of social misery. The peculiarity of their fate was, that this was not their condition by accident or transiently, but inevitably and immutably, whilst they remained in their present place, by a law as infallible in its operation as any of a physical nature?”

In same 15th Report, page 25:—"What is the free black to the slave? A standing, perpetual excitement to discontent. The slave would have then little excitement to discontent, but for the free black; he would have as little to habits of deterioration, his next strongest tendency, but from the same source of deterioration!! In getting rid, then, of the free blacks, the slave will be saved from the chief occasions for suffering, and the owner from inflicting severity."

"2. 15th Report, page 26:—If none were drained away, slaves became inevitably and speedily redundant; &c. &c. When this stage had been reached, what course or remedy remained? Was open butchery to be resorted to, as among the Spartans with the helots; or general emancipation and incorporation, as in South America; or abandonment of the country by the masters *?" Either of these was a deplorable catastrophe; could all of them be avoided? and if they could, how? "There was but one way, and it was to provide and keep open a drain for the excess of increase, beyond the occasion of profitable employment, &c. &c. This drain was already opened." *The African Repository*, vol. 7, page 246, says, "Enough, under favourable circumstances, might be removed for a few successive years, if young females were encouraged to go, to keep the whole coloured population in check!!" How dreadful thus cooly to rend asunder the sexes which were made to be each other's mutual strength and solace through earth's dangerous pilgrimage!! And in page 232, anticipating within two generations a result of forty whites to one black, it declares that all meanness would then be at an end.

"3. In 14th Report, pages 12 and 13:—And the slaveholder, so far from having just cause to complain of the Colonization Society, has reason to congratulate himself that in this institution a channel is opened up, in which the public feeling and public action can flow on, without doing violence to his rights! The closing of this channel might be calamitous to the slaveholder beyond his conception; for the stream of benevolence that now flows so innocently in it, might then break out in forms even far more disastrous than abolition societies and all their kindred and ill-judged measures."

Report of Pennsylvania Colonization Society for 1880, page 44.—"The Society proposes to send, not one or two pious members of Christianity into a foreign land, but to transport annually, for an indefinite number of years, in one view of its

* "In contemplating these alternatives, how can we sufficiently admire the goodness of God in having provided that the increase of slaves shall necessarily lead to emancipation and incorporation! and how can we be sufficiently struck with horror at the deliberate and insolent cruelty of man, in devising schemes like this for the perpetuation of slavery!—J. C."

This scrap of pure nonsense is a specimen of Mr Cropper.

scheme, 6000 ; in another, 56,000 missionaries (!!!) of the descendants of Africa itself, to communicate the benefits of our religion, and of the arts. And *this colony of missionaries,*" &c. That is, *six or fifty-six thousand of the degraded and anomalous wretches who are said to be a mildew upon the fields of America, and a scourge to the backs, and a stain upon the escutcheon of the white people of the United States, are to be transformed annually, by transportation to Africa, (with their own consent), into an army of missionaries, communicating the benefits of religion and the arts !!!*

Now, suppose the very worst meaning to be given to the words of these speakers, as *picked out* by Mr Stuart, without giving us the benefit of context, we would ask, if it is to be endured, that a Society professing benevolence, and acting benevolently, shall be condemned because some of its members, in speeches at its meetings, discover and avow that the benevolent scheme may be made at the same time to answer a selfish interest? The notion is preposterous. But we have read the *whole* speeches, and are satisfied that their spirit was throughout benevolent both to the free Negroes, and also to the slaves,—slavery existing,—and the very reverse of that hard-hearted selfishness, which Mr Stuart obviously intends to fasten upon the speakers, or rather on the Society, by culling and arranging for effect, isolated, and as they stand alone, equivocal passages.

But the utter want in the Author's mind of the power of perceiving the relation of necessary consequence, is exposed by his drawing from any thing he has quoted of these speeches, conclusions condemnatory of the Colonization Society. It is most true that the evils stated in them exist in America ; and existed long before colonization was thought of ; and equally true that that measure will do its own share of good without increasing those evils ; if it shall not, as we take it is demonstrable it will, materially alleviate, and, it may be, ultimately cure them. The utmost contemplated by the speakers, is the separation of the white and black population of the United States ; and they welcome a means that shall tend to this beneficial end, and moreover, improve the Negro's condition, physically and morally. Let us look this misrepresented policy of separation more narrowly in the face, and try it by the principles of a sound philosophy, which will ever be found in accordance with genuine rational religion.

Even Mr Stuart will grant to us, that the actual existence of some millions of blacks in the same community with the whites of the United States, is in itself an enormous political and moral evil. That the black population is, *de facto*, an inferior caste, which, with many individual exceptions, no doubt, is generally degraded, uneducated, and in many instances vicious and de-

praved; and if it be a scourge to America, the punishment is the natural result of a daring violation by man of a marked appointment of God,—a just retribution for the avarice, rapacity and cruelty that for ages outraged nature, by tearing the African from the region and the climate for which his Creator had fitted his physical constitution, and mingling him with a race with which incorporation was not designed, if a strong natural repugnance to it is to be received as proof of the Divine intention.

It is wild fanaticism to call this repugnance unchristian, and to denounce a doubt of the power of religion to overcome it as infidelity;—*because* God made all men of one flesh, and Christianity bids us open wide the arms of brotherly love, and take all our brethren of mankind to our bosom. It is a stupid perversion of this religious precept to maintain, that the fulfilment of this duty precludes all change of the Negro's place of residence, and that the American does not in effect hold out to him the arms of brotherly love, by placing him in independence, comparative elevation, and abundance, in another country, instead of degradation and destitution where he is. God made all men of one flesh, but he did not design them all to live in one country, and, however various and unsuitable their aspect and nature, to mix and incorporate. If we look at that well marked and vast peninsula called Africa, we find that equally marked race the Negro, with slight modifications, forming its native population throughout all its regions. We find the temperature of his blood, the chemical action of his skin, the very texture of his wool-like hair, all fitting him for the vertical sun of Africa; and if every surviving African of the present day who is living in degradation and destitution in other lands for which he was never intended, were actually restored to the peculiar land of his peculiar race, in independence and comfort, would even Mr Stuart venture to affirm that Christianity had been lost sight of by all who had in any way contributed to such a consummation? It matters not to brotherly love on which side of the Atlantic the Negro is made enlightened, virtuous and happy, if he is actually so far blessed; but it does matter on which side of the ocean you place him, when there is only one where he will be as happy and respectable as benevolence would wish to see him, and certainly there a rightly applied morality and religion would sanction his being placed. The incurable evil of the present relation of the whites and the blacks in America is, that incorporation is almost morally impossible. The whites are too numerous in both the sexes, to be driven to intermarriage with the Negroes. Mulattoes are a West Indian, greatly more than an American phenomenon. The distinction in the United States is white or black,

with little of the intervening shades of colour. The races do not and will not incorporate. Try the loudest advocate for the "vincibility" of this prejudice, as it is most unphilosophically called, with this touchstone,—“marry the Negresses to your sons, and give your daughters to Negroes,”—and we shall have a different answer from Nature than we receive from a misplaced religious profession.

If there be the barrier of natural repugnance to the actual incorporation of the blacks with the whites, it is equally hopeless to preach, as a religious duty, the conquest of prejudice to the effect of elevating the Negro to social equality with the white,—for this, too, is required by the anticolonizationists. The dominant relation of the white to the Negro has not varied during more than two centuries of intercourse. It was natural from this to infer constitutional inferiority in the Negro race, which, as an average character, was not generally elevated by the occasional appearance of an Ignatius Sancho, or other Negroes of superior talents and force of character. Phrenology confirms this decision. It demonstrates that brain is the visible title, the material charter of the ownership of mind. When it is of large volume, both in the intellect and the feelings, there is a moral force as inseparable from it as light from the sun, and minds manifested by smaller brains yield to it an homage which they have no power to withhold. The influence of the man over the boy,—of the schoolmaster over a numerous school, is not muscular but cerebral strength; for, in the first, he would be outdone by the united force of his pupils. The large brain of Europe controls the small brain of India by an irresistible moral influence, while the total Indian muscle is to the British as three thousand to a unit. A native once asked an English gentleman how it came to pass that 30,000 Europeans could subject and keep in subjection 100,000,000 of natives, when, if each native only threw a slipper upon their masters, they never would be heard of again? The moral force of large brain has mastered India, and is in the course of meliorating its condition. We had occasion, as already said, to compare the Negro with the European brain in a former number *, and stated it as a phrenological fact, that the white is not only endowed with a larger volume, but with a better organization of brain than the Negro, so that the first has not only more power, but that power fitted for a superior intellectual and moral direction. Now a fact in nature is another word for the Creator's will. When mixed, the white and Negro *must* stand to each other in the relation of a superior and inferior race, with all the injurious effects of such a relation on both. It is therefore in vain to make an ig-

* Vol. viii. p. 87.

norant appeal to Christianity, and denounce this fact as a sin in those who are sufficiently enlightened to observe it. Man must do his part, before he raises his voice to heaven. The Creator did not intend the two races to people the same country, where the one must rule, and the other submit, in their respective degrees of constitutional power. Man produced this anomalous condition, and, therefore, his first duty is to do his utmost to remedy the mighty mischief he has perpetrated, to remove the temptation to the sin of domination over a weaker brother, by restoring him to the condition for which he was created, instead of making vain efforts to do him justice in circumstances where it is morally impossible, and where it is, therefore, an inconsistency to make it a point of religious duty. It is here that we find well-meaning, but over-zealous religionists, erring most widely. They hold practically, though they do not say so, that nature is not of God, and thence they reject all aid from any manifestation of God but what *they* call his Word, which they are in constant danger for that very reason; as is done in the question before us, to misinterpret and misapply.

We do not mean to affirm that this distinction is immutable, and that in the lapse of ages the African brain may not improve, as there are grounds for concluding the European has done in the most favourable circumstances for such melioration; but it is impossible to conceive worse circumstances than those of a despised, neglected, and degraded caste, mingled yet unincorporated with a naturally dominant and greatly more numerous population.

Independent, therefore, of the indisputable abomination of slavery,—the real blot on America's escutcheon,—the existence of half a million of Negroes, and, were slavery abolished, of above two millions, whom nature destined to people Africa, and man has violently transported to America, is, we repeat, an enormous political and moral evil; and it will be a scourge to the American's back, which will goad him and his children, and his children's children, long after he has laid down his own. Now, before the American citizen resolves to break down a golden bridge for a retiring enemy,—to close a path, however narrow, by which the African may, *if he wills*, return to the country and climate of his race,—to reconsign to the desert jungle, and its wild beasts, a fertile cultivated spot, inhabited by a civilized, religious, and moral community, ready to receive the African with the welcome of citizenship, and, for the rags of oppression, proscription, and persecution, to put on him the ring and the robe of a higher morality, and give him the elevated consciousness of independence and character,—before the American, we repeat, shall resolve to say NO to all this, he must demonstrate that

the Negro race *can*, in a reasonable course of generations, find in America, what they have never yet done, any thing that deserves the name of a country. This is to us the question, in comparison with which all the other points so much dwelt upon, shrink into insignificance.

It is, to the high moral view which we take of the question, matter of no small importance whether the American slave-owner is relieved or not of the incitement to insubordination in his slaves, which is dreaded from the spectacle of a wretched, despised, and destitute free-coloured population, existing among them, — another of the evils which a speaker thought Liberia would cure, and which expectation Mr. Stuart calls a set purpose to perpetuate slavery. Accustomed as we are to confide in the onward march of the supremacy of the Moral Sentiments and Intellect, the key-stones of our Ethics, we expect the annihilation of slavery all over America, by the fiat of her legislatures, and the acclamations of her people, on far higher compulsion than the wretched fear of a redundant coloured population. When we really come to the great question of slavery abolition, Liberia, *per se*, as it has hitherto operated, will be but a fly on the wheel of *that* mighty revolution. If it operates at all, we say it operates towards facilitating abolition, and not perpetuating slavery. But, alas! if two thousand settlers in the amount of colonization in eleven years, when would the “*drain*,” as it is called, begin to be felt, which is to raise the slaves’ marketable value, — remove the slave-owner’s fears, — encourage him to perpetuate his tyrannies, — and harden his heart that he will not let the oppressed go. Confident that slavery will be abolished in the United States, whether the Liberian drain be great or small; through causes altogether unconnected with that drain, we grudge embarrassing that great question with one which has independent benefits in its train; and we hold the Liberian plan to be so excellent in its essence absolutely, that we would hail its enlargement to ten thousand times its present extent. But when we consider the difficulties which retard its enlargement, — when we view its present insignificant operation in any way, the loud denunciation of it by Mr. Stuart and by his echoes seems to us utterly insane.

One of the speakers whose words are quoted, asks most unnecessarily, and because of the atrocious alternative alluded to, in very bad taste, “Was open butchery to be resorted to?” A child just beginning to read would see that the speaker was assuming that such a course was morally impossible; yet Mr. Stuart gives the words the emphasis of italics, as if the speaker had recommended *that* mode of diminishing the free coloured population of the United States! This gross perversion has

been eagerly seized by the enemies of Liberia, transferred in all its deformity into the Anti-Slavery Reporter, and the Anti-Slavery Record, and imputed not merely to the speaker, whose meaning has been purposely reversed, but to the whole American Colonization Society!

The speaker whose words are quoted from pages xii. and xiii.* of the Appendix of the Fourteenth Report, disclaims interference with the slave owner's *rights*, while he would open a channel to his benevolence. Now, what person endowed with a fair portion of intellect can fail to see, and, with an average conscientiousness, to acknowledge, that the rights here spoken of are merely the conventional rights of two centuries' standing in America? And what grown man of practical sense will not say, that the Society did right to declare their non-interference with this question, when they could do all the good they contemplated without it. Nothing they do will obstruct, or even retard, the great measure which is destined to put the question of right on its proper moral footing. Yet their avoidance of that question is called acknowledgment of the slaveholder's right. If this is merely bad logic, we should not be disposed to visit it with the same measure of censure, as would be its due if it is deliberate perversion.

The 6000, or 56,000 missionaries, it matters not which number, is a mere hyperbole of over-zeal in the friends of the Colonization scheme. We rather look to the moral and religious improvement which the great majority of emigrants are to find in Liberia, than to take thither. Nevertheless, we would say, educate them as extensively as you can before sending them, and by all means send your most intelligent and moral individuals first, in order to lay that municipal foundation which will render it safe and beneficial to colonize more numerous and indiscriminately afterwards. But all that emigrate are missionaries to a certain extent, as they are more or less civilized and religiously instructed, and fitter for usefulness in the colony than the tribes which unite with it in Africa.

We had written some pages upon Mr Stuart's yet farther amplifications of the few ideas which his meagre pamphlet contains, and on what he calls farther proofs, still consisting of isolated passages from the speeches of individuals, and from the African Repository. We shewed what he calls his evidence to be insufficient, and his statements, even if proved, to be irrelevant; but in consideration of our readers, and as we found that we only repeated the answers we have already made, we have not sent them to press.

* We refer to the passage by the proper Roman numerals of prefatory matter, which Mr Stuart does not.

Mr Stuart tells us that the American black population itself is hostile to the colonization scheme. He says, p. 14, that the coloured people are "writhing under the colonization process." This is the exaggeration of special-pleading. No one writhes under an invitation which he is perfectly free to refuse. Nevertheless, we have meetings of the free-coloured people, passing resolutions,—far above Negro literature, and evidently all the work of one pen,—invoking their household gods, and obtesting the tremendous and atrocious scheme of *tearing* them from their native land and the homes of their fathers, &c. ! We have no manner of doubt that these absurd and uncalled for exhibitions are got up by the enemies of the colonization plan, and a weak invention they are. The reports of the society are full of evidence of the popularity of the colony with the people of colour, and record many instances of their eagerness to emigrate in greater numbers than the means of the society enable it to permit. The testimony of the settlers is daily spreading and increasing the attractions of the colony to the black population in every part of the United States.

With Mr Lloyd Garrison we really need not trouble our readers. He is a type of Mr Stuart, or Mr Stuart of him, the chronology of the pamphlets being of no moment, or the question which has saved the other original thinking. Mr Garrison distorts meanings—fastens the speeches of individuals on the society—quotes partially—conceals explanations—exaggerates, clamours, and cants, exactly as Mr Stuart does; while the answer of irrelevancy, were every word they speak true, applies equally to both.

The Anti-Slavery Reporter, No. 102, has not only, as we formerly observed, copied the unfairnesses of Stuart and Garrison, but has made an addition of its own in the very worst spirit of these pamphleteers. It observed that a Mr Broadnax had made an absurd and unfeeling speech in the Virginia House of Delegates, in proposing a bill for the *forcible* removal of the free Negroes from that State; and although the bill was of course rejected, the Reporter holds out Mr Broadnax's insane proposal, as serving "to illustrate the spirit of the colonization leaders!" The next words in the Reporter, differently applied, we adopt, and apply to its conductors themselves: "This is really too bad!"

Mr Stuart thought proper to impugn an account given of Liberia in the organ of the Peace Society, called the Herald of Peace, and addressed a letter to the editor of that periodical, which has brought from him "a Vindication" of the Society and their colony, itself sufficient to annihilate Mr Stuart in the controversy. We allude to that paper for the sake of deriving from

it an important aid to our own vindication. Mr Stuart, in his letter to the editor of the *Herald of Peace*, makes admissions, by which, as the lawyers say, he admits himself out of court: He says, "But is there nothing good, then, in the American Colonization Society? Yes, there is,—1st, For Africa it is good. It interrupts the African slave trade within its own limits; and the least interruption to that nefarious traffic is an unspeakable good. 2d, For the few coloured people who prefer leaving their native country and emigrating to Africa, it is unquestionably a great blessing. 3d, To the slaves, whose slavery it has been, or may be, the means of commuting into transportation, it is a blessing, just in as far as transportation is a lesser evil than slavery; and this is by no means a trifling good. 4th, But its highest praise, and a praise which the writer cordially yields to it, is the fact, that it forms a new centre; whence, as from our Sierra Leone, and the Cape of Good Hope, civilization and Christianity are radiating through the adjoining darkness. In this respect, no praise can equal the worth of these settlements." After this declaration in favour of all that he had denounced, we should think we *ought* to hear no more of Mr. Stuart.

For ample evidence of both the salubrity of the climate for Negroes,—though not for Whites,—and its growing prosperity, down to September last, we must refer to the Society's Reports, and other publications on Liberia*.

It will naturally occur to the reader to ask, How is this settlement countenanced, which is thus opposed? In America, the scheme has been hailed all over the Union, by the most eminent and patriotic statesmen, by the clergy of all denominations, by men of science and men of business; and the Society, which was formed 1st January 1817, presents a most encouraging array of their names. We read among these the names of Monroe, Madison, Marshall, Jefferson, Bishops White and Meade, La Fayette, Caroll of Carrollton†, Buhsrod Washington, Henry Clay, Webster, Mercer, Frelinghuysen, and many other names of statesmen, patriots, and philosophers. Auxiliary Societies have been formed in almost all the free states, and in several of those where slavery is yet unabolished. We have seen a letter from the Bishop of Virginia, Bishop Meade—a name which carries the greatest weight all over the Union—addressed to Mr Elliott Cresson, the zealous agent of the colonization scheme, now engaged in enlisting British sympathies in its favour. We wish

* There is an interesting account of Liberia, we hear about to be in second edition, published by Waugh & Innes, Edinburgh; and Whittaker & Co. London.

† Lately deceased at the age of ninety-six, the last survivor of those who signed the declaration of independence in 1776.

we had space for it, because it takes our own view of the evil of the mixture of a white and black population, and welcomes a benevolent plan for their separation. In England, the name of Wilberforce, who has decidedly approved the plan, is itself a tower of strength; and the venerable Clarkson, too, has lived to see and applaud it in the strongest terms. With every friend to Africa and the African, he wonders at the opposition, and (we have seen his words) imputes it to some demon's intervention.

Mr Cresson has been eighteen months in England. He is a gentleman of independent fortune, and, actuated by the purest philanthropy, is zealously preaching the cause to the British people. He has been on the whole well received; and wherever opposed, it has been in the *very words* of Mr Stuart's pamphlet, while his opponents had not read any thing on the other side. In Edinburgh, his reception has been most flattering. At a public meeting to hear his statement, held 8th January 1838, Lord Moncrieff presided, and a number of the most eminent men were present, all of them well versed in the subject. Lord Moncrieff delivered a powerful address, in which he lamented the opposition to the enlightened plan. The Lord Advocate Jeffrey, M. P., concluded an eloquent address, by moving the first resolution, and was seconded by the Rev. Dr Grant*.

“ 1. Resolved, That this meeting view with unmixed satisfaction the establishment of the free and independent settlement of Negroes on the West Coast of Africa, called Liberia, under the patronage of the American Colonization Society,—because they consider it as the most likely means to civilize and christianize the natives of Africa,—to diminish, and ultimately annihilate, the slave trade, by preventing its supply at its source,—and to forward the cause of the abolition of slavery itself, by opening a channel in which benevolence may flow safely, in providing for the emancipated Negro an asylum and a country, in a region and climate for which his physical constitution is peculiarly fitted.”

The second was moved by Mr Simpson, advocate, in the unavoidable absence of the Solicitor-General Cockburn, who had zealously undertaken it, and seconded by Mr Wardlaw Ramsay: “ 2. That this meeting are disposed to welcome a plan, which, with a due regard to the free-will, rights, and feelings of both the black and white population, tends to commence the cure of the evil of slavery itself, by re-establishing the African in possession of every social and political right in the land of his ancestors.”

* Men of all shades of politics were present and concurring. A committee of correspondence was named, a collection made, and subscription papers lodged at all the banks, &c. Mr Simpson, Advocate, undertook to act as Secretary; and Mr Cresson has since signified, that the funds, if sufficient, should be allotted to the establishment of an additional settlement at the mouth of one of the five rivers between Monrovia, the Liberian capital, and Sierra Leone, to which the name of *Edina* should be given. The rivers are the only slaving stations.

And the third was moved by Mr J. A. Murray, M. P., and seconded by Mr Farquhar Gordon: "3. That this meeting highly approve of the principles and motives of the American Colonization Society, and applaud the judicious course which they have followed, in doing all the direct good in their power, while they carefully avoid in any way interfering with other existing institutions; and, in particular, in leaving Anti-Slavery and Negro Education Societies, and the American Legislatures themselves, to pursue their proper course in the great work of justice to the injured sons of Africa." The motives of the American Societies—although held by all the speakers to be unexceptionable—were considered quite secondary to the actual merits of the plan, as standing out prominently in the real colony, with its free trade, its schools, and its churches, and even its newspaper. The sheet of a number, in quarto size, was, with great effect, held up to the meeting; and another, "grown bigger," as a Negro printer's boy said, "as it grew older," in folio.

With the sentiments of that meeting we cordially join. We heartily approve the American Colonization Society, on the one hand, in their motives, their principles, and their acts, and would cheer them on in their twofold behest of delivering Africa and America from the present diseased and unnatural condition of both, by a plan which tends to put asunder two races of men which God did not join, and whose junction He does not bless, and to establish each, free and erect, the lords of their own continent; while, on the other hand, and independently of all the possible mixture of motives with which it may be encouraged and supported, we hail the *existence* of Liberia,—a community of Africans, without a white to claim the white's ascendancy, to snatch from his coloured brethren the prizes of life, and blight the freshness of his freedom by the chill of ancient associations and recollections,—a community whose basis is peace, or if war—and it has had its wars, in which it has borne itself nobly—defensive war alone;—whose principle of commerce is a port without a custom-house, open to the whole world,—whose education is universal,—whose practical code is Christianity.

Last of all, we welcome Mr Cresson to our country, and are glad of the encouraging reception which he has received. Such missions do incalculable good, both to the parent country, and her gigantic offspring in the New World. He comes in all the power of benevolence, before which unsocial feelings fly like the shades of night before the dawn. May his visit tend to enlarge better relations between the two lands than those of jealousies, and taunts, and calumnies, and wars; and may Liberia itself be a new bond of union between them, in the very spirit of that infant community,—liberty, light, religion, free commerce, brotherly love, and peace.

ARTICLE VI.

ON A SINGULAR AFFECTION OF THE ORGAN OF LANGUAGE, PRODUCED BY THE ACTION OF MORPHIA. By WILLIAM GREGORY, M. D., F. R. S. E., Sec. Phren. Soc.

THERE can be no doubt that different remedies produce different effects on the mind as well as on the body; and, if medical men, acquainted with the principles of Phrenology, were to direct their attention to the action of remedies on the minds of their patients, a new and interesting field of inquiry would be laid open, and much light would probably be thrown on many obscure points in the history of mind.

Every one is familiar with the fact, that ardent spirits excite strongly the feelings of those who indulge in them. It is stated in the works on Phrenology, that the predominant organs are commonly excited more than the others; but I think we must all have observed, that this excitement is most frequently observed in the lower propensities and the sentiments, while the intellect rarely participates in it.

On the other hand, the intoxication of opium is generally manifested by an increased vividness of intellectual perceptions, without that activity of the lower propensities, especially Combativeness and Destructiveness, so often observed in ordinary drunkenness.

It appears to me, then, probable, that the action of alcohol is directed more to the posterior, and that of opium to the anterior, part of the brain. But opium is a substance so complex, that we can hardly draw accurate conclusions from observations on its action, unless those substances which it contains be separated from each other, so as to avoid the confusion arising from different and even opposite actions going on at the same time.

When morphia, the most active ingredient of opium, is purified and combined with an acid, such as sulphuric or muriatic, the resulting salt is an anodyne of very great power and uniformity in its operation; and it seems to me to produce effects on the mind which are well worthy of being studied with attention by those who have the opportunity.

The results which I have the honour to offer to the Society, are derived from experiments, chiefly involuntary, made on my own person.

About two years ago, while occupied in examining opium, and especially the salts of morphia, I had acquired a bad habit of tasting the solutions; and it happened more than once, that, by repeated tastings, I received into the system a quantity sufficient to produce effects which I was at first far from attributing to the true cause. The first effect which struck me was, that, in reading, the words, which I saw distinctly, conveyed to

my mind an impression which I could not define, but which was certainly different from the right one. On attending as closely as I could to what passed in my mind, I was conscious of nothing but that the words seemed to have lost their true meaning. When this effect had passed off, I was unable to recall what the erroneous impressions had been. A few days after the first occurrence of this affection, while still engaged in the same experiments, I was suddenly taken ill, and had nearly fainted. On recovering, I observed my eyes to be affected in a way to which I am subject, in common with others of my family, when the stomach is slightly deranged. This affection of the eyes consists in an unpleasant vibratory motion of zig-zag lines before the eye, rendering vision partial, and accompanied by nausea. In ordinary cases, it is soon followed by a headach, confined to behind the eyeball, when the sight becomes clear. On this occasion, the affection of the eye was unusually great, which led me to predict a violent headach. In a few minutes the headach came on. It was very severe, and confined to that part of the brain situated behind the eyeballs. As soon as I could see clearly, I was astonished to find that I was affected as I had formerly been in regard to words, but to a much greater degree. Not only was I incapable of rightly reading written language, but words addressed to me conveyed a meaning different from the true one. I think also, but of this I am not certain, that a few words which I spoke were observed to be incoherent. But during the whole of this time, my mind was perfectly clear, and I was quite conscious that the erroneous impressions were confined to the faculty of Language.

I began now to suspect that I had suffered from my imprudence in tasting the solutions; which idea was confirmed when I found that a friend who had accidentally taken a large dose of muriate of morphia, had suffered in a manner somewhat similar to what I have described, in regard to the fainting and sickness produced. This gentleman did not observe any affection of Language, but he was in a state of such complete prostration, that he lay for two days without being able to raise his head, and consequently did not attempt to read. I resolved to abstain in future from tasting solutions of opium; but, from habit, I did taste some about a week after; and, a third time, I experienced the same effects, as to language, but without the headach. Having overcome the habit of tasting, I have not since experienced any thing of the kind.

Here, then, is a very marked derangement of the faculty of Language, amounting to a dissociation of the sign and the thing signified, produced by an overdose of a salt of morphia; and, in the most severe instance, it was accompanied by violent headach in the situation of the phrenological organ of Language. But, it must be remarked, that, in the other two cases, there was

no headach; and that I have frequently had headach in the same situation, from derangement of the stomach, without *observing* a similar affection of Language. It by no means follows, however, that this affection did not exist.

A very interesting question now arises, viz. What is the effect of a moderate dose of the same medicine? And, in my own person, I can state distinctly, that, in this case also, the faculty of Language is affected, but in a very different way. If I take from twenty to thirty drops of the solution of muriate of morphia, it produces, in the course of an hour, a very agreeable state of calm; and, for some hours after, the organ of Language is so strongly stimulated, that, so far from having any hesitation in finding words, I find it difficult to stop when I begin to speak; and I have repeated this experiment, which is attended with no inconvenience, so often, that I am quite confident of the result.

Dr Montgomery Robertson, in a paper on the salts of morphia in the Edinburgh Medical and Surgical Journal, recommends the muriate to nervous people who have to make an appearance in public, on account of the calm collectedness of mind which it produces. I am disposed to concur in this recommendation for another reason, viz. the stimulus which it affords to Language.

I am inclined to believe, that all the intellectual organs participate in this stimulus. At all events, when under the influence of this drug, I have always observed an increased flow of ideas, and a greater power of following out a train of reasoning; and I have never experienced from it any excitement of the lower propensities. I have often had occasion to remark, that, even when the muriate of morphia does not cause sleep, the patient rises refreshed, although the intellect has been actively employed all night. It appears as if, to use a strong expression, the mind was awake while the body slept. This remark is confirmed by the experience of others.

I consider it, therefore, probable, that the action of morphia is directed to the anterior lobe, and, in some individuals, more particularly to the organ of Language, and that an overdose causes entire derangement of that faculty. These conclusions will have to be confirmed, or otherwise, by the observations of intelligent practitioners. Since writing the above, my attention has been drawn by Mr Simpson to the description of the effects of opium contained in the "English Opium-Eater," and Madden's Travels, both analyzed in this journal*. I shall only remark here, that, in the English Opium-Eater and Mr Madden, all the knowing organs, except that of Language, appear to have been affected, and the propensities and sentiments do not seem to have participated in the stimulus, which affords a strong and unexpected corroboration of the conclusion to which I have been led by my own observations.

* Vol. ii. 428, and iv. 133.

I have only farther to add, that, at the time these observations were made, I was ignorant of Phrenology, and knew nothing of the seat of the various organs, and consequently was utterly at a loss to account for the phenomena.

In my head, the organ of Language is *rather large*.

ARTICLE VII.

STRUCTURE AND FUNCTIONS OF THE MUSCULAR SYSTEM, VIEWED IN RELATION TO THE PRINCIPLES OF EXERCISE.

By ANDREW COMBE, M. D.

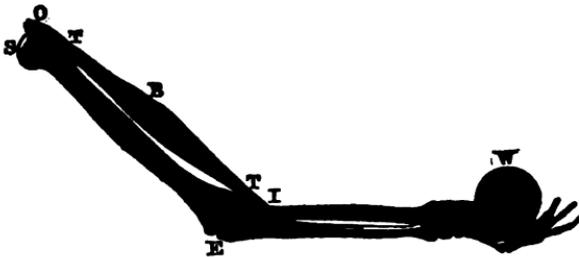
WHEN explaining the functions of the skin in the first article of our last Number, we announced our intention of occasionally devoting a few pages to the exposition of the nature and uses of such of the corporeal organs, as, either by the importance of their functions, or their intimate connexion with the rest of the system, were most calculated to interest the general reader. Our design has been so generally approved of, that we have now no hesitation in following it up. We have, accordingly, selected the muscular system, and the principles of exercise, as the subjects of another essay,—in which, as in the former, we shall endeavour to be at once popular and practical.

The muscles are those distinct and compact bundles of fleshy fibres which are found in animals immediately on removing the skin and subjacent fat; and which, although perhaps not known to all under their generic or scientific name, are familiar to every one, as constituting the red fleshy part of meat.

Every muscle or separate bundle of fleshy substance, is composed of innumerable small fibres or threads, each enveloped in, separated from, and, at the same time, loosely connected with, the others by a sheath of cellular membrane, so thin, however, as not to obscure the colour of the fibre, or attract notice unless specially looked for. Each muscle is in its turn separated from the neighbouring muscles by thicker layers or sheaths of the same membrane, in some of the cells of which fat is deposited, especially where the intervals between the muscles is considerable; and hence the elegantly rounded form of the limbs, which, without this fat, would present the rigid, sharp, and prominent outline which we see occasionally in strong persons of a spare habit of body. From the loose texture of the connecting cellular membrane, the muscles enjoy perfect freedom of motion during life, and admit of being easily separated from each other after death, either by the knife, or by simply tearing the cellular tissue.

Muscles, speaking generally, may be divided into three parts, of which the middle fleshy portion, called the *belly*, is the most conspicuous and important. The other two are the opposite ends, commonly called the *origin* and *insertion* of the muscle.

The belly is the bulky and fleshy part, by the contraction or shortening of the fibres of which, the two ends are brought nearer to each other, while the belly itself swells out in a lateral direction. When we attempt to lift a heavy weight in the hand, or to overcome any resistance, the muscles which bend the arm may be seen and felt to start out, rigid and well defined in their whole extent, while their extremities tend powerfully to approach each other, and of course to carry along with them the bones to which they are attached. In consequence of this tendency, if the weight be unexpectedly knocked out of the hand before we have time to obviate the result, the muscles, having then no resistance to overcome, will contract violently, and throw the hand up with a sudden jerk. All voluntary motion is, in fact, effected by the contraction of muscles acting upon and changing the relative position to each other of the bones or solid supports of the system, and consequently almost all muscles are attached to one bone by their *origin*, and to another by their *insertion*; the former being merely the fixed extremity towards which the opposite or more moveable end, called the *insertion*, is carried by the shortening of the intervening belly of the muscle.



The figure represents the bones of the arm and hand, having all the parts dissected off except one muscle OI, of which the function is to bend the arm. O the origin of the muscle. B the belly. I the insertion. TT the tendons. S the shoulder-joint. E the elbow. When the belly contracts, the lower extremity of the muscle, I, is brought nearer to the origin or fixed point O, and by thus bending the arm at the elbow-joint, raises up the weight W placed in the hand.

If all the muscles must be attached to bones, it may be asked, how can the bones, which present comparatively so small a surface, afford space enough for the attachment of muscles, which are so much larger, and which even appear in successive layers above each other? This difficulty is obviated by two means. In the *first* place, the heads, and other parts of bones to which muscles are attached, swell out so as to present a larger surface than the body of the bone, and form what are called *processes*, for the express purpose of affording greater room; and, *secondly*, instead of *all* the fleshy fibres of a muscle being prolonged to its points of attachment at the bone, they, with few

exceptions, as they proceed from the belly, terminate gradually in a white shining *tendon*, of a much smaller size than the muscle but of great strength, which is inserted into the bone. These tendons, or *sinews* as they are occasionally named, conduce greatly to symmetry, elegance, and freedom of motion; and may be traced under the skin on the back of the hand, and in the very powerful specimen at the heel called the tendon of Achilles. The hamstrings are another obvious example, and may easily be felt becoming tight when an effort is made to bend the knee. There are a few muscles not attached to bones by either extremity, and also a few which have no tendons. Those which surround the eyebrows, the mouth, the gullet, and some of the other natural passages, are of the former description, as is also the heart; and some of the muscles of the trunk have no tendons, but these are few in number, and may at present be considered exceptions to the general rule.

In man, and in most of the animals with which we are familiar, the muscles are of a red colour; but this depends entirely on the blood which they contain, and so far is the colour from being essential to their constitution, that it may be destroyed by washing out the blood which produces it, the muscular substance remaining in other respects unchanged. Hence the colour of the muscles varies with that of the blood,—is dark where it is dark, pale where it is pale, and white where the blood is white. The true characteristic of muscular fibre is *contractility*, or the power of shortening its substance on the application of stimuli, and again relaxing when the stimulus is withdrawn.

The direction in which the fleshy fibres run, determines the direction of the motion effected by their contraction. In some muscles the fibres are nearly parallel, and act consequently in a straight line. In others they run obliquely, producing a corresponding obliquity of motion; and in others again they are disposed like the feathers in relation to the quill, and are, therefore, styled penniform. A few are circularly disposed round openings, and contract towards a common centre, like the mouth of a purse drawn in by its strings. When the direction varies, it is always to effect a particular kind of action. Remarkable contrivances appear for this end; one muscle of the lower jaw, for example, is divided into two distinct fleshy bellies by an intermediate thin strong tendon, which passes through and plays in a pulley adapted for its reception; its two portions being by this means enabled to operate with full effect almost at right angles to each other. A similar arrangement is found in the *trochlearis* or pulley-muscle of the eyeball; and modifications of a different kind occur in other muscles, as in those of the fingers and toes, wherever a particular object is to be accomplished.

The chief purpose of the muscles is obviously to enable us to carry into effect the various intentions and designs—or volitions,

as they are termed by philosophers—which have been formed by the mind. But while fulfilling this grand object, their active exercise is at the same time highly conducive to the well-being of many other important functions. By muscular contraction, the blood is gently assisted in its course through the smaller vessels and more distant parts of the body, and its undue accumulation in the internal organs is prevented. The important processes of digestion, respiration, secretion, absorption, and nutrition, are promoted, and the health of the whole body immediately influenced. The mind itself is exhilarated or depressed by the proper or improper use of muscular exercise, and it thus becomes a point of no slight importance to establish general principles by which that exercise may be regulated.

The first requisite for healthy and vigorous muscular action, is the possession of strong and healthy muscular fibres. In every part of the animal economy, the muscles are proportionate in size and structure to the efforts required from them; and it is a law of nature, that whenever a muscle is called into frequent use, its fibres increase in thickness within certain limits, and become capable of acting with greater force and readiness; and that, on the other hand, when a muscle is little used, its volume and power decrease in a corresponding degree. When in a state of activity, the quantity of blood which muscles receive is considerably increased, and, in consequence, those which are much exercised become of a deeper red colour than those which are less used. The reason of this will be evident, when we recollect that to every organ of the body arterial blood is an indispensable stimulus, and that its supply is, during health, always proportioned to the extent and energy of the action. When a part, therefore, is stinted of its usual quantity of blood, it very soon becomes weakened, and at last loses the power of action, although every other condition required for its performance may remain unimpaired.

It is the infringement of this condition that entails so much misery upon our young manufacturing population, and even upon many of the inmates of our boarding-schools. Wasted by excessive labour, long confinement, and miserable diet, the muscular system is stinted in growth, and weakened in structure; and the blood, impoverished by insufficiency of nourishing food, and a vitiated atmosphere, is no longer capable of repairing the waste consequent upon exercise, or of affording a healthy stimulus to the vessels and nerves which animate the muscles. Languor, paleness, debility, and wasting of the body, and hopeless exhaustion of mind, necessarily follow, and place the individual beyond the reach of either bodily or mental health; and leave him susceptible of no stimulus but that of ardent spirits or of excited and reckless passion.

In youth, not only must the waste of materials be replaced,

but an excess of nourishment must be provided, to admit of the continued growth which is the chief function of our earlier years. If this be denied, the development of the bodily organs often receives a check which ~~no~~ after treatment can remedy, and a foundation is laid for diseases of debility which afterwards embitter and endanger life. From pretty extensive inquiry, we are satisfied that in boarding-schools, especially for females, this important principle is often disregarded; while the conductors are at the same time without the least suspicion of the evil they are producing, and even take credit to themselves for only checking sensual appetites, and promoting temperance in eating as well as in drinking. Youth requires the best and most nutritious food, and such ought to be regularly provided. Weak broth, twice-cooked hashes, quantities of vegetables and watery milk, are not sufficient sustenance for a young and growing frame. Can we be surprised that, with such a diet, worm-powders and stomachic medicines are in constant demand, and that even with the assistance of these, the girl shoots up thin, pale, and fleshless? Let it not be supposed that we wish to make a god of the belly: Our object is the reverse of this, and we are sure that no better means can be used to effect it, than to give a sufficiency of wholesome and nourishing food, which alone will satisfy the stomach, and obviate the constant craving, which is a frequent and painful concomitant of deficiency of food. See, for example, how soon, in cases of shipwreck, men previously well fed are wasted away by bodily labour when deprived of a full allowance of food, and it will not be difficult to form some conception of the importance of this condition to the well-being of the muscular system.

Something more than mere muscle, however, is required for the production of regulated or voluntary motion. The muscle itself, though perfect in strength and in structure, would otherwise remain inert. A stimulus is required to put it into activity, and to direct its contraction; and this stimulus is conveyed to it by the *nerves*. As we write, the muscles which move the fingers, and guide the pen, obviously follow the commands of the will; and the moment the will is withdrawn, they cease to operate. If the will be feeble and undecided, the muscular movements will be equally feeble and irresolute; whereas, if the mind be powerfully excited, and the will energetic, energy, rapidity, and decision will equally characterise all the movements of the body. Under the intense excitement and headlong fury of madness, the muscular action of an otherwise feeble man acquires a force often exceeding all our powers of control.

The phrenologist will perceive at once, from this description, that in effecting voluntary motion, we must have in operation, *first*, The brain, or organ of mind, as the source of the will; *secondly*, The nerves, which convey the intimations of the will to

the muscles; and, *thirdly*, The muscles themselves, by whose contractile powers motion is produced: he will easily understand also, why the number and size of the nerves distributed to a muscle, are in proportion, not simply to its volume, but to the variety, frequency, and vivacity of the movements required from it; and why some small muscles employed in many combinations, are therefore supplied with a greater variety of nerves than others of a simpler kind, but double their size.

Muscular power is (other circumstances being equal) proportioned to the size of the muscle; but it often happens, that great power is required where bulk of muscle would be inconvenient or cumbersome. In such cases, it is supplied by an increased endowment of nervous fibres, which make up by the strength of stimulus what the muscle wants in bulk of fibre. Many birds, for example, require intense muscular power to sustain them in their long and rapid flights through the air, and owe its possession chiefly to the strong stimulus imparted to moderate-sized muscles by large nerves, which add nothing, or next to nothing, to their weight; whereas, had the greater power been obtainable only from an augmentation of fleshy fibres, the consequent addition of weight would, from the greatly increased difficulty the animal must have felt in raising and sustaining itself in the air, have gone far to counterbalance any advantage gained on the side of power. But in fishes, which float without effort in their own element, size produces no such inconvenience, and their strength accordingly is made to depend more on the volume of the muscle than on its nervous endowment,—shewing a beautiful adaptation to the mode of life and wants of the animal.

As voluntary motion depends as much on nervous stimulus as on muscular agency, it happens, that whatever interrupts the action of the nerves, puts a stop to motion as effectually as if the muscular fibre itself were divided. Injuries and diseases of the brain, whence the will emanates, are well known to be accompanied with palsy, or want of power in the muscles, although in their own structure the latter remain sound. Sleep, narcotics, and intoxication suspend voluntary motion by their influence on the nervous system. In like manner, although the brain and muscles be perfectly sound, yet if the communication between them be impaired, or destroyed by the compression or division of the nerves, the muscles cease to act.

The muscles of the human body are between 300 and 400 in number. In some of the operations in which we are engaged, nearly the whole are thrown into action at one time, while in many others a great variety of muscles combines to one end. The simultaneousness of action which obtains in such instances, and which occurs in almost every act of life, however simple, and without which no dictate of the will could be harmoniously and successfully obeyed, depends solely on the distribution and

connexions of the nerves which animate them. Every individual fibre of every muscle is supplied with nervous filaments, and the different fibres of the same muscle are indebted for the simultaneousness of their excitement to the connexion established between each of them by these filaments. Wherever a number of muscles combine to execute an important movement, they are uniformly found to be provided with, and connected by, branches from the same system of nerves, as, without this means, simultaneousness of action could not be insured. Thus the muscles which cover the upper part of the chest co-operate in the voluntary movements of the arm, and at the same time in the respiratory movements of the chest; but these, being two distinct purposes, require different combinations of the muscles among themselves. To effect these combinations, two sets of nerves are provided, as has been shewn by Sir Charles Bell; the one regulating the respiratory, and the other the purely voluntary movements of the muscles. This is the true reason why the same muscle sometimes receives nerves from two or three different quarters; a circumstance which, before the principle was discovered, and when all nerves were considered alike, was altogether inexplicable, and seemed a work of mere supererogation.

The influence of the nervous agency may be still farther illustrated. When the trunk of a muscular nerve is irritated by external contact or by the electric spark, the muscles which it supplies instantly contract, but without either harmony or permanency of action: the contraction is like the violent and ill regulated start of convulsion. It is the influence of the brain and mind in the equal diffusion of the required stimulus to each muscle, in the exact proportion needful, that characterises healthy and sustained voluntary motion, as opposed to the irregular convulsive start. Nothing can be more wonderful than the accuracy with which, in the most delicate movements, this stimulus is adjusted and apportioned to such a variety of parts, particularly where practice, or, in other words, education, has rendered the combination of powers easy and certain. Not to mention the more obvious and graceful movements of dancing, fencing, and riding, we discover, in the management of the hand and fingers by engravers, sculptors, watchmakers, jugglers, and other artists and mechanics, a minute accuracy of muscular adjustment, to effect a given end, which is the more surprising the more we consider the complicated means by which it is effected.

In consequence of the co-operation of both nerve and muscular fibre being required to effect motion, excess of action in each is followed by results peculiar to itself. If the NERVES preponderate, either constitutionally or from over exercise,—as they are apt to do in highly nervous temperaments,—their excessive irritability renders them liable to be unduly excited by ordinary stimuli, and hence, as in hysteric and nervous females, a prone-

ness to sudden starts, cramps, and convulsions, from causes which would scarcely affect an individual differently constituted. Such persons have little muscular power, except under excitement: they then become capable of great efforts, of short duration, but sink proportionally low when the necessity is past. If, on the other hand, the MUSCLES predominate, as in athletic strong built men, the nervous system is generally dull and little susceptible to stimuli, and the muscles which it animates are consequently little prone to the rapid and vivacious action which accompanies the predominance of the nervous functions. Great strength, and endurance of bodily labour, are then the features of the character.

From the general resemblance which characterises the different nerves, a similarity of function was long ascribed to them all, and no explanation could be given why one muscle sometimes received filaments from a variety of nervous trunks. Recently, however, the labours of Sir Charles Bell and Magendie have clearly established, that, in such cases, each nerve serves a distinct purpose, in combining the movements of the particular muscle with those of others necessary to effect a given end,—and that without this additional nerve such a combination could not have been produced. The muscular nerves must not be confounded with those which we have seen ramified on the skin for the purposes of sensation. The former are provided for the purposes of motion and not of feeling, and hence muscles may be cut or injured with little pain, compared to what is felt by the skin. Weariness is the kind of sensation recognised by the muscular nerves.

So uniformly is a separate instrument provided for every additional function, that there is every reason to regard the muscular nerves, although running in one sheath, as in reality double, and performing distinct functions. Sir Charles Bell has the merit of this discovery, if such it shall ultimately prove to be. In his work on the Nervous System, he endeavours to shew, that one set of nervous fibres conveys the mandate from the brain to the muscle, and excites the contraction; and that another conveys from the muscle to the brain the peculiar sense of the state of the muscle, by which we judge of the fitness of the degree of contraction which has been produced to accomplish the end desired, and which is obviously an indispensable piece of information to the mind in regulating the movements of the body. Sir Charles has shewn, that many of the sensations supposed to be derived from the sense of touch and the skin, arise from the muscular sense, and are wholly imperceptible to the skin, without the co-operation of muscular contraction.

“The muscles have two nerves,” says Sir Charles, “which fact has not hitherto been noticed, because they are commonly bound up together. But whenever the nerves, as about the

head, go in a separate course, we find that there is a sensitive nerve and a motor nerve distributed to the muscular fibre, and we have reason to conclude that those branches of the spinal nerves which go to the muscles, consist of a motor and a sensitive filament.

“ It has been supposed hitherto, that the office of a muscular nerve is only to carry out the mandate of the will, and to excite the muscle to action, but this betrays a very inaccurate knowledge of the action of the muscular system ; for, before the muscular system can be controlled under the influence of the will, there must be a consciousness or knowledge of the condition of the muscle.

“ When we admit that the various conditions of the muscle must be estimated or perceived, in order to be under the due control of the will, the natural question arises, Is that nerve which carries out the mandate of the will capable of conveying, at the same moment, an impression retrograde to the course of that influence which is going from the brain to the muscle ? If we had no facts in anatomy to proceed upon, still reason would declare to us that the same filament of a nerve could not convey a motion, of whatever nature that motion may be, whether vibration or motion of spirits, in opposite directions at the same moment of time.

“ I find that, to the full operation of the muscular power, two distinct filaments of nerves are necessary, and that a circle is established between the sensorium and the muscle ; that one filament or single nerve carries the influence of the will towards the muscle, which nerve has no power to convey an impression backwards to the brain, and that another nerve connects the muscle with the brain, and, acting as a sentient nerve, conveys the impression of the condition of the muscle to the mind, but has no operation in a direction outwards from the brain towards the muscle, and does not therefore excite the muscle, however irritated *.”

This consciousness of the state of the muscles, or muscular sense, as it may be truly called, is of great importance both to man and to animals, as it is necessarily by information thence derived that every subsequent exertion is directed and apportioned in intensity to the effort required to be made. If we had no such sense, the delicate and well directed touches of the engraver, painter, and sculptor, or of the ingenious mechanic, would be at the mercy of hazard ; and a single disproportioned movement might ruin the successful labour of months, supposing success to be even compatible with hazard and chance. Without this sense, man could not deliberately proportion the muscular efforts to his real wants, and even in walking, his gait would be unsteady and insecure, because there would be no harmony between effort and resistance. The loss of equilibrium, and the concussion and disturbance of the system consequent on taking a false

* Bell's Anatomy, seventh edition, vol. II. p. 372.

step, as it is called, are a specimen of what we would always be subject to, without the guidance of the muscular sense. When we imagine we have one step more of a stair to descend than really exists, we are placed nearly in the same circumstances as if we had no muscular sense to direct the extent of our intended movement, because the sense is then misled by an erroneous impression, and, accordingly, we make an effort grievously unsuited to the occasion; and yet so habitually are we protected from this error by the assistance of the sense alluded to, and so little are we conscious of its operation, that it is only after mature reflection that we perceive the necessity of its existence.

In chewing our food, in turning the eyes towards the object looked at, in raising the hand to the mouth, and, in fact, in every act and variety of muscular movement which we perform, we are guided by the muscular sense in proportioning the effort to the resistance to be overcome; and where this harmony is destroyed by disease, the extent of the service rendered us becomes more apparent. The shake of the arm and hand, and the consequent incapability which we see in drunkards and others of carrying the morsel direct to the mouth, are examples of what would be of daily occurrence, unless, we were directed and assisted by a muscular sense.

Life and the nervous stimulus are essential to muscular power. Separated from the body, and deprived of both, the muscle which formerly contracted with a power equal to 100 pounds, would be torn asunder by a weight of ten. This fact is of itself sufficient to give a tolerable notion of the extent to which muscular contraction depends on causes apart from the mere structure of the fleshy fibres, for these continue the same after death, or after the nervous communication has been suspended, as in recent paralysis; and yet how feeble is the power of resistance which the muscle then possesses!

The required movement having been once effected by the nervous impulse stimulating the muscular fibre to contraction, relaxation speedily follows, and is in its turn succeeded by a fresh contraction proportioned to the object in view. *Muscular action, therefore, consists properly in alternate contraction and relaxation of the fleshy fibre.* A state of permanent contraction is both unnatural and impossible; and, accordingly, the most fatiguing muscular employment to which a man can be subjected, is that of remaining immoveable in any given attitude. To an unreflecting person it may seem a very easy and pleasant service to stand for half a day in the attitude of an Apollo or of a Gladiator, as a model to a statuary; but, on trying it, he will find, to his astonishment, that stone-breaking or the tread-mill are pastimes in comparison: in the one case, the muscles which preserve the attitude are kept incessantly on the strain, while in the other, they enjoy that play and variety of motion for which

they were destined by nature. We may easily put the fact to the test, by attempting to hold the arm extended at right angles to the body for the short space of ten minutes. He whose muscles, if indeed capable of the exertion, do not feel sore with fatigue at the end of that time, may think himself peculiarly fortunate in being blessed with a powerful constitution.

The principle just stated explains very obviously the weariness, debility, and injury to health, which invariably follow forced confinement to one position, or to one limited variety of movement, as is so often witnessed in the education of young females. Alternate contraction and relaxation, or, in other words, exercise of the muscles which support the trunk of the body, are the only means which, according to the Creator's laws, are conducive to muscular development, and by which bodily strength and vigour can be secured. Instead of promoting such exercise, however, the prevailing system of female education places the muscles of the trunk, in particular, under the worst possible circumstances, and renders their exercise nearly impossible. Left to its own weight, the body would fall to the ground, in obedience to the ordinary law of gravitation: in sitting and standing, therefore, as well as in walking, the position is preserved only by active muscular exertion. But if we confine ourselves to one attitude, such as that of sitting erect upon a chair—or, what is still worse, on benches without backs, as is the common practice in schools,—it is obvious that we place the muscles which support the spine and trunk in the very disadvantageous position of permanent, instead of alternate, contraction, which we have seen to be in reality more fatiguing and debilitating to them than severe labour. Girls thus restrained daily, for many successive hours, invariably suffer, being deprived of the sports and exercise after school-hours, which strengthen the muscles of boys, and enable them to withstand the oppression. Their muscles being thus enfeebled, they either lean over insensibly to one side, and thus produce curvature of the spine; or, their weakness being perceived, they are forthwith cased in stiffer and stronger stays—that support being sought for in steel and whalebone, which Nature intended they should obtain from the bones and muscles of their own bodies. The patient, finding the maintenance of an erect carriage (the grand object for which all the suffering is inflicted) thus rendered more easy, at first welcomes the stays, and, like her teacher, fancies them highly useful. Speedily, however, their effects shew them to be the reverse of a blessing. The same want of varied motion, which was the prime cause of the muscular weakness, is still farther aggravated by the tight pressure of the stays interrupting the play of the muscles, and rendering them in a few months more powerless than ever. In spite, however, of the weariness and mischief which result from it, the

same system is persevered in, and, during the short time allotted to nominal exercise—the formal walk,—leaves the body almost as motionless as before, and calls only the legs into melancholy activity. . The natural consequences of this treatment are, debility of the body, curvature of the spine, impaired digestion, and, from the diminished tone of all the animal and vital functions, general ill health;—and yet, while we thus set Nature and her laws at defiance, we presume to express surprise at the prevalence of female deformity and disease!

The sedentary and unvaried occupations which follow each other for hours in succession in many of our schools, have been the cause of needless suffering to thousands; and it is high time that a sound physiology should step in to root out all such erroneous and hurtful practices. Taken in connexion with the long confinement, that of causing the young to sit on benches without any support to the back, and without any variety of motion, cannot be too soon exploded*. If the muscles of the spine were strengthened by the exercise which they require, but which is so generally denied; and if the school employments were varied or interrupted at reasonable intervals, to admit of change of position and of motion, nothing could be better adapted for giving an easy and erect carriage than seats without backs, because the play of the muscles necessary for preserving the erect position would give them activity and vigour,—and, accordingly, the want is scarcely, if at all, felt in infant schools, for the very reason that such variety of motion is, in them, carefully provided for. But it is a gross misconception to suppose that the same good result will follow the absence of support, when the muscles are weakened by constant straining and want of play. The incessant and fidgetty restlessness observable after the second or third hour of common

* About two years ago a friend informed us, that in one of the public Hospitals for young females in Edinburgh, the hours from 10 to 2 were wholly occupied in sewing, on seats without backs; and that from 6 in the morning till 9 at night, only three hours were allowed for play or muscular exercise. During these hours in summer, the children were allowed the use of a small green; but from November till March, *the seniors were locked up during the play hours in the hall, and the juniors in the school-room, where not the least romping or noise was permitted.* As a general rule, the children were allowed to visit their parents one day in three weeks, but frequently for some trivial offence, even this recreation was withheld; and in the winter of 1830-31, for fear of the typhous fever, they were seldom, if ever, out of doors from November till April, unless in going to church on Sunday. When to this it is added, that eighteen slept in one comparatively small apartment, without a fire-place to assist in the free circulation of fresh air, and generally twenty-four in another, although with a fire-place, the injurious effects must be obvious. Three children belonging to one family died in the course of about three years, several very nearly lost the use of their limbs, while the constitutions of many others received a severe shock, all of which was very naturally attributed by their parents and relations to the long hours, close monotonous confinement, and consequent want of free air and muscular exercise. It is hoped that such gross mismanagement and cruelty do not now prevail.—EDITOR.

school confinement, shews the earnest call of Nature for a little wholesome exercise; and the quiet that ensues when it is granted, indicates clearly enough that the restlessness springs even more from bodily than from mental weariness. It is, in fact, a degree of what we all feel when kept long standing on our feet, or sitting at a desk. We become weary and uneasy from the continued strain on the same muscles, and feel at once relieved by a walk, a drive, or any change whatever. The same principle explains the fatigue so often complained of, as experienced in "shopping," or in an exhibition room. We "hang about" on our feet till the muscles become sore with fatigue of being always in the same position, and we are refreshed by a walk or a dance, or any thing which alters the position. The same languor of the muscles is felt after witnessing a pantomime, or other continuous spectacle, by which we are induced to keep the neck for a long time in a constrained and unvaried position.

Instead, therefore, of devoting so many successive hours to study and to books, the employments of the young ought to be varied and interrupted by proper intervals of cheerful and exhilarating exercise, such as is derived from games of dexterity, which require the co-operation and society of companions. This is infinitely preferable to the solemn processions which are so often substituted for exercise, and which are hurtful, in so far as they delude parents and teachers into the notion that they constitute in reality that which they only counterfeit and supersede. We have already seen what an important part the mental stimulus and nervous impulse perform, in exciting, sustaining, and directing muscular activity; and how difficult and inefficient muscular contraction becomes, when the mind, which directs it, is languid, or absorbed by other employments. The playful gambolling and varied movements which are so characteristic of the young of all animals, man not excepted, and which are at once so pleasing and so beneficial, shew that, to render it beneficial in its fullest extent, Nature requires amusement and sprightliness of mind to be combined with, and be the source of, muscular exercise; and that, when deprived of this healthful condition, it is a mere *evasion* of her law, and is not followed by a tithe of the advantages resulting from its real fulfilment. The buoyancy of spirit and comparative independence enjoyed by boys when out of school, prevent them suffering so much from this cause as girls do; but the injury inflicted on both is the more unpardonable, on account of the ease with which it might be entirely avoided.

Facts illustrative of the influence of mental, co-operating with and aiding muscular, activity, must be familiar to every one; but as the principle on which they depend is not sufficiently attended to, we shall add a few additional remarks.

Every body knows how wearisome and disagreeable it is to

saunter along without having some object to attain; and how listless and unprofitable a walk taken merely for exercise is, compared to the same exertion made in pursuit of an object on which we are intent. The difference is simply that, in the former case, the muscles are obliged to work without that full nervous impulse which nature has decreed to be essential to their healthy and energetic action; and that, in the latter, the nervous impulse is in full and harmonious operation. The great superiority of active sports, as a means of exercise, over mere measured movements, is referable to the same principle. Every kind of youthful play interests and excites the mind, as well as occupies the body; and by thus placing the muscles in the best position for wholesome and beneficial exertion, enables them to act without fatigue for a length of time, which, if occupied in mere walking for exercise, would utterly exhaust their powers.

The elastic spring, bright eye, and cheerful glow, of beings thus excited, form a perfect contrast to the spiritless and inanimate aspect of many of our boarding-school processions, and the results in point of health and activity are not less different. So powerful, indeed, is the nervous stimulus, that examples have occurred of strong mental emotions having instantaneously given life and vigour to paralytic limbs. This has happened in cases of shipwrecks, fires, and sea-fights, and shews how indispensable it is to have the mind engaged and interested along with the muscles. Many a person who feels ready to drop from fatigue, after a merely mechanical walk, would have no difficulty in undergoing ten times the exertion in active play or in dancing; and it is absurd, therefore, to say that exercise does not agree, when in reality proper exercise has not been tried.

The amount of bodily exertion of which soldiers are capable, is well known to be prodigiously increased by the mental stimulus of pursuit, of fighting, or of victory. Hence the improved health and ready activity of recruits after a few months regular drill, in which a mental excitement always co-operates with muscular exercise; and hence, too, the bodily labour which sportsmen, cricketers, golfers, skaters, and others, moved by a mental aim, are able to undergo, where men of stronger muscular frames, without the object, are soon fatigued. We have heard an intelligent engineer remark the astonishment often felt by country people, at finding him and his town companions, although more slightly made, withstand the fatigues and exposure of a day's surveying better than themselves; but, said he, they overlooked the fact, that our employment gives to the mind as well as to the body a stimulus which they were entirely without, as their only object was to afford us bodily aid, when required, in dragging the chains or carrying our instruments. The conver-

sation of a friend is, in the same way, a powerful alleviator of the fatigue of walking.

The same important principle was implied in the advice which the Spectator tells us was given by a physician to one of the eastern kings, when he gave him a racket, and told him that the remedy was concealed in the handle, and could act upon him only by passing into the palms of his hands when engaged in playing with it, and that as soon as perspiration was induced, he might desist for the time, as that would be a proof of the medicine being received into the general system. The effect, we are told, was marvellous; and, looking to the principle just stated, to the cheerful nervous stimulus arising from the confident expectation of a cure, and to the consequent advantages of exercise thus judiciously managed, we have no reason to doubt that the fable is in perfect accordance with nature.

The story of the Englishman who conceived himself to be so ill as to be unable to stir, but who was prevailed upon by his medical advisers to go down from London to consult an eminent physician at Inverness who did not exist, may serve as another illustration. The stimulus of expecting the means of cure from the northern luminary, was sufficient to enable the patient not only to bear, but to reap benefit from the exertion of making the journey down; and his wrath at finding no such person at Inverness, and perceiving that it was all a trick, sustained him in returning, so that on his arrival at home he was nearly cured. Hence also the superiority of battledore and shuttlecock, and similar games which require society and some mental stimulus, over mere passive exercise. It is in fact a positive misnomer to call a solemn procession *exercise*. But Nature will not be cheated; and the healthful results of complete cheerful exertion will never be obtained where the nervous impulse which animates the muscles is denied.

This constitution of Nature, whereby a mental impulse is required to excite and direct muscular action, points to the propriety of teaching the young to observe and examine the qualities and arrangements of external objects. The most pleasing and healthful exercise may be thus secured, and every step be made to add to useful knowledge and to individual enjoyment. The botanist, the geologist, and the natural historian, experience pleasures in their walks and rambles, of which, from disuse of their eyes and observing powers, the multitude is deprived. This truth is acted upon by many teachers in Germany. In our own country, too, it is beginning to be felt, and one of the professed objects of infant education is to correct the omission. It must not, however, be supposed, that *any* kind of mental activity will give the necessary stimulus to muscular action, and that, in walking, it will do equally well to read a book or carry

on a train of abstract thinking, as to seek the necessary nervous stimulus in picking up plants, hammering rocks, or engaging in games. This were a great mistake, for in such cases the nervous impulse is opposed rather than favourable to muscular action. Wherever the mind is absorbed in reading or in abstract speculation, the active will to set the muscles in motion must necessarily be proportionally weakened, and the muscles be reduced to the kind of mechanical action we have already condemned as almost useless. For true and beneficial exercise, there must be *harmony of action between the moving power and the part to be moved. The will and the muscle must be both directed to the same end and at the same time*, otherwise the effect will be imperfect. The force exerted by strong muscles, animated by strong nervous impulse or will, is prodigiously greater than when the impulse is weak; and as man was made not to do two things at once, but to direct his whole powers to the one thing he is performing at the time, he has ever excelled most when he followed this law of his nature.

When a physician urges the necessity of exercise, it is very usual for him to receive for answer, from persons of an indolent or sedentary habit, that even a short walk fatigues them so much as to render them unfit for every thing for some days after, and that they are never so well as when allowed to remain in the house. But if, in perfect reliance on the regularity of the Creator's laws, we seek out the cause of this apparent exception, we shall almost uniformly find, that, instead of beginning with a degree of exertion proportioned to the weakened state of the system, such persons have (under the notion that it was not worth while to go out for a short time) tasked their muscles, already weakened from inactivity and confinement, to perform a walk to which only regularly exercised muscles were adequate. The amount of exertion which is always followed by exhaustion is thus, through mere impatience and ignorance, substituted for that lesser degree which always gives strength; and because the former is followed by headach and debility, it is argued that the latter must also be prejudicial! Many sensible people delude themselves by such puerile plausibilities as this.

The remedy for mistakes of this kind is to diffuse a knowledge of the laws of exercise as part of a useful education. The blood is the grand source from which all the organs of the body derive their nourishment and their vital power; and it is remarked that, whenever a part is called into use, its vessels and nerves become excited to higher action, and the supply of arterial or nutritive blood and of nervous energy becomes greater: the waste and renovation which are incessantly going on in every part of the body, proceed with greater rapidity, and in due proportion to each other; and when the active exercise

ceases, the excitement thus given to the vital functions subsides, and the vessels and nerves return at length to their original state.

If the exercise be resumed frequently, and at moderate intervals, the increased action of the bloodvessels and nerves becomes more permanent, and does not sink to the same low degree as formerly; nutrition rather exceeds waste, and the part gains consequently in size, vigour, and activity. But if the exercise be resumed too often, or be carried too far, so as to fatigue and exhaust the vital powers of the part, the results become reversed; waste then exceeds nutrition, and a loss of volume and of power takes place, accompanied with a painful sense of weariness, fatigue, and exhaustion. When, on the other hand, exercise is altogether refrained from, the vital functions decay from the want of their requisite stimulus; little blood is sent to the part, and nutrition and strength fail in equal proportion. A limb which has been long in disuse becomes weak and shrivelled from this cause, and its muscles present an unusual paleness and flabbiness, strongly contrasting with the florid redness and rigid fulness of the muscles of a well exercised limb.

Even sensation gives faithful notice of these changes, and therefore serves as a guide to exercise. When muscular employment is neglected, the body becomes weak, dull, and unfit for powerful efforts, and all the functions languish. When exercise is taken regularly and in due proportion, a grateful sense of activity and comfort prevails, and we feel ourselves fit for every duty, both mental and bodily. Lastly, when we are subjected to excessive exertion, a painful sense of weariness and exhaustion ensues, which is not relieved by rest, and which for a long time prevents sleep. A person who has greatly over-fatigued himself in walking, for example, is feeble and restless; and on lying down, either cannot sleep at all and rises in the morning weak in body and languid in mind, or his sleep is uneasy and disturbed till the exhaustion is partially recovered from, after which he may enjoy sound and refreshing repose.

From this exposition of the effects of exercise in its different stages, it becomes easy to deduce rules applicable to all for promoting the healthy development of the muscular system, and to trace the errors by which indolent people are accustomed to maintain that exercise is hurtful to their constitutions. The second stage of exercise, or that in which, by its frequency, moderation, and regularity, nutrition and vigour are preserved at their highest pitch, is, of course, the one to be aimed at; but the quantity of exercise which will fulfil it, must vary according to the constitution and previous habits of the individual, as is well exemplified in training for pedestrian feats, for the

ring, and for racing. The assertion made by many, that exercise hurts them, arises entirely from overlooking this circumstance.

A person accustomed to daily activity, will feel invigorated and refreshed by a walk of four or five miles in the open air; whereas the same distance will exhaust and weaken another, who has not been in the habit of walking at all. But instead of inferring from this, as is often done, that exercise in the open air is positively hurtful to the latter, reason and experience coincide in telling us, that he has erred only by exceeding the powers of his system, and that to acquire strength and activity, he ought to have begun with one mile, and to have gradually extended his walk in proportion as the muscles became invigorated by the increased nutrition consequent on well regulated exercise. A person recovering from fever begins by walking across his room perhaps ten times in a day, and gradually extends to twenty or thirty times, till he gains strength to go into the open air. On going out, a walk of ten minutes proves sufficient for him at first, but by degrees his strength and flesh increase, and his exercise is prolonged till he arrives at his usual standard. Such is the order of Nature; but many sedentary people have no patience for such slow progress, and when urged to take exercise, they grudge the trouble of going out for a short time, and think that, if a walk of half a mile does them good, one of a whole mile will do more; and when they suffer from the error, they shelter their ignorance under the general assumption that exercise does not agree with them! And the same persons who argue thus, would think themselves entitled to laugh at the Irishman, who, finding himself relieved by five pills taken at night, inferred that he would necessarily be cured if he took the whole boxful at once, and on doing so narrowly escaped with his life.

From these principles it follows that, to be beneficial, exercise ought always to be proportioned to the strength and constitution, and not carried beyond the point, easily discoverable by experience, at which waste begins to succeed nutrition, and exhaustion to take the place of strength; that it ought to be regularly resumed after a sufficient interval of rest, in order to insure the permanence of the healthy impulse given to the vital powers of the muscular system; and that it is of the utmost consequence to join with it a mental and nervous stimulus. Those, for example, who go out only once in four or five days, are always at work but never advancing; for the increased action induced by the previous exercise, has fully subsided long before the succeeding effort is begun; and so far as increased nutrition and greater aptitude for exertion are concerned, no progress whatever is made.

ARTICLE VIII.

ON SOME OF THE PECULIARITIES OF THE SCOTTISH CHARACTER—DONATION OF OLD SKULLS.

DESTRUCTIVENESS is a well-known feature in the Scottish character. Till about the close of the seventeenth century, that propensity, with Combativeness, Secretiveness, Self-Esteem, and Firmness, for which our countrymen are in general remarkable, was diabolically manifested in the dissensions and feuds which so long distracted this part of the island, and of the deadly bitterness of which it is almost impossible for the present generation to form an idea. War, contention, and bloodshed were, in fact, the grand occupations of the people, just as money-making is their standard employment in our own day. The national animosity which, during so many centuries, subsisted between the Scotch and English, afforded numerous opportunities for the display of the faculties alluded to. This spirit seems to have attained its highest degree of rancour during the minority of Queen Mary, about the middle of the sixteenth century, and a lively idea of its intensity may be obtained from the perusal of the first volume of Sir Walter Scott's *Monastery*. At that time, incredible atrocities were committed on both sides, during the invasion of Scotland by the Earl of Hertford, in 1544. The instructions of the Lords of the Council to that nobleman may serve as an illustration. In this document he is ordered "to put all to fire and sword, burn Edinburgh town, so used and defaced, that when you have gotten what you can of it, it may remain for ever a perpetual memory of the vengeance of God lighted upon it, for their falsehood and disloyalty. Do what you can out of hand, and without long tarrying to beat down or overthrow the castle; sack the houses and as many towns and villages about Edinburgh as ye may conveniently. Sack Leith, and subvert it, and all the rest, putting man, woman, and child to fire and sword, without exception, when any resistance shall be made against you; and this done, pass over to the Fifeland, and extend like extremities and destruction to all towns and villages whereunto you may reach conveniently; not forgetting, amongst all the rest, so to spoil and turn upside down the cardinal's town St Andrew's, as the upper sort may be the nether, and not one *stoke* stand upon another, sparing no creature alive within the same, specially such as, either in friendship or blood, be allied unto the cardinal; and if ye see any likelihood to win the castle, give some stout essay to the same, and if it be your fortune to get it, raze and destroy it piece-meal; and after this sort, spending one month there, spoiling and destroying as

aforesaid, with the wise foresight that his majesty doubteth not ye will use that your enemies take no advantage of you, and that you enterprise nothing but what you shall see may be easily achieved, his majesty thinketh verily, and so all we, ye shall find this journey succeedeth this way most to his majesty's honour," &c. These barbarous orders, says Robertson, seem to have been executed with a rigorous and unfeeling exactness.

The following account of the damage accomplished during the inroads or *forrays* of the English Wardens of the Marches, from the 2d of July to the 17th of November 1544, gives us a notion of the miseries to which some of the most fertile counties in the kingdom were exposed, by the sudden and destructive incursions of the borderers:—

“ Towns, towers, stedes, barnekyns, parishe-churches, castel-houses, cast down or burnt, 192; Scots slain, 403; prisoners taken, 816; horned cattle taken, 10,386; sheep, 12,492; nags and geldings, 1296; goats, 200; bolls of corn, 850; insight gear, *i. e.* household furniture, not reckoned.”

Another document contains an account of an inroad by the Earl of Hertford, between the 8th and 23d of September 1545; from which it appears that he burnt, rased, and destroyed, in the counties of Berwick and Roxburgh alone, 7 monasteries and friar-houses; 16 castles, towns, and piles; 5 market towns; 243 villages; 13 mills; and 3 hospitals. “As the Scots,” adds the historian, “were no less skilful in the practice of irregular war, we may conclude that the damage which they did in England was not inconsiderable; and that their *raids* were no less wasteful than the *forrays* of the English*.”

The destructiveness of the Scotch was fearfully conspicuous in the appalling cruelties which continued for a century and a half to be put in practice against those unfortunate beings who were supposed to be tainted with witchcraft. The circumstances attending the trial, in the reign of James VI., of a wretch popularly known by the name of Dr Fian, may be quoted as an example, though the details are so truly sickening, that it is not without much hesitation that we transfer them to our pages. He was put to the question “first, by thraving of his head with a rope, wheratt he would confess nothing; secondly, he was persuaded by fair means to confess his folly, but that would prevail as little; lastly, he was put to the most cruel and severe pain in the world, called the Boots, who, after he had received three strokes, being inquired if he would confess his damnable acts and wicked life, his tongue would not serve him to speak†.” Being released from this instrument of torture, he confessed the

* See Robertson's History of Scotland, book ii.

† News from Scotland, declaring the damnable life of Dr Fian.

truth of the charges brought against him, of conspiracy against the King's life by means of witchcraft; but subsequently he thought fit to contradict the terms of his confession: "Whereupon the King's majestie, perceiving his stubborn wilfulness," prescribed the following remedy for his relapse: "His nayles upon his fingers were riven and pulled with an instrument, called in Scottish a Turkas; and under every nayle there was thrust in two needles over even up to the heads. At all which torments, notwithstanding, the Doctor never shrunk ane whitt, neither would he then confess it the sooner for all the tortures inflicted upon him. Then he was with all convenient speed by commandment conveyed again to the torment of the boots, where he continued a long time, and abode so many strokes in them, that his legs were crushed and beaten together as small as might be, and the bones and flesh so bruised, that the blood and marrow spouted forth in great abundance, whereby they were made unserviceable for ever."

Since the union of the two kingdoms, the mutual spirit of animosity above alluded to has gradually disappeared—persecutions for witchcraft have ceased; the minds of the people have been directed to the peaceful occupations of commerce, manufactures, and agriculture; and the blessings of education have been widely diffused amongst them. The manifestations of the destructive propensity have in consequence assumed a milder character, and now consist chiefly in the breaking of milestones, the dilapidation of parapets and bridges, the destruction of hedges and young trees, the defacement of public buildings and sepulchral monuments, the hacking of benches in schools and colleges, the reckless demolition of windows at illuminations, and, among the lower orders in particular, cruelty to animals, and those occasional murders which have recently cast a stigma on the reputation of the country. Nor do our southern neighbours, in this respect, differ from ourselves. In the words of a writer in a late number of the Quarterly Review,—“The characteristic of the English populace—perhaps we ought to say people, for it extends to the middle classes,—is their propensity to mischief. The people of most other countries may safely be admitted to parks, gardens, public buildings, and galleries of pictures and statues; but in England it is necessary to exclude them as much as possible from such places.”* We think it

* The following passage occurs in the “Journal of an Officer on the Western Coast of Africa:”—“To support our national character, even in that distant land, various specimens of Diaz's pillar were knocked off, and brought on board, either for the satisfaction of the dilapidator, or gratification of the curious. The world would be greatly benefited, if any scientific phrenologist could discover what particular organ, in an Englishman's cranium, produces in him that longing after immortality, which he gratifies by either picking a finger or nose off every statue he can get near, or writing his name

exceedingly probable that the form of the Scottish head has progressively improved under the influence of civilization and of the efforts made to cultivate the moral sentiments and enlighten the intellect of the people. Facts seem to indicate that exercise produces on the brain, especially in youth, the same effect as on the other organs of the body—augmentation of size, as well as increased facility of action; and that the particular cerebral organs which are most kept in activity in one generation, are more largely developed in the next. Our observations on these points are not yet sufficiently extensive to warrant us in laying down these propositions as fully ascertained. From such of the cranial remains of our forefathers, however, as we have been able to collect, they derive a strong degree of probability, which subsequent observations may or may not convert into certainty. In 1829, a skull was found beside a cannon-ball, by workmen who were digging the foundation of the Edinburgh Infant School, near the tower built in 1513, after the battle of Flodden, at the top of the *Vennel*, a steep lane, immediately opposite the south side of the Half-Moon Battery of the Castle. This skull exhibits a very large development of Destructiveness and Secretiveness, with moderate intellectual organs. In another skull, found in March 1830, on the northern slope of the Castlehill, at the depth of two feet and a half below the surface, the organs of Combativeness, Destructiveness, and Secretiveness, are very large, while the forehead is small, and the coronal region flat. This individual does not seem to have been regularly buried, for the face was next the earth. We have recently obtained six skulls from the ancient cemetery of Edinburgh, and of these the general features are the same. “Previous to the seventeenth century,” says an observant and industrious antiquary, “the ground now occupied by the Parliament House and the buildings adjacent to the south and west, was the Churchyard of St Giles’s, from the south side of which edifice it extended down a steep declivity to the Cowgate.” “After the period of the Reformation, when Queen Mary conferred the gardens of the Greyfriars upon the town, the churchyard of St Giles’s ceased to be much used as a burying-ground; and that extensive and more appropriate place of sepulture succeeded to this, in being made the *Westminster Abbey of Scotland*.”—“On all occasions, when excavations have been made in this part of the city—at the founding of Sir William Forbes and Company’s [late] Banking-house—of the new south room of the Advocates’ Library—at the alterations of the Royal Bank

on every bench, tree, or post that comes in his way. *Destructiveness* appears the most probable.”—*See the United Service Journal for April 1831, p. 460.*

of Scotland when converted into a Police-office—great quantities of human bones have been discovered *.” It was probably some time after the Reformation before the church-yard of St Giles’s was entirely disused as a place of burial. Mr Chambers does not recollect any trace of an interment there after that of John Knox, in 1572. He thinks there may have been straggling funerals in it a few years later, though certainly not many. The great hall of the Parliament House was founded in 1632, and finished in 1639. The remainder of the “Parliament Yaird,” down to the Cowgate, was let by the Magistrates, in 1662, to one John Thomson, a gardener, in order that he might lay it out in walks, and plant it with trees, herbs, flowers, and cabbage. This, however, does not appear to have been fully carried into effect; for we find that shops and houses were built on the south and east sides of the Square very soon afterwards. In 1676 and 1700 successively, the buildings on the east side were destroyed by fire. Before the latter of these catastrophes, the houses are said to have been fifteen stories high; but they were then rebuilt in a more handsome style, and lower by three stories †. These remained till 1824, when another great fire laid the whole buildings in the Square, except the public offices, completely in ruins. On the east side, the new Exchequer Chambers and Sir William Forbes and Company’s Bank have recently been erected; and, during the year 1832, workmen were busily employed in clearing the declivity down to the Cowgate, and in laying the foundations of new apartments for the Court of Session. In the course of these operations human bones have been frequently met with; and in September particularly, a large quantity was found at the back of the building called the Meal-Market, about six feet below the level of the Cowgate. Six skulls, in a state of excellent preservation, were obtained by Charles Maclaren, Esq., who has presented them to the Phrenological Society.

The *first* is a large skull, with a great development of the organs of the propensities, particularly Adhesiveness, Combativeness, Secretiveness, Alimentiveness, Constructiveness, and Cautiousness. Destructiveness is altogether exorbitant; and the coronal region is very flat. The *second* exhibits a somewhat more favourable combination; but still the propensities are powerful, and Firmness is very large. In the *third*, Destructiveness, Secretiveness, Love of Approbation, Cautiousness, and Firmness—especially the last three—are very great; Ve-

* “Traditions of Edinburgh, by Robert Chambers,” vol. ii. pp. 195–197. —Arnot, in his History of Edinburgh, p. 239, says: “Till the Reformation, the burying-ground of the city of Edinburgh extended from St Giles’s Church over the Parliament Square and Back Stairs to the Cowgate.”

† Chambers, pp. 200–203.

neration is small, and Conscientiousness large. The *fourth*, likewise, has good Conscientiousness; but Destructiveness, Secretiveness, Love of Approbation, and Cautiousness, are also large. The organs of Destructiveness, Secretiveness, and Cautiousness, are tremendous in the *fifth*, which is a large skull, with no great development of the organs of the moral sentiments, but with large Acquisitiveness and Love of Approbation. And, in the *sixth*, we find a great endowment of Destructiveness, Secretiveness, Alimentiveness, Cautiousness, and Firmness. The size of the intellectual organs, in these six skulls, is by no means proportionate to the great development of the organs of the animal propensities and inferior sentiments. Their possessors must have been, for the most part, turbulent, ferocious, and quarrelsome individuals. These skulls were found below or near the foundation of the ancient city wall, immediately under and on both sides of which, human bones were discovered in abundance. This wall is understood to have been built four or five centuries ago, and it cannot be doubted that the skulls now under consideration are of still greater antiquity. If the skulls enumerated in this article may be looked upon as average specimens of the cerebral development of our Scottish ancestors, the present generation has every reason to be gratified with its superiority.

ARTICLE IX.

JOURNAL OF THE PHRENOLOGICAL SOCIETY OF PARIS.

No. II.

THIS number of the French Journal is prefaced by an apologetical advertisement, excusing the delay of the second number on the ground of the prevalence of the cholera, and promising more punctuality and increased ardour for the future.

ARTICLE 1. *A Discourse on some Relations between Phrenology and Politics.* By M. Emm. de Las Cases, President of the Phrenological Society of Paris, and Member of the Chamber of Deputies. (Delivered on 22d August 1832).

After observing that the benefactors of mankind, by great discoveries, seldom escaped persecutions in former times, the author proceeds to lament the absence, in modern education, of the study of man and human nature, and of all knowledge of our own physical and moral organization. He then particularises two important departments of human affairs for the application of Phrenology, namely, Education and Forms

of Government. As Scottish phrenologists, we rejoice to see the useful application of the science recommended from the Chair to our fellow-labourers on the other side of the channel. M. Las Cases concludes his eloquent address with the following fine display of liberality: "Our laborious and penetrating neighbours see all the advantages which may be drawn from Phrenology. In a few years, twenty-three societies have been formed in England. At their head has arisen the Society of Edinburgh, with its chief, Mr George Combe. Almost all the societies have distinguished themselves by numerous and considerable labours. Gentlemen, let us pay them our homage! Thank God, science knows not little paltry national jealousies. Let us thank them, in the name of Humanity, for the good they have done her."

ARTICLE 2. "*On Phrenology applied to the Reformation of Criminals. By M. Appert.*"—The author narrates several interesting cases, from his own observations in visiting prisons and penitentiaries, of criminals with some redeeming virtue, (chiefly benevolent, adhesive, or philoprogenitive), on which he founds the conclusion of the practicability of amendment. As a proof that, under the present system, there is little or no reformation, he mentions instances of relapse in circumstances where it was least expected. He considers a reformatory system yet to be commenced, and looks to Phrenology as essential to its efficient direction and progress. On Phrenology will depend a proper classification of prisoners. He recommends the abolition of branding (*la marque*), the establishment of schools, workshops, houses of refuge for the liberated, asylums for women and their infants, &c.; but states no principles, and enters into no details of penitentiary discipline. We are glad to find this subject creating interest in France; and strongly recommend the views of Professor Caldwell of Lexington, United States, (see our 7th volume, pages 385 and 493), to Mr Appert's consideration.

ARTICLE 3. "*Report of the Labours of the Society since its Foundation. By M. Casimir Broussais, General Secretary.*"—This document is too long to be here analyzed. Its subjects are:—Some difficulties in the way of ascertaining character from external cranial development, by M. Sarlandière. On the increase of the cerebral organs by exercise, by the same. Case of the cure of a very obstinate fanatic by bleeding at the base of the skull, and applying cold to the organs of Wonder and Firmness. Case of Granié, a prisoner under sentence of death, who barricaded his cell, and starved himself to death, to save his effects for his children; the head exhibiting large Combativeness and Philoprogenitiveness. Case of Escousse and Lebras, who agreed to commit suicide

together, and executed their purpose, dying in each other's arms, the one twenty; the other eighteen years of age—Lebras from evident melancholy, Escousse from thoughtless imitation of his friend. M. Sarlandière gives an account of their organization. A case of loss of memory, in a memoir, by M. Mondière, followed by an interesting discussion upon several points of Phrenology, arising from an examination of skulls presented, some of them of animals, leading to Comparative Phrenology as systematized in the superb work of Dr Vimont, which is briefly analyzed.

M. Broussais strongly recommends the study of Dr Vimont's work to every phrenologist. He then reports that the Society's collection of books, casts, &c. is increasing, and particularises our own Journal, of which the Society were then in possession of six volumes, which they are engaged in analysing; and he trusts the Society will soon be familiar with the labours of its sister Societies in England. The reporter concludes with an encouraging account of the Society's relations with England, Scotland, Italy, and even India, in all of which there are honorary members of their association.

ARTICLE 4. *Craniological Observations made on a Negro of the Isle of Bourbon, by Dr Richy.*—This man had been wounded on the head, about the lower part of the left parietal bone. His delirium was intensely destructive, and to shed and even drink the blood of his enemy was his desire. His organization corresponded. He delighted in the office of killing the pigs, and occasioning pain. He was also eminently constructive, improved his own implements of labour, and mended whatever was broken or deranged, with which faculty his organization also corresponded. When recovering, he was calmer and less bloodthirsty, but an over pressure even of his bandage on the wound, brought back his fearful paroxysms. He was a native of Madagascar. The report of the case is remarkably well given.

ARTICLE 5. *Phrenological Observations on a Fracture of the Skull, by M. Robouam.*—In this case, the injury was occasioned by a fall from a coach-box, and one effect was the loss of all use of language, but the word *oui*. The pain was always referred by the patient to the region over the eyes; and, as he afterwards stated when cured, deep in the orbits, in other words, in the seat of the organ of Language. The author of the paper was the medical attendant of the patient, and had the satisfaction of effecting a complete cure, except a slight stammer in pronouncing some words, which then remained. M. Robouam exhibited his patient to the Society.

ARTICLE 6. *On some Points of Cerebral Physiology, by M. Richy.*—It appeared by post-mortem examination, that the cerebellum was disorganized in a person that had manifested violently, some time before, its well known impulses; while in more than

one, who had difficulty of articulating their words, there was pain as if in the bottom of the orbits of the eyes. A complete failure of the perceptive faculties, in another case, followed an injury in the front of the head, (the position of their organs,) and disorganization was found on post-mortem examination.

ARTICLE 7.—*Extracts from Foreign Journals on Phrenology.* By M. C. Broussais.—No less than thirty printed pages are devoted to our own Journal. In the first twenty is an analysis of part of our first volume, from December 1823 to August 1824, and a continuation is promised. The remainder proceeds with our 28th Number (in vol. vii.), and notices every article briefly. We take the opportunity of expressing our cordial acknowledgments for the honour done us, and for the liberal and handsome manner in which our humble exertions for the great science are spoken of.

A table follows, communicated by Mr George Combe, of his mode of measuring the head, marking the temperament, and noting the development of the organs. Uniformity in this, every where, would be a very important point gained.

ARTICLE 8. *Biographical Notice of Benjamin Constant*, by Dr Richy; and ARTICLE 9. *Biographical Notice of the Abbé Gregoire, Bishop of Blois*, by M. Desmarest.—Both sketches are spirited and interesting, and the phrenological analysis of the characters ably managed.

A graphic account is then given of the meeting of the Society on the 23d of August last, which was crowded with strangers of both sexes, who listened with respect and attention to the different communications, and testified their satisfaction by lively applause.

The number concludes with the programme of a prize, of 500 francs, for the best Memoir on the state of Phrenology since the works of Gall; to be sent post free to the general secretary, M. Casimir Broussais, 25 Rue de l'Université, before 1st July 1833.

We congratulate the Society of Paris on this able Number, and heartily say to them "*Euge! et perge!*" They will, however, greatly add to the interest of their reports, by giving full details of the *measurements* and of the *size of all the organs*, when they describe heads. Casts of the heads of Benjamin Constant and Abbé Gregoire appear to have been produced before the Society, and the persons present saw the development; but *we* would be much instructed by reading it. We solicit the conductors also to give us figures of important heads. In translating from our Journal, attention should be paid to the names. Some of them are so blundered in spelling that we can scarcely recognise the individuals meant; Professor Jameson, for example, has become Professor *Lameran*; Gordon is printed *Gardon*, &c. Some inaccuracies have also arisen, apparently from the conduct-

ors assimilating the London Institution, at which Dr Spurzheim delivered lectures, to some analogous institution in their own country patronized by government. At least we cannot otherwise explain the error they have fallen into, of supposing that our Government has patronised Phrenology, and availed itself of its lights. No such thing has occurred, except in the case of the convicts examined by Mr Deville some years ago, and that experiment was conducted not by Government, but by individuals in the employment of Government, and in their private capacities.

The triumph of Phrenology will secure the permanent ascendancy of the moral and intellectual powers of man over his animal propensities; and, whenever this consummation shall be reached, mankind will perceive themselves to be members of one family, whose highest interest is to promote each other's happiness and prosperity. We rejoice, therefore, in the efforts of our Parisian friends to diffuse this science. Their position for doing so with effect is excellent, and they will reap the gratitude of Europe as the reward of their labours.

NOTICES.

DR SPURZHEIM.—The career of this distinguished leader in Phrenology is closed. The details of his death will be found in our previous pages. As the last sheet of our present Number was going to press, we received Professor Follen's Funeral Oration, delivered at his burial. It is an admirable production, and we shall reprint the greater part of it in our next Number. The account of his death is affecting, and the estimate of his character just. Dr Follen describes Dr Spurzheim such as he really existed, and neither falls short of nor exceeds the truth. We bear this testimony to the merits of the oration with the highest satisfaction, and have formed a very favourable opinion of Professor Follen's own mind and attainments, from the accurate, graphic, and eloquent representation which he has given of our departed friend.

The record of the proceedings of the Boston Medical Association, and of the medical gentlemen of that town in general, shall also be reprinted. Posterity will honour Boston for the conduct of her leading men on this occasion.

DR VIMONT'S PLATES OF THE SKULLS AND BRAINS OF MEN AND ANIMALS.—The publication of these admirable plates goes on with regularity and rapidity. A large number of engravings of skulls and brains of men and the inferior animals are now in the hands of the public, and they will be able to judge of the high merits of the work. Nothing which we have seen equals the accuracy of delineation, power of expression, and beauty of execution, of these plates. We look forward with considerable interest and anxiety to the publication of the letterpress which is to accompany them.

EDINBURGH.—Some very interesting papers have lately been read to the Phrenological Society. We have not room, however, to notice its proceedings. Mr Combe's Lectures continue to be regularly attended by a crowded audience. We beg to hear from our friends in London, &c.

GLASGOW.—On the evening of Saturday, 12th January 1833, Dr Hunter, Professor of Anatomy in the Andersonian University, commenced a course of lectures on Phrenology in the Mechanics Institution, North Hanover Street,

to a numerous and most respectable audience. Above 300 persons were present—a fact which bespeaks the growing interest in Phrenology felt by the citizens of Glasgow. We have seen a report of his first lecture in the Glasgow Free Press of 16th January, and its effect is to confirm the opinion which we expressed in our 33d Number, that Dr Hunter has an accurate and extensive knowledge of the new philosophy, and is eminently qualified to do it justice in his lectures.

PORTSMOUTH.—A very able and eloquent lecture in defence of Phrenology was delivered to the Hampshire Phrenological Society, at the Old Town-Hall, by Mr Tichborne, on Thursday 8th November 1832. The meeting was numerously and respectably attended.

We regret to observe that Mr Bilton has resigned as a member of the Phrenological Society at Portsmouth, in consequence of the manner in which his lecture "on the Lights which Phrenology affords towards ameliorating the Condition of Mankind" was received. We are entirely unacquainted with the merits of the essay, but perceive that Mr Bilton states, that it contained essentially the doctrines expounded in our Journal and in the works of Dr Spurzheim and Mr Combe. The objection seems to have been, that he diverged into the field of politics. Our opinion is, that Phrenology, by unfolding the elements of the human mind, brings all the general principles and applications of morals and politics within the range of the science, and we anticipate good from the judicious discussion of these in Phrenological Societies. They ought to be applied, however, only to obtain general conclusions. If directed to political measures, or events of a temporary character, the passions and prejudices both of the essayist and of the hearers might be roused, and philosophy be dropped out of view.

COPENHAGEN.—We rejoice to learn that the apostle of Phrenology in Copenhagen, Dr Otto, has been made Professor of Materia Medica and Forensic Medicine or Medical Jurisprudence in the University of that city, and has also been elected a member of the Royal College of Health. His talents are such as would have procured for him equal honours long ago, had he been guiltless of the sin of being a phrenologist! We have no doubt that he will largely infuse the principles of our science into his lectures on medical jurisprudence, in the course of which he must necessarily advert to human responsibility, insanity, and criminal legislation,—subjects which it is impossible to treat in a rational manner without the aid of phrenological principles. As a member of the College of Health, he will be called on to give his vote in many criminal cases; and here also, as well as in the exercise of his duties as physician to the penitentiary, he will find in Phrenology principles at once true and practically useful. In the Medical Journal, of which he is editor, he frequently gives translations of phrenological cases and remarks, contained in our own publication.

GERMANY.—Gall and Phrenology now begin to be mentioned more frequently in Germany. Dr Blumröder of Hertsbruck, in the 6th number of Friedrich's Anthropological Magazine (an excellent Journal, with a very extensive circulation), strongly urged his countrymen to bestow upon Gall's doctrine the attention which it deserves. The same has been done by Dr Lichtenstadt of Petersburg, (who has written so much on Cholera), in "Medicinisches Conversations Blatt." Froriep's *Notizen*, a paper which is read everywhere throughout Germany, has given translations of several Phrenological articles from this Journal, and from the *Lancet*. Gall's great French work, in four volumes, has been translated into German; and we have heard that Dr Andrew Combe's Observations on Insanity will have the same fortune. It is, indeed, high time for Germany to bestir herself in an attempt to wipe off the disgrace of having forced her illustrious sons, Gall and Spurzheim, to seek, in foreign countries, a soil in which their discoveries might take root and flourish! These eminent philosophers have inflicted a severe but merited penalty on their countrymen for their treatment of Phrenology—they have died without publishing one word of their doctrines in their native language. The Germans must borrow, by translation from foreigners, the instruction which they heartlessly rejected when proffered to themselves.

THE
PHRENOLOGICAL JOURNAL.

No. XXXVI.

ARTICLE I.

ACCOUNT OF THE ILLNESS, DEATH, AND POST-MORTEM
EXAMINATION OF DR SPURZHEIM; AND SUBSEQUENT
PROCEEDINGS AT BOSTON.

1. *Report by Dr JAMES JACKSON of Boston.*

BOSTON, November 13. 1832.

DURING his short residence here, Dr Spurzheim has excited a great interest among us. He has commanded the attention of many of our most intelligent fellow-citizens in his lecture-room, and he rendered himself very agreeable to those who had the pleasure of his private acquaintance. The interest thus excited has been augmented by his sickness and death. There has been a very natural desire among the most respectable members of our community, to become acquainted with the nature of his disease, and the circumstances attending it. The inquiries on these points have been too numerous to be answered in full by personal intercourse with those about him. I, therefore, submit whether it may not be allowed to publish the following statement. It is proper to make such a publication in some mode, independently of the claims above referred to; for his numerous friends in Europe will claim to know the particulars of his last days.

I was called to see Dr Spurzheim on the 30th of October, in consultation with Dr Grigg. I found him affected with a continued fever, of a kind not uncommon here after the middle of autumn. The disease had not had a well marked beginning; it had crept on gradually and insidiously; but it appeared

that it had existed more than a fortnight. He had continued his lectures until within a week of the time I was called to him. On the 23d he had lectured at Cambridge, and on the 22d and 24th in this city. In the week preceding these days, it was evident that he was not well, and I had remarked the effect of this in his lecture-room. On the days above mentioned, he was so obviously sick as to have excited the sympathy of many of his audience, both here and at Cambridge. On the 25th he kept his room, and did not go out afterwards. He consulted Dr Grigg, with whom he had formed an intimate acquaintance and friendship, and that gentleman attended him most faithfully, giving up his own business at last, that he might not be interrupted in his care of this celebrated man.

On the 30th of October I found Dr Spurzheim in his bed. His tongue was perfectly dry, except a line on each side, and dark, but not thickly coated; he had much thirst, but no appetite. He stated to me that his bowels were and had been freely open, though I found that they had not been kept so without artificial aid. His pulse was 96, firm, and with the hardness of age rather than of disease, though he was only fifty-five years old; his pulse intermitted frequently, but he stated that this had been the case for three years past, unaccompanied by any other symptom of diseased heart; his respiration was natural, or as much so as that of any person so much diseased. He could expand his chest fully and freely: he struck it and it resounded well, and he declared that he had no symptom of disease referable to that cavity. His skin was dry and rather hot, but not much so. He declared himself free from pain, but he had uncomfortable feelings about the head; and he had occasional uneasiness in the bowels, which he was always able to remove at will by a *lavement*. There was nothing morbid in his evacuations. His most distressing symptoms were an extreme restlessness, with an appearance of impatience, and very great watchfulness. He had an idea that his disease partook of the character of cholera, or that there was in him a disposition to this disease, an irritable state of the alimentary canal. But he denied that he had any nausea, and Dr Grigg informed me that he had not exhibited any of the symptoms of cholera.

From the 30th of October to the 5th of November, he continued to manifest the same symptoms, without material alterations, gradually getting worse, but not in a marked degree, from day to day. On one day, (31st), his skin was very moist, but without corresponding amendment generally. He had the usual exacerbations at evening, and these did not abate till two, three, or four o'clock in the morning. He had some good sleep, but, I believe, never more than three hours in a night. He manifested at times great impatience, and an irritable temper,

which he had not evinced in health. This state of mind passed almost insensibly into delirium, particularly in the night.

When I visited him on the 5th of November he was manifestly worse. His countenance was altered; his pulse was accelerated, though it retained its firmness in a good degree. The tongue had been perfectly dry from the first day on which I saw him, now it had diminished in volume, as if its whole substance were dried; his respiration was somewhat irregular; he had frequent twitchings of the muscles, which had existed in a less degree for two or three days, accompanied by a pricking of the bed-clothes; and his delirium was increased.

On the 6th the bad symptoms had become much worse. He was disposed to coma, with intervals of delirium. His respiration was more hurried and irregular, with some rattle in the throat; and his pulse was now 120, more feeble and unequal in force.

From this time his symptoms continued to be of a bad character until his death, which occurred on the 10th of November, a little before midnight. From the 6th to the 10th, he had some variations. On the 8th, he often started as if from some sudden pain or spasm. He generally placed his hand on some part of the chest, but sometimes on the abdomen. He said he had a spasm in his lungs at these times; but his mind was not in a state to represent any thing accurately. In the night of the 8th he suffered very much in this way, and the medical gentlemen who watched with him believed that they discovered a tenderness, on pressure, over the left side of the abdomen. But this was not found to exist the next day, and during his whole sickness there was never hardness, fulness, or tension in the abdomen. I called his attention to this region daily, when he was capable of stating his feelings, and he uniformly denied the existence of pain or of tenderness there, and usually doubled over the relaxed parietes with his hand to evince to me the absence of this symptom. I presume, therefore, that the tenderness discovered on the night of the 8th, must have been the consequence of some spasmodic affection in the abdominal muscles.

From the 6th his respiration was seldom natural for any length of time. It was sometimes almost stertorous. The difficulty seemed to be owing to diminished nervous power. It was certainly very different from the dyspnoea of bronchitis or of pneumonitis. By auscultation it was found that the respiratory murmur was deficient, but there was heard a coarse mucous rale, similar to that heard in the trachea. In some short and quick respirations, however, the natural murmur was heard. Percussion always elicited a clear sound, but less clear on these last days than before.

On the night of the 9th, his extremities were cold, and his dissolution was looked for by Dr Grigg and the other gentlemen who watched with him. But he recovered his heat, and grew calm before three in the morning. From this time he was comatose for the most part, and did not seem conscious of any suffering. He expired without a struggle.

After his disease assumed its most aggravated features on the 6th, he did not enjoy the full exercise of his intellectual powers, except for a few moments at a time. He did not seem aware of danger, and he was not in a state in which he could perform any important act, if this were made known to him. If there was any exception to this, it was for a few minutes on the evening of the 9th, when he called for Mr Capen, who had the charge of his pecuniary concerns, and for two lawyers. When Mr C. arrived shortly afterwards, Dr S. forgot his object, if he had any, and he was not in a situation to discuss the subject which was supposed to have arrested his attention.

It is interesting to many persons to learn the exact name of his disease. It may be called a continued fever, in which the nervous symptoms were predominant. There were no symptoms of putrescency, and no strong inflammatory symptoms. If it were called a pure typhus, the name would mislead many. It may be rather called a synochus, though not without dispute. Those who are accustomed to my teaching on this subject know that I do not place a value on these names, not believing that nature recognises the specific distinctions, which they are intended to designate. To those persons I should describe Dr Spurzheim's disease thus. It was continued fever, in which the symptoms of the access came on insidiously, and were alone for many days; the symptoms of the other stages never became very prominent; those of a crisis never appeared. There was not evidence of inflammation in any organ of the body. If inflammation did exist, it must be called latent.

The public and the friends of Dr Spurzheim feel an interest in his case, and the cause of his death. They also feel an interest in the method of treatment. There is a very natural feeling in regard to those whom we respect or love, and who are taken away from life without our being able to administer to them, that, if present, we could have done something for them; something which would have saved their lives. On the doctrine of chances we may always suppose that a different course might have been successful. It is well, therefore, to give a full history of the treatment in this case.

First, on the score of attention, Dr Spurzheim did not suffer; at least, not from a want of it. He was sometimes annoyed by too much, perhaps; and I begged him, at one time, to say what persons he wished to see, for that I could regulate that matter

completely. But he would not make an election, and I did not know enough of his relations to others to do it for him.

But if he was occasionally oppressed by the attentions of others, it was because one gentleman could not tell what another had done. In general there was a tender and prudent caution in this respect. Almost every physician in the town was at his service, yet comparatively few saw him. For the most part, he had one or two physicians as watchers from the time he became seriously ill. I have already mentioned the entire devotion of Dr Grigg to him during his whole illness.

In the commencement of his disease he consulted Dr Grigg, but declared, at the same time, his dread of medical treatment. He stated that Cuvier had been bled, though he (Dr S.) protested against it, believing that literary men did not bear that evacuation. He stated that his own constitution was very irritable, and that, from his childhood, he had never been able to bear medicine. When very properly advised by Dr G. to employ some evacuant, he consented to take *one drachm* of Epsom salts, saying that this would affect him very powerfully. It did produce a hypercatharsis, so that he took some small dozes of opium to arrest it. He had used no other medicine when I saw him.

At this time he was really in the third week of fever, though he had not been confined to the house so much as one week. The disease was fastened on him. I was convinced that it was too far advanced to be removed by medicine. Dr S. avowed to me his strong aversion to medicine. Dr Grigg had begged him, from the beginning, to ask the advice of some older physician; he felt all the interest of a friend, but was unwilling to assume the responsibility of prescribing alone for a man so distinguished as Dr Spurzheim. But the patient assented very reluctantly, from the dread of having medicine forced on him. Under these circumstances, I could not urge the use of medicine on Dr S., unless I had felt a strong assurance of its necessity and advantages. But I have long since been taught by experience, and have taught to others, that, in this confirmed and advanced period of fever, medicine is not of any avail in arresting the disease. Under such circumstances, we have only to watch the disease so as to guard against accidents, and especially to watch against the occurrence of inflammation in any part. I had then no hesitation in confirming Dr S. in the propriety of the *expectante* method of treatment under his actual circumstances. It surely was useless to urge upon him, at that time, the error of continuing his labours too long, and of neglecting medicine when it would have benefited him. All that was past.

It was then agreed between Dr Grigg and myself, much to the satisfaction of our patient, that he should be supported by

mild liquid diet, duly regulated in quantity ; that he should take such mild beverages as were grateful to him ; and that he should continue to rely on his favourite remedy, the *lavement*, to regulate his bowels.

This simple treatment was continued during the remainder of his sickness almost without a deviation, except that, after the 5th, wine was administered in moderate quantities. Twice I proposed to him some mild medicine, to obviate inconveniences which annoyed him. In each case he took a single dose ; but, either from a peculiarly irritable constitution, or from the influence of imagination, he felt himself much irritated, and refused to go any further. Had I urged upon him any important medicine as essential to his safety, he might perhaps have consented to use it. I do not, however, believe that he would. Happily I did not think it necessary to make the trial.

In regard to the chance of his recovery, I must say the result disappointed me. Still, if I had thought the danger greater, I should have pursued the same course. Could I, indeed, have known that he would die in this course, I would have hazarded another. But this was impossible.

I thought his recovery probable until the 5th of November, because I could not discover any evidence of inflammation ; and it is very rare among us for fever to be fatal, unless there is some inflammation superadded to it. The unfavourable result in this case may, perhaps, be explained by the great labour, intellectual labour, which the patient had undergone for several weeks ; and that, too, connected with a good deal of moral excitement, though of an agreeable kind.

I ought to state that, at the request of Mr Capen, Doctors Ware and Stevenson consulted with Dr Grigg and myself in the last five days of Dr Spurzheim's life. They acceded perfectly in the measures pursued during that period.

The foregoing statement, so far as relates to the history of the disease, was written before the examination of the body of Dr Spurzheim. The paragraph which states my opinion in regard to the nature of the disease was read to the gentlemen who attended the examination, before it was commenced. I may now say that the result of that examination confirms the opinion then expressed.

The examination was made in accordance with the wishes of the gentlemen to whom Dr S. had been particularly made known, and who met on the morning after his decease to consider the steps to be taken in consequence of this event. It was made by Dr Warren, at the Massachusetts Medical College, in the presence of all such medical gentlemen as chose to attend. Among these was Dr M'Kibbin of Belfast, in Ireland, a gentleman who had been much acquainted with Dr S., and who ar-

rived in this city almost at the hour of his death, without having known his situation previously.

The appearances discovered were as follows. The *dura mater* adhered to the *cranium*. The *pia mater* was red, but no effusion had taken place from it. The lungs had the usual cadaveric appearances, but were free from all traces of inflammation. The valves of the *aorta* were somewhat rigid, and the *aorta* itself was somewhat enlarged in its calibre. The heart was, perhaps, rather large, and had more fat than is common in subjects of the age of Dr S. The ascending *colon* had contracted adhesions to the parietes of the abdomen, and to the adjoining organs. These adhesions were partly membranous bands, and had not any redness in or about them. There was no reason to believe them of recent origin, unless that be shown by the ease with which some of them were torn. They exhibited no marks of an active process going on in them, and no experienced pathologist would regard them as having any influence in the recent disease and death of the patient. The intestines were discoloured in some spots, especially that portion which was lodged in the pelvis. This was a cadaveric change. Yet openings were made in every suspicious spot, and likewise in the stomach, in the last portion of the *ileum*, and in the *cæcum*. There was not discovered any morbid change in the mucous membrane of these parts.

As it is rare for a patient to die under idiopathic fever, without any evidence of inflammation, this examination was interesting in a pathological view. It gave as much evidence as one case can give, that fever is not dependent on inflammation.

In the full account thus given, it has been my wish to afford satisfaction to the several classes of persons interested; to the public here, or such of them as take an interest in the distinguished person to whom it relates; to the professional men especially, who sympathized with him very strongly during his illness; and to the many friends whom he has left in Europe, and who will lament his decease in this distant land. To them I may once more give the assurance that he was faithfully and tenderly watched. I bear witness to the attention of others, which was vastly greater than my own.

JAMES JACKSON.

2. *Notes of Post-mortem Examination of Dr Spurzheim, 11th November 1832. By Dr ROBERT M'KIBBIN, of Belfast.*

There was little general emaciation.

Head.—The *dura mater* adhering so firmly to the skull that

it could not be separated without laceration. The vessels of dura mater more injected with blood than natural. The falx preternaturally vascular. (This, Dr Warren remarked, might be called inflamed, but should be taken with caution; in my Notes I have interlined "I should say inflamed.")

In the arachnoid there is some opacity which should not exist. Pia mater—large vessels not distended, small ones are; but as the head has been placed higher than the body, they may have been evacuated by the position.

Considerable vascularity of the whole surface of the brain. No accumulation in the longitudinal sinus. Cranium thick.

As a cast was to be taken, the brain was not further disturbed.

Thorax.—Muscles natural in colour. Cellular substance rather yellow. Mediastinum vascular and redder than usual. Slight adhesion, of old standing, between the pleura pulmonalis and costalis. In the pleura pulmonalis nothing remarkable; the substance of the lung, as seen through the pleura, darker than natural. Hepatization of lower margin of inferior lobe and back part of right lung. (Much of this may happen after death.) Lower lobe of left lung presents the same accumulation of blood.

On pressure, lungs feel healthy: interior structure in upper parts natural; in the lower, suffocation has occurred.

Pericardium healthy, containing about half an ounce of serum slightly tinged with blood.

Heart shewing more fatty substance than usual at the age. Aorta large; vascular-proper coat healthy; valves of aorta indurated at their edges, but not ossified. Coat of artery thick, but not rigid. Arteria innominata not larger than either the left carotid or subclavian.

Passing the finger by the pulmonary artery into the right ventricle, it feels small, and contains blood more fluid than usual. (This is thought to accompany andynamic fever). No fluid on either side of the chest.

The heart was not opened, as it will be preserved.

Abdomen.—Near the right iliac region, internally, the skin and cellular membrane discoloured (bluish); within, opposite the discoloration, there is adhesion between the parietes and the great arch of the colon, and part of omentum. The colon dragged down into the middle of abdominal cavity in consequence of the adhesion. The adhesion easily separated without tearing the structure. Omentum contains little fat which is transparent; on the left side has a violet appearance. Adhesions to colon very extensive and firm, also between the arch of colon and œ-

cum. Colon much distended with gas. Vessels of cellular coat of colon much injected. Serous coat the same, (which latter is unusual).

In the small intestines the vessels of the inner coats seem injected, and shew the arborescent appearance usually attending inflammation of the mucous coat. The small intestines much discoloured and dark brownish, whether from disease or position ("I should say morbid," I have written.)

Stomach seems healthy, rather vascular at the extremities, but nothing which may not be accidental. Serous and cellular coats healthy. Slight redness of the mucous coats, principally at the villosities. At the right extremity the same appearance; about half a wine-glassful of fluid in the cavity; nothing unnatural in the stomach.

On opening a portion of the small intestines, where the vascularity was greatest, the same appearance. Veins injected either morbidly or accidentally. No ulceration. Inner surface of colon very unhealthy looking, but not inflamed; much discoloured; no injection of the mucous coat corresponding with that of the serous.

Liver—form, size, &c. natural; dark coloured towards inferior margin, otherwise very healthy coloured. Spleen larger than usual, and divided into two lobes, anterior small, posterior larger. Gall-bladder moderately distended with a fluid, which does not present the appearance of healthy bile, being more watery, and less coloured than usual. Intestines empty. Liver in substance healthy. Pancreas and kidneys healthy.

I inquired of Dr Jackson if there had been pain or pressure in the discoloured part, as it seemed like a recent bruise. He had been most particular in pressing, and even folding, the integuments of the abdomen over each other, and in no instance did it give pain.

R. M'K.

3. *Letter from Dr M'KIBBIN to Mr GEORGE COMBE, accompanying the foregoing Reports.*

DEAR SIR,

BELFAST, 5th January 1833.

In my hurried letter from New York,* in which I communicated the melancholy tidings of the death of Dr Spurzheim, I promised, on my return, to forward you any other particulars I could collect, relating to the illustrious deceased. I enclose you a Boston paper, kindly forwarded to me by Dr Jackson, containing his account of the disease from the time he was called

* Published in our last Number, p. 129.—EDITOR.

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- SLOW LEWIS junior.
- KEELY STEVENSON.
- D. FISHER.
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did it give pain.

3. Letter from Dr McKim to Mr...
purging the foregoing Report.

DEAR SIR,

In my hurried letter from New York...
cited the melancholy...
promised, on my return, to forward...
I could collect, relating to the...
you a Boston paper, kindly...
containing his account of the...

* Published in the Boston...

in, and the appearances on dissection. I also send a copy of my own notes, taken during the examination of the body. I am inclined to lay more stress on the vascularity of the coverings of the brain (which was certainly more than natural) than Doctor Jackson or Warren did. There was not, however, any very marked congestion or inflammation in any one organ, and the immediate cause of death must remain rather obscure.

I cannot avoid repeating, to the credit of the gentlemen in attendance, that nothing which kindness could suggest was left undone. Nor can I avoid regretting, that he could not have been by some means made to submit to more decided remedial measures. I do not mean to say that more could have been done for him, as he was most obstinate in refusing medicine; unless the disposition to pay deference to his opinions may have been carried farther than desirable on a subject of which he was necessarily incapable of judging. Had he been an ordinary man, the decided measures which the climate required would likely have been insisted on; and the reason, which disease had obscured, would not have been allowed to sway the opinions of those who alone were capable of judging what was proper.

It is useless, and perhaps wrong, to hope that by any other means his life could have been saved, but in estimating the loss, we can scarcely avoid wishing that every thing which could offer the most remote chance of a different issue had been tried; at all events, it would have been a comfort to think that he had not interfered with those gentlemen, to whose judgment his case should have been implicitly confided.

When I left New York, Dr Follen's address had not been published; it will, in all probability, or perhaps has been before this time. If so, it will be forwarded to me, and I shall take an early opportunity of sending it you.

I send you a little hair. I regret I brought so small a quantity; but, presuming it would be gratifying to you, I send you half of what I brought.

On your shoulders the mantle has now descended; and I do sincerely hope that your labours may be attended with success in the promulgation of a doctrine, which, if well understood, will go a long way in bettering the condition of society, and rescuing the human mind from many of the errors, which, fondly cherished and industriously inculcated for ages, have retarded its progress in the search for truth. I am, with much respect,
your obedient servant,

ROBERT M'KIBBIN.

George Combe, Esq.

4. *Proceedings at Boston in relation to the late Dr Spurzheim.**

On Sunday, the 11th day of November 1832, the morning after the decease of Dr Spurzheim, a number of his friends assembled at his late apartments, for the purpose of considering what measures should be taken on this melancholy occasion.

The Hon. Josiah Quincy, President of Harvard University, being called to the chair, and J. Greely Stevenson, M. D., appointed Secretary, a deliberation took place on the measures which should be adopted to express a sense of the public loss sustained by the death of this distinguished man, and of the impression made by his talents and virtues on those who had enjoyed the privilege of his acquaintance during his short residence in this city. The gentlemen assembled also took into consideration what disposition should be made of his remains, so as to place them at the future disposal of his European friends and relatives, in case they should be hereafter claimed by them, and in whose hands his papers, casts and other property should be deposited so as to secure them from the possibility of being damaged, diminished, or lost, until some person legally authorised should take them into possession.

Whereupon it was voted,

1. That the arrangement of the funeral obsequies of the deceased, and of the measures proper to be adopted to express a sense of the public loss, by the death of Dr Spurzheim, and the respect entertained by the inhabitants of this city and its vicinity for his talents and virtues, be committed to

JOSIAH QUINCY, LL. D., President of Harvard University.
NATHANIEL BOWDITCH, LL. D.
JOSEPH STORY, LL. D.
JOS. TUCKERMAN, D. D.
CHAS. FOLLEN, J. U. D.

JONA. BARBER, M. D.
CHARLES BECK, P. D.
WILLIAM GRIGG, M. D.
GEORGE BOND, and
CHAS. P. CURTIS, Esqrs.

2. Voted, That the body of Dr Spurzheim be examined and embalmed; and be placed in such a situation as will render it most suitable to be transmitted to his European friends and relatives, should they request it; and also that a cast of his head be taken, under the superintendence of

DRS. JOHN C. WARREN.
JAMES JACKSON.
GEO. C. SHATTUCK.
WALTER CHANNING.
GEORGE PARKMAN.
JOHN WARE.

DRS. EDWARD REYNOLDS jun.
WINSLOW LEWIS junior.
J. GREELY STEVENSON.
JOHN D. FISHER.
WILLIAM GRIGG; and
SAMUEL D. HOWE.

* These Proceedings are taken from the Appendix to Professor Follen's Funeral Oration.—EDITOR.

3. Voted, That the papers, casts, and other property of the deceased be committed to

JOHN PICKERING, LL. D. THOMAS W. WARD, and
NATHANIEL BOWDITCH, LL.D. NAHUM CAPEN, Esqrs. ;

and that they be requested to secure the same until such disposition be made of them as the laws of the land, in such cases, provide.

A true transcript of the proceedings,
Attest, JOSIAH QUINCY, *Chairman.*
J. GREELY STEVENSON, *Secretary.*

At a meeting of the Committee appointed by the friends of the late Dr Spurzheim, " to take charge of his Funeral Obsequies, and to adopt measures proper to express a sense of the public loss sustained by the death of Dr Spurzheim, and the respect entertained by the inhabitants of this city and vicinity for his talents and virtues," holden on the 11th of November 1832, it was

Voted, That the body of the deceased be conveyed, on Saturday, the 17th inst., at two o'clock, P. M. to the Old South Meeting House, where appropriate services shall be performed ; after which the body shall be conveyed to the receiving tomb belonging to the trustees of Mount Auburn, there to remain until the determination of his European friends shall be known, and that it be attended from the Old South Church to the cemetery in Park Street by a voluntary procession composed of the members of the several committees and such citizens as may be desirous to pay that mark of respect to the remains of this distinguished stranger.

Voted, That Dr Tuckerman be requested to address the Throne of Grace, and Dr Follen to deliver an Eulogy in the Old South Church on the occasion.

Voted, That Dr Grigg be a sub-committee to request the Rev. Mr Pierpont to write an Ode for the occasion, and the Handel and Haydn Society to perform appropriate music at the solemnities.

Voted, That the Chairman, Mr Bond, and Mr Curtis, be a committee to prepare a statement of all the proceedings which have taken place relative to the funeral obsequies of Dr Spurzheim, for publication, in such form as they may deem expedient.

A true copy of the proceedings of the committee,
JOSIAH QUINCY, *Chairman.*

At a meeting of the above Committee, on the 17th of November 1832, it was

Voted, That Dr Follen be requested to deliver a copy of his very appropriate Eulogy this day delivered at the funeral of Dr Spurzheim, for publication.

Voted, That a place for the permanent deposit of the body of Dr Spurzheim be prepared at Mount Auburn, in case it should not be requested to be sent to Europe by his friends and relatives; and that a monument be erected over his tomb; and for this purpose, that a subscription be opened among those who are willing to pay this tribute to his memory.

A true copy of the proceedings of the above Sub-committee,
 JOSIAH QUINCY, *Chairman.*

BOSTON MEDICAL ASSOCIATION.

At a special meeting of the Boston Medical Association, held at the Massachusetts Medical College, November 14. 1832, the following resolutions were *unanimously* adopted, and ordered to be published :

The Boston Medical Association having received with great satisfaction the visit of the late Dr G. Spurzheim; and their acquaintance with him having inspired them with high respect for his researches in Anatomy and Physiology, and a deep interest in his opinions on the moral and physical improvement of Man; therefore,

Resolved, That we view the decease of Dr Spurzheim and the termination of his labours, as a calamity to mankind, and, in an especial manner, to this country.

Resolved, That a respectable letter be addressed to his friends in Europe by the Secretary of this Association, detailing an account of his labours, his illness, and death, and the expression of public respect paid to his memory.

Resolved, That this Association, as a body, will attend the funeral obsequies of the deceased.

Resolved, That we recommend to our fellow citizens the opinions of the deceased on the improvement of our systems of education; and especially what relates to the development of the physical powers and moral dispositions; and as they can no more expect to hear them from the lips of our lamented friend, that they lose no time in making a practical application of them to the existing state of our institutions for the culture of the human mind.

Attest, JOSEPH W. M'KEAN, *Secretary.*

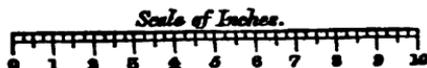
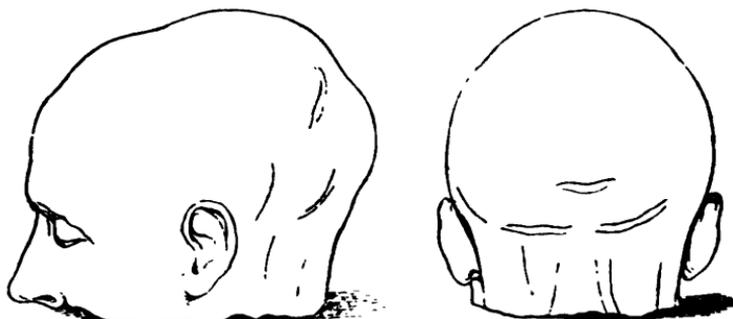
[We intended to reprint Dr Follen's Oration, and the Rev. Mr Pierpont's Ode, in the present number of our Journal. The great length of this article, however, renders it necessary to postpone them till next publication.—
 EDITOR.]

ARTICLE II.

NATURAL DISPOSITIONS AND TALENTS INFERRED FROM
A CAST; WITH SUBSEQUENT CORRESPONDENCE RELATIVE
TO SOME OF THEIR PECULIARITIES.

ON 13th February 1833, Mr B——, a gentleman who resides at a distance from Edinburgh, transmitted to Mr Robert Cox, a phrenologist in that city, a cast of a head, in which the lower part of the face did not appear. The only particulars communicated were, that the cast was a very accurate representation of the head of a well-educated gentleman, aged 30. The letter of Mr B—— thus concludes:—"I hope you will send me, at your earliest convenience, an analysis of the gentleman's character, as deduced from his head. He is a good subject for phrenological investigation, as his character is, in many particulars, a well marked one. Perhaps Mr Simpson also would not object to try his hand, seeing he was so singularly successful in the two former instances."

The following cuts will give a general idea of the appearance of the cast:—



The measurements are these:—

	Inches.
From Individuality to Philoprogenitiveness,	8½
..... Concentrativeness to Comparison,	7½
..... Ear to Philoprogenitiveness,	5
..... Individuality,	5
..... Benevolence,	6½
..... Veneration,	6
..... Firmness,	6½
..... Destructiveness to Destructiveness,	6½
..... Secretiveness to Secretiveness,	6½
..... Cautiousness to Cautiousness,	5½
Ideality to Ideality,	5

The cast was examined by Messrs Simpson and Cox, and the following correspondence then took place.

1. *Letter from Mr Cox to Mr B—.*

MY DEAR SIR,

EDINBURGH, 23d February 1833.

I had the pleasure of receiving your letter of the 18th, with the cast. The shape of the head is peculiar enough; and I have not been in too great a hurry to communicate the ideas which I have formed with respect to the character indicated. This has arisen partly from the urgent nature of my other avocations, and partly because matters of this sort ought not to be hastily dealt with. The development I take to be as follows:—

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

The size of this head is unusually great, and the mind of its owner must, in consequence, be one of great energy. He will manifest great strength of feeling, with intrepidity and decision of character. He possesses great influence over such of his acquaintances as have inclinations similar to his own, and naturally takes the lead amongst them. His general character is little apt to be moulded by external circumstances, or biassed by intercourse with society: he forms his own opinions, and acts upon them.

His passions are exceedingly strong, and he finds self-government no easy task. He is remarkable for courage and inflexible perseverance, and for an indomitable spirit of independence. No ordinary danger can appal him; and he would perform a conspicuous part in circumstances requiring great presence of mind, and promptness and decision of action. He has the elements of patriotism in his character, and is likely to take a deep interest in the history of such men as Sir William Wallace. He seems to have a strong liking for disputation and strife, and to be excessively fond of argument; in which he finds it difficult to keep his temper altogether cool. If he believes himself on the right

side of a question, no power on earth will induce him to surrender his position. He is irritable, and perhaps even apt to be sometimes vindictive; and throws out many a bitter sarcastic remark on those who offend him. Of his rights he is extremely tenacious: *Nemo me impune lacesset* could be adopted as a motto by no one more fitly than by him. He seems to be a keen politician, and has that combination of faculties which should make him rank himself on the side of the Whigs, if interest, family connexions, or some such cause, have not otherwise biassed his mind. He takes great interest in war, and in deeds of enterprise in general, and probably had a strong inclination, at some period of his life, to embrace the martial profession. When he issues commands, his manner and voice are impressive, and such as to intimate that, unless his injunctions be promptly obeyed, disagreeable consequences may ensue to the offender. He is capable of being easily roused into anger, especially when contemptuously treated; and, if excited by intoxication, will be no very agreeable companion. When a gust of passion is over, however, he will be anxious to make atonement for the injury he may have inflicted; and a soft answer is tolerably effectual in turning away his wrath. He has, moreover, the power of effectually concealing his thoughts and emotions, and is even able to assume a calm exterior at the very time when his passions are raging within.

He is fond of female society, delights in the presence of children, and is capable of forming strong and lasting attachments. When not contradicted, he is kind and good-natured. He loves to hear his actions applauded, and is anxious to learn what is thought of him by others. At the same time, his own opinion of his qualifications is so high, that, when these are called in question by persons for whose judgment he has no great respect, he is likely enough to receive their disapprobation with indifference. Without being either a vain boaster or unduly self-satisfied, he is fully conscious of his merits, and is able to proclaim them boldly on all necessary occasions. He is not apt to paint futurity in gay colours, or to build castles in the air; but, on the contrary, is liable to fall sometimes into low spirits. He has a strong desire to accumulate property; but I fear his contending feelings are too numerous and powerful to allow him to be very successful in laying up a store. It does not strike me that his religious emotions are strong. In general, he bestows his respect only on very eminent and admirable individuals; and he does not seem to be a blind worshipper of antiquity.

Though, as already mentioned, his passions are very strong, by no means left to their unbridled sway: a constant war goes on within him, between the lower and the higher faculties; and from this, as well as from the circumstance of

his Hope being deficient, I infer that his life is not one of unbroken happiness. "The flesh lusteth against the spirit, and the spirit against the flesh, so that he cannot do the things that he would."—He will find it impossible to comply with the injunction, "Resist not evil; but whosoever shall smite thee on thy right cheek, turn to him the other also." Yet he is not apt to be a cool aggressor; for, while jealous of his own rights, he is thoroughly honest, and not less scrupulous in respecting the rights of others. He will, indeed, find in his strong sentiment of Conscientiousness a very efficient check upon his animal propensities; and as he has likewise a large development of Secretiveness, Benevolence, and Love of Approbation, and his education is stated to have been good, I have no doubt that, in refined society, he is able to repress the more disagreeable manifestations of his propensities. Still, however, this will not be accomplished without an effort.

There is a decided talent for construction, and he could display considerable ingenuity and manual dexterity in the prosecution of it. This, however, depends much on the training he has received. It is impossible to predicate in what direction his Constructiveness is employed; but I am apt to imagine that, although capable of learning to draw, he will not be peculiarly successful as a colourist, and that he has no decided genius for engineering and dynamics. He is deficient in the power of discriminating nicely and judging of the harmonies of colours; is rather disorderly and unsystematic in his habits; and has no distinguished talent for the mathematics, particularly arithmetic and algebra. His reflective intellect is excellent; but, being ignorant of his temperament, I cannot speak as to its activity. Presuming that his constitution is active in an ordinary and tolerable degree, I infer a very respectable share of acute judgment and logical power. He has a good deal of dry humour, and is sometimes severe in his jokes. He penetrates, with great shrewdness, into the motives and feelings of others, and would find in Phrenology an interesting explanation of the apparent anomalies of his own mind.

A great command of language, and quick verbal memory, are not among his characteristics. He is fond of taking the aid of analogy in his reasonings, and is able to conduct an argument in a relevant, forcible, and connected manner. He has very considerable powers of narrative and illustration, and, if an author, is likely to make frequent use of figurative language. A shrewd reasoner, he is a still better describer. His musical powers appear to be above an average, and he is probably fond of the picturesque and beautiful. Does not a full military band, followed by the regiment, excite a high degree of pleasure in his mind?

I have thus delineated the character of this gentleman at some length, and perhaps with greater minuteness than was authorized by the cast alone, without a knowledge of the circumstances in which the individual is placed. You will recollect also that I am only a tyro in practical Phrenology, and that my errors cannot fairly be made to bring discredit on the science which I am studying and attempting to practise. Still I am not prepared to learn that there is a very material divergence from truth in what is above anticipated, with respect to the character of your friend.

Before sending the cast to Mr Simpson, I had committed my views to paper, and he drew up his remarks in total ignorance of what had occurred to me. On comparing notes, we found that very nearly the same conclusions had been arrived at, as you will perceive on reading both papers. They were only slightly modified (and more on his side than on mine) after our conference.

I shall expect to receive, in the course of eight or ten days, a full description of the gentleman's actual character.

The head is not at all symmetrical. What is the effect of this?

Is the gentleman addicted, or the reverse, to the pleasures of the table? Or is he indifferent?—I am, &c.

ROB. COX.

2. Mr SIMPSON'S Inference.

THIS individual will manifest as much *power of character* as the large-headed uneducated man, whose cast was formerly under discussion; but what a difference in respectability! There is as large an animal endowment here as there; but how differently controlled! The flesh is strong, but the spirit is stronger, and will keep the flesh a powerful servant, but yet a servant. The individual is amative, but his conduct will be decent and delicate. He is passionate and irascible, but this will not always externally appear. He is combative and disputatious, but even that tendency he can regulate, and he will shew courage, activity, energy, and enterprise.

He delights in praise, and is ambitious of distinction, but his estimate of his own powers and merits is so high that he will scorn the bad taste and deficient judgment of those who refuse their tribute of approbation. His firmness is not to be shaken, and would give him great fortitude under trial. Yielding is a grand moral impossibility in a good cause, and *victory*, even in a more doubtful one, is quite essential to his comfort. He is just and truthful, and pays his debts. The only occasion

where his candour may be in danger is in rivalry. "Aut Cæsar aut nullus" is his motto, and his charity is in risk towards his formidable opponents. He is kind and generous in his sentiments, though more charitable with his exertions than his money. *This* he likes to accumulate; but his passions may have made inroads on his means. He likes to be shewily hospitable. He will not be outdone in a *public* subscription. He is probably popular and liked. If he ever gives offence, it is with his Self-esteem piquing that of others, for he is apt to despise adverse opinions and judgments. He may, when off his guard, argue insolently and dogmatically; and, as he probably waxes vehement, and gets loud and harsh in voice, he becomes, as was said of Samuel Johnson, "a tremendous adversary." Nevertheless he is much respected, and has much weight in the circle in which he moves, and is a frequent referee in disputes. In him the domestic group of affections are very powerful; as lover, husband, father, friend, he can have few equals. As a father he is a perfect nursery-maid; and, if he has not children of his own, he must *borrow* those of others to pour out his affections upon. Children will come to him by instinct. He is secretive, and probably cautious and reserved, with much of *savoir faire* and tact about him. He will not rashly enter into speculations, and never into gambling ones. He has not bright future views, and is often subject to fits of despondency.

His intellect is far above average. It is better in the reflecting than the knowing region. He would not top his class at Greek and Latin, and would *tail* it at arithmetic. At history, and all the objects of eventuality, he would make a better figure. His talents would have a later development than school, and belles lettres, metaphysics, political economy, legislation, and speculation on human affairs in general, would be the pursuits in which he would be declared an able man. He has the talent for them; I do not say which he has followed. He did not shine in the details of science and experimental philosophy, and had no great relish for mathematics, especially algebra. His compositions will exhibit sound thinking; and although he can reason logically from necessary consequence, he prefers the reasoning of comparison, analogy, and illustration. His illustrations will be drawn from things that *happen*, more than from things that *are*; from history more than from scientific stores of knowledge. Of these last he will be impatient, and will be eager to ascend into generalization. He loves the sublime as well as the beautiful; and his style, although scarcely very fluent, will be ornate, and poetical, and eloquent. He is a readier writer than extemporaneous debater. He is not a musician, nor engineer, nor draughtsman, nor calculator, although he is an expert constructor, and *maker* with his hands. He is witty and loves

the ludicrous, and often sets the table in a roar with well-told stories, and even with original unexpected resemblances. He is not a *punster*, and despises the accomplishment. His wit is often caustic and satirical, especially *ironical*; and his humour is dry and grave. He has some *Uncle Adamism* about him; he delights to make those about him happy, but they must all be happy in the way he *dictates*. He cannot match nice shades of colour. On the whole, he is a person who will *take* the lead, and the lead will be given to him. He could manage the combinations of a large and complicated establishment. But for some minor defects, such as want of order, he could have commanded a large army; and, often in his youth, when he read *Cæsar de Bello Gallico*, this was his ambitious dream. He is probably slovenly in his personal arrangements; and I should like to know if he is not unpunctual to appointments, not only from want of arrangement, but from a weak perception of the lapse of time, so as not to know *when to look his watch*. Some persons can tell the hour before taking out their watches; he cannot do this. He is a woeful bad dancer, and could never be brought to make a bow approaching to respectfulness, not to say grace. He is kinder in his manner than polite. Indeed, wherever he goes, were kings and dukes present, he would be easy and familiar.

J. S.

3. Letter from Mr. B—— to Mr Cox.

MY DEAR SIR,

13th March 1833.

I AM much obliged to you and Mr Simpson for the trouble you have been at with the cast which I took the liberty of forwarding to you. You, I dare say, will be surprised when I tell you that it was taken from my own head*. So far as I know my character, the phrenological analyses are most admirable. Indeed, with one or two exceptions, they are surprisingly correct, and fill me with astonishment at their strict accordance with nature. My friends also bear the fullest testimony to their extraordinary accuracy. The only points on which I think you have both erred, are in indicating the feeling of Amativeness as

* It seems necessary to remark, that neither Mr Simpson nor Mr Cox had the slightest knowledge of the personal character of Mr B——. The former had never even seen him, and the other had merely accompanied him and another gentleman, in the course of last summer, to the Museum of the Phrenological Society, where nothing was said or done to indicate, in any degree whatever, the peculiarities of Mr B——. Nor had either phrenologist the most distant suspicion, when the inferences were drawn, that the cast represented the head of Mr B—— himself. The temperament of that gentleman, it may be here stated, is nervous-bilious.

very powerful, and in representing me as disputatious. I am rather surprised at the first mistake; for it occurs to me that the development of Amativeness upon the cast is only moderate. I always considered this to be the case; and if you will look again you will find it is not so large as you have represented. Philoprogenitiveness being very large, and coming very low down, has, I suspect, led you into this error. Independently of this, the muscles at the back of my neck are very large and strong, and might thus mislead you by giving an appearance of unusual thickness. The feeling of Amativeness is certainly not more than moderate, certainly not at all excessive or troublesome.

The feeling of Combativeness is, beyond all doubt, exceedingly active, but it does not manifest itself in disputation. I cannot, without a strong effort, keep my temper in argument, and, therefore, hate arguing. Independently of this, I am apt to dislike those who contradict or differ in opinion from me; and, to avoid indulging in this feeling of dislike, I make a point of giving them little or no opportunity of differing. With regard to my combative propensities in other matters, I could, if I were disposed, say enough; suffice it that I am immoderately fond of seeing fights, of sparring, and of perusing accounts of battles in the prize-ring. In fact, if I had not been well brought up, and possessed strong controlling faculties, as well as some prudence, there is no saying to what lengths the activity of the pugnacious faculty might have led.

Secretiveness ought to be very largely developed, for few men with such strong passions to struggle against are more in the daily habit of controlling them: and I often take some credit for keeping, by its means, these passions under due restraint.

Mr Simpson says, that the person writes with more ease than he speaks. This is a very shrewd remark, and singularly correct. No man writes with more ease, or speaks with less, than I do. You and Mr Simpson differ with regard to drawing: he says I am not a draughtsman. Your view is the more correct. I am not only capable of learning to draw, but I can do so very well. Colouring, however, I never cared about, nor do I believe I could ever excel in it. Mr S. says I cannot match colours. I cannot speak on this point, as I do not very clearly understand his meaning. If he means that I cannot accurately distinguish one shade of colour from another, I apprehend he is inaccurate; but I cannot speak decidedly, having never paid attention to the subject. If, however, he means that I cannot harmoniously arrange colours, I suspect he is right. I used to be remarked for the unskilful way in which I selected the colours of different parts of my dress; and, two years ago, a friend of

mine, a portrait-painter, stopped me in the street, and advised me to pay more attention to this point, as there was an absurd want of harmony in the colour of coat, vest, trowsers, stockings, and neckcloth. He advised me what colours I ought to wear, and I have followed his advice, and am now something like other people. There must surely have been some defect or other, when people were taking notice of it so pointedly. Besides this, I care nothing about flowers. Their splendid hues do not strike me with any particular pleasure; and if I had a garden, I should not trouble myself with having a single flower in it.

Mr Simpson says I am a bad dancer. There never was a worse on the face of the globe. I never, in fact, could learn dancing, and have a natural dislike to it. But upon what data does he predicate this, seeing that Tune is rather full? Moreover, upon what data does he infer want of elegance of manners, seeing that Imitation and Ideality are both rather large? The inference is perfectly just, but I can see no grounds for it in the estimate of the development. At making a bow, and other little conventional matters of politeness, no man could well be worse. I would make a shocking lord-in-waiting to his Majesty; and as for a master of ceremonies to a ball, the very idea would throw Beau Nash into convulsions.

You say the religious feelings of the individual are not strong, and yet give him good Veneration. Your assertion is perfectly just, but upon what do you ground it? According to the estimate, he ought to be religious, which he most certainly is not.

How do you reconcile his "Language full" with the deficient command of words, which you rightly say is one of his characteristics? Your inferences are in themselves correct—strikingly so—but they appear to me as being sometimes inconsequential, and not deduced from what I would suppose the data.

Locality, you say, is "rather large." I suspect you are mistaken in taking this development. Locality I take to be moderate, or rather small, in the cast; but of course you are a better judge than I. I wish you would look again, and satisfy yourself. I always considered the development as moderate. In one point of view, Locality with me is weak, in another strong. I am a very bad hand at finding out places, and yet particularly fond of travelling. How do you reconcile these differences?

I am a shocking arithmetician; a worse does not exist. I never could learn the multiplication-table, and have really no talent whatever for calculation. Mathematics I once attempted, but gave up the science in disgust, long before arriving at the *pons asinorum*. And yet you say Number is *full*. How is this?

Mr Simpson is very acute when he says, that I would not *top* my class at Greek and Latin. I was uniformly *dolt*, and was a most wretched scholar. Indeed, in every school (except drawing), I was considered extremely stupid, whether in the classics, arithmetic, French, or geography. He is also very accurate indeed, when he alleges that my mind would not be thoroughly developed till later than school. I never was good at any thing till I attained the age of sixteen, when I became a tremendously hard-working student in ——— and general literature, two subjects which I liked, and which I pursued with an intensity which I may safely say was never surpassed. In fact, I could do nothing till I became my own master. The trammels of school education were most insufferable, and I look back to the floggings, wranglings, fightings, and heart-burnings of my school-boy days with the greatest loathing. Whenever the tension of scholastic bondage was removed, and I was left to do as I liked, I felt quite another being, and acquired the knowledge I was partial to with readiness and zeal. No boy at school was ever more flogged than I. My teachers I abhorred as insufferable tyrants; and, when I became a little older, was quite ungovernable, and constantly mutinying and forming conspiracies against them. Flogging, however, never did me any good, but rendered me much worse. Those only who treated me leniently could make any thing of so rebellious a subject.

I should like to know Mr Simpson's data for inferring bad scholarship, and late mental development; also his reasons for inferring that I despise punning. This paltry accomplishment I have the most utter contempt for, but I cannot see how he infers such antipathy.

With regard to deficient *Order*, he is also right. Want of arrangement in others never annoys me, unless when it produces inconvenience. For *order* in the abstract I have no *penchant* whatever, and rather feel it an annoyance than a pleasure. I am constantly mislaying pen-knives, umbrellas, &c. and since the first of November, have lost not fewer than eight pairs of gloves.

He mentions also a want of punctuality to appointments, owing to a deficient perception of the lapse of time. This is another staggerer, for I have certainly an imperfect perception of time, and yet you admit *Time* to be rather full. Appointments I never on any occasion wilfully break, as I consider the thing dishonest; but I sometimes, or rather frequently, do so from forgetting them, or from forming a wrong estimate of time. I can make nothing of time, unless I have my watch. I have seen me, while it was at the mending, mistake three o'clock P.M. for noon, and *vice versa*.

With regard to my love of the ludicrous, and turn for irony and grave humour, I shall say nothing myself, but leave others to form an opinion. I believe no man loves the ridiculous more than I do; the passion for it is most active, but whether such humour as I have be genuine, is of course another question. Nothing gives me so much delight as to get into the company of a self-sufficient blockhead, and bestow upon him the most fulsome and nauseous flattery. Stupid people, unless when doing business with them, never annoy me. I am rather partial to their society. They must, however, be immoderately stupid to suit my taste.

I suspect I have no talent for music; but few people are fonder of it. I do not care for Scotch airs, or pathetic pieces, at least not particularly; while, on the contrary, martial music, and the bold wild strains of Weber, make a most powerful impression on my mind. Sacred music I care little about.

I must mention one curious fact. I have a most singular tendency to compare one thing with another. For instance, if I hear the piano played, every sound seems to resemble a particular colour; and so uniform is this, that I could almost make a gamut of colours. Some notes are yellow, others green, others blue, and so forth. Words also are associated in my mind with shapes, and shapes with words; a horse's mouth, for instance, I always associate with the word *smeer*. As instances of the similitude with words and forms, take the following examples:

Combs resembles



Cox resembles



Simpson resembles



This is certainly a very odd peculiarity, and I know not how to account for it, unless it be from a strange activity in the faculty of Comparison. It has existed since ever I recollect, and has puzzled myself as, I believe, it will do every other person. In writing and reasoning, I feel at once that Comparison is the strongest faculty I have, and I believe there is no person makes a greater use of similes and illustrations. This was observed by others long before it occurred to myself. Indeed it never struck me till I was told it.

You inquire about my addiction or non-addiction to the pleasures of the table. I am not at all given to this, and am mo-

derate and temperate in the matter of eating—more so than most men,—but, somehow, what I do eat, must be cooked with peculiar care, or I cannot taste it. I mention this, as it is rather a strong point in my character. It is the only thing I am finical in, and I cannot account for it. With regard to drinking I am also moderate, although there are few men who are so little affected by excess. I impute this to the great self-command which I possess, as well as to good bodily stamina. These trifles I would not mention, unless you had drawn my attention to them.

The head, as you observe, is not at all symmetrical, but I am not aware that this has any effect, one way or another.

You mention the moderate development of Hope, and justly remark upon the tendency of the individual to occasional low spirits, and the likelihood of his being not apt to paint futurity in gay colours. Nothing can be more true than both statements. I am often causelessly flat, and never view the future with complacency. Indeed, so little do I expect any thing to turn out well, that I never was disappointed all my life, and am constantly meeting with agreeable surprises, at events turning out far better than I anticipated.

Mr Simpson is wrong when he talks of my love of ostentation and show. I do not possess this quality at all; on the contrary, I despise it, and would despise myself were I to indulge in any thing of the kind. This is one of the few points where his estimate is at fault.

I do not know whether I have a desire to accumulate property or not. I believe I am reckoned rather liberal in money matters—more so than I think I deserve to be. I am, however, fond of accumulating books, and extremely unfond of lending them.

To what organ, or combination of organs, do you refer the fondness of ascending heights, and the capability of standing upon them without getting giddy? This feeling is exceedingly strong in me. I can go almost to any elevation, and even walk across the ridge of a high house without difficulty. When I resided in the Normandy I used to sit with my legs hanging over precipices from one to three hundred feet high, and read there for an hour or two, or watch the sea boiling in the caverns below. The faculty of doing this is very perfect, and, with a little practice, I think, no man could excel me. As it is, I can do so as well as any mason or slater I ever saw.

I forgot to say that my verbal memory is not particularly good, but that I have a very powerful recollection of events, whether such as I read, or such as pass under my own observation.

I may also mention, that I am terribly bad at all games requiring calculation. Cards, draughts, &c. puzzle me exceed-

ingly. I believe I could as soon fly in the air as become a third rate chess-player. Indeed, I hate all games whatever except the more athletic sort, such as quoits, single-stick, fencing, sparring, and so forth, in the whole of which I think I would be capable of excelling, were I to practise them.

I am not the least speculative—quite the reverse. - I was brought up in the strictest doctrine of Toryism, but fear much that I am a recreant from the old faith. Somehow I always side with the opposition in Parliament, whatever that may be. This is absurd, but I cannot help it.

I have thus gone over the principal parts of your and Mr Simpson's analyses, and I hope you will not think me a vain-glorious egotist in thus speaking so much of myself. I have done so honestly, at least; and if in any part I am wrong, perhaps my self-love may have misled me, and made me deny the truth of some of your statements, which, for all that, may be true enough.

I am much obliged to both of you for the great trouble you must have been at. I shall not again ask you to do any thing of the kind; but should I meet with any remarkable heads, I shall try and get casts of them, which I shall send to you along with sketches of their characters. Your estimates of the heads which I have already sent, without giving you any cue of their owners' talents or dispositions, I look upon as very valuable, and as incontrovertible evidences of the truth of Phrenology. I am, &c.

4. *Letter from Mr Cox to Mr B.*—

MY DEAR SIR,

EDINBURGH, 19th March 1833.

It was very gratifying to find that Mr Simpson and I had described your character with so much accuracy, especially as we were altogether ignorant of the temperament, health, and circumstances of the subject, and therefore were considerably liable to error. I now write for the twofold purpose of affording the explanations you desire as to the data from which some of the inferences were drawn, and of requesting information on various points not hitherto adverted to.

In stating development, the following scale is used, to indicate more exactly than could be done by mere words the relative size of the different organs.

1.	6. Small.	11.	16. Rather large.
2. Idiocy.	7.	12. Rather full.	17.
3.	8. Rather small.	13.	18. Large.
4. Very small.	9.	14. Full.	19.
5.	10. Moderate.	15.	20. Very large.

The figure 12, therefore, annexed to the name of an organ,

signifies that it is rather full, and "19" means that it is between large and very large. Character is judged of by comparing the size of every individual organ with the size of every other individual organ in the *same* head. When one organ is stated as "rather full, 12," and another as "enormous, 22," the distance between the two points in the scale shews that one of the organs is, relatively to the other, very large. The lowest department of the scale, viz. from 1 to 6, is seldom applied to European brains, being reserved almost exclusively "for the accommodation of strangers," such as the Caribs and New Hollanders. Not being aware of this, you were naturally puzzled on finding deficient arithmetical talent put in combination with "Number rather full, 12," (not "full," as you say). The size of many of your leading organs is indicated by numbers so high in the scale as 16, 17, 18, 20, and in one case even 22; so that an organ stated at 12, is in comparison with these deficient. I may notice, that, in my first draft of the development, Number is set down as "rather small, 8," but it was subsequently altered to 12, on account of the difficulty of judging of this organ, especially in a cast, and because, though I was certain that its size was very moderate, I thought it prudent, in this case, not to go to extremes. *Rather small*, I am now convinced, is the proper term; and you will see at once what a leap there is from 8 to 22 in the scale—which being interpreted signifies that your combative propensity (22) is vastly more energetic than your arithmetical talent, taking the latter at 8, or even 12.

On looking again very carefully at the cast, I cannot bring myself to think that Amativeness is moderate. The size of the cerebellum is judged of by the distance between the mastoid processes, and by the length of a line drawn across the neck along the ridge in which the muscles are inserted, by way of the spinous process, from one mastoid to the other. Now, in your head, unless the muscles be extremely thick, the mastoids are at a great distance, and the spinous process of the occipital bone seems to be considerably farther back than the other two processes. The lateral and longitudinal dimensions of the cerebellum are therefore great; but there is yet another measurement which must be attended to, viz. the *depth* of the organ, which, in the present instance, I confess, is not great in proportion to the length and breadth. The skull of Raphael the painter droops in this quarter, exhibiting a very protuberant base of the occiput; and, during life, his neck would be more rounded and full than it is with you. I am therefore content to reduce your cerebellum from "very large, 20," to "large, 18 or 17;" but lower I cannot go. "Moderate, 10," is out of the question. Mr Simpson, when he took the development, called

it 17, because "the *appearance* was not decidedly that of large lobes of the cerebellum;" but, on discussing the matter with him, and getting him to measure the circumference, he came up to my point, 20. We did not sufficiently advert to the *depth*; but, besides, as you remark, the thickness of the muscles not being shewn by the cast, we had not the means of avoiding *some* degree of error.

After all, however, I am very much disposed to believe that you have an erroneous opinion of the strength of this feeling in your mind. Its *activity*, perhaps, is moderate; but, depend upon it, the propensity is there, ready to blaze whenever circumstances shall stir it up. You know that hard study, or indeed continued exertion of any sort, bodily or mental, is the most effectual restraint on the passion of love that has yet been invented, and that idleness is peculiarly favourable to its activity. Ovid's "Remedia Amoris," are nothing else than a commentary on that text. He says, as translated by an indifferent poet:

"If therefore you expect to find redress,
In the first place, take leave of idleness.
'Tis this that kindled first your fond desire,
'Tis this brings fuel to the am'rous fire.
Bar idleness—you ruin Cupid's game;
You blunt his arrows, and you quench his flame.
What wine to plane-trees, streams to poplars prove,
Marshes to reeds, is idleness to love:
Mind business, if your passion you'd destroy;
Secure is he who can himself employ."

Now, in the *first* place, you have various faculties as powerful as Amativeness, all soliciting activity; *secondly*, the intellectual organs, in particular, are large and active, and you have a great development of Firmness and Concentrativeness, which will enable you to keep them in that condition; and, *thirdly*, these intellectual organs seem to have been kept in a continued state of excitement since the age of 16, at which time, as you say in your letter, "I became a tremendously hard-working student in ——— and general literature, two subjects which I liked, and which I pursued with an intensity which I may safely say was never surpassed." "Secure is he who can himself employ," says Ovid: "Secure art thou who *hast* thyself employed," say I. Do you dislike female society? I hardly think you do; but if so, for what reason? Probably because other pursuits may engross the thoughts which, without the attraction of those pursuits, would have been devoted to the ladies. With a moderate Amativeness, you would be an absolute woman-hater, which I presume is not the case.

But, moreover, you indulge much in walking, and other species of muscular exercise; and such exercise, you know, is also in some degree an antidote to love. Ovid says,—

" Hunt, if the flaming passion you'd remove ;
 Diana will too hard for Venus prove.....
 Or travel, though you find your fetters strong:—
 Set out betimes ; the journey must be long," &c. &c.

Finally on this subject, do you read with pleasure, and think natural, tales, romances, and novels, in which love makes a conspicuous figure ? And don't you think that your large Cautiousness, small Hope, and perhaps your large Self-Esteem, may have contributed to the keeping down of the activity of the cerebellum ?

Let us now turn to *Combativeness*. This propensity, you say, " does not manifest itself in disputation." My words were, " He seems to have a strong *liking* for disputation and strife, and to be excessively fond of argument." It is very obvious that this *liking* (by which I mean natural propensity) is abundantly strong, and that it is only by a strenuous moral effort that you are able to prevent the manifestation of it. Mr Simpson remarks on this point, " Mr B—— is disputatious, although he represses disputation prudentially. Let him observe the difficulty he experiences in repressing the impulse to contradict an opinion from which he differs, especially when confidently stated by another. He has virtually admitted disputatiousness, and described it." The fundamental and elementary faculty manifested by the organ No. 5. is in my opinion most accurately expressed by the phrase, " Instinct or propensity to oppose," or briefly, " *Opposiveness*." When not too large, it opposes aggression ; when exorbitant, it prompts men to attack others, so as to raise opposition for the pure delight of meeting and contending with it. *Opposiveness* seems to me a better term than *Combativeness*, inasmuch as it applies to moral as well as to physical contention, without the use of so violent a metaphor. Gall named the faculty " Self-Defence ; Defence of property ;" but this appears not to indicate its nature so clearly and accurately as *Opposiveness* ; for the latter term includes every species of manifestation, defensive and aggressive. Opposition is the essence of every form of activity which it assumes. You will find a very excellent essay on this faculty, and on *Destructiveness* and *Secretiveness*, in the Transactions of the Phrenological Society.

Secretiveness is at 19. in the scale, that is, almost very large ; and I seem to have hit the mark in predicating that you have " the power of effectually concealing your thoughts and emotions, and are even able to assume a calm exterior at the very time when your passions are raging within." The pleasure which you derive from roasting self-sufficient blockheads, arises in a great measure from *Secretiveness*. In the first volume of the Phrenological Journal, p. 182, the following passage occurs : " The observations of phrenologists have determined that this

power is an essential ingredient in humour, or that talent which enables its possessor to amuse himself quietly and covertly with the foibles and feelings of others." A quotation is then given from Quentin Durward, wherein Louis XI. (whose Secretiveness is the subject of discourse), is represented as putting a worthy cardinal into an extremely awkward condition, by pretending to be desirous of speaking gravely with him on affairs of importance, and, at the same time, slyly making the cardinal's horse rear and prance, and become so unruly that no conversation was possible. "Dunois," says the novelist, "laughed outright; while the king, who had a private mode of enjoying his jest inwardly, without laughing aloud, mildly rebuked his minister in his eager passion for the chase, which would not permit him to dedicate a few moments to business." The novelist informs us likewise, that, "like all astutious persons, Louis was as desirous of looking into the hearts of others as of concealing his own."

In the draft of my inference, the following clause was originally inserted; but afterwards, for some reason which I have forgotten, it was deleted: probably it might have stood without inconvenience:—"He may be moderately fond of the drama, and in that case likes in an especial manner tragedy and *low comedy*." Is it so? And is it the case that Fielding's Joseph Andrews, Knickerbocker's History of New York, Don Quixote, Gulliver's Travels, The Tale of a Tub, and Hudibras, are in the highest degree tickling to your imagination? I am pretty confident of the affirmative. Blackwood's famous Chaldee M.S. must also tickle you.

Leaving humour, we now come to your constructive talents. Mr Simpson writes that he "has not said that Mr B—— is not a draughtsman, for Imitation, Form, and Constructiveness are all well developed. He has only said that he will not use colouring in drawing*. Matching colours is only one way of expressing a defect in the perception of colouring. Mr B—— sufficiently proves this defect in his remarks upon the harmonies in his articles of dress." My own expression was, "he is deficient in the power of discriminating nicely and judging of the harmonies of colours;" and this, in all probability, very nearly approaches the truth. The ground on which Mr Simpson predicated bad dancing is deficient Time, (see paper on that organ in Phrenological Journal, vol. ii. p. 134.) To politeness and bow-making, a large Veneration is requisite: in the present case it is only rather full; and Self-Esteem is very large.

"Language full" is not a development for a ready command of words. This organ is not *deficient* with you, else how could

* Mr Simpson is here mistaken: he did say that Mr B—— was no draughtsman, but the inference was clearly unwarranted.

you write so easily? Your case, and that of one of the individuals whose casts were formerly sent, have suggested the idea, that Secretiveness has something to do in rendering an individual a worse speaker than writer.

Locality is in the region of the frontal sinus, and hence we *may* have erred in calling it rather large. I am not inclined, however, to admit this without farther investigation. If the sinus be not unusually great, the organ is certainly not deficient. Your love of travelling is referable chiefly to this faculty; and I would suggest, as the cause of the difficulty which you experience in finding places, that you do not turn your attention sufficiently to the subject, but allow your mind to be occupied at the time with something else. How little knowledge do we gain of the topography of a district, in travelling through it under the guidance of another, compared with what we learn when obliged to exert our own intellect in finding the way! Let me hear your opinion of this conjecture.

Your school adventures remind me of Roderick Random, whose character is, in some respects, like your own. In Mr Combe's *Essays on Phrenology*, p. 317, there is a passage which may very aptly be quoted with reference to you: "If a child possess from nature a great endowment of Self-esteem and Firmness, he will be naturally self-willed and obstinate in his dispositions. Such a child ought never to be punished for possessing these feelings; for, as they are part of himself, they will appear to him natural and proper, and he will only rebel the more, the more we outrage them by indulging in anger against himself." With regard to your progress at school, Mr Simpson remarks, "Indifferent scholarship at school is inferred from Individuality and Language, although not deficient, yet being only a middling endowment, and no match for the animal desire of idleness and freedom, then in activity. Late development of the intellectual powers is accounted for partly on the same antagonizing propensities, and partly on the later maturity of the reflecting powers, on which Mr B——'s character for intellect mainly depends." You may see, in the first volume of the *Phrenological Journal*, p. 505, the case of a youth (an intimate friend of my own), who resembled you in this particular. His reflective organs are much larger than the perceptive.

As for your contempt of punning, this, says Mr Simpson, "was inferred from the development of Language not being sufficient to furnish rapidly several meanings for the same word, while the Wit and Comparison will furnish resemblances of a higher order of wit; and the large brain and large reflecting organs will vilipend the verbal jingle of others. The conjecture was ventured on experiment." I know four gentlemen whose love of punning is strong. The whole are characterized by mode-

rate general size of head, an active temperament, large Individuality and Language, and rather moderate organs of the reflective faculties.

The associations which you mention are curious, and I doubt not have some connexion with your large organ of Comparison. The association of ideas with colours is not uncommon; cases are mentioned in Number xxxiv. of the Phrenological Journal p. 70. There is, however, in your case, a peculiarity which I shall not endeavour to account for.

The reason why I asked whether or not you were addicted to the pleasures of the table was, that, in examining the cast, I was struck with the small amount of brain which must exist between Destructiveness and the anterior surface of the middle lobe behind and below Constructiveness;—in other words the organ of Alimentiveness must be deficient in its longitudinal dimension. The fact as to the strength of the propensity turns out as I conjectured; but having made very few observations on this organ, I was unwilling to risk an inference.

I lately examined the head of an eminent tragedian, and found the organ of Hope in the same condition as yours. On predicating a disposition to entertain gloomy prospects, I was informed that he never had brilliant views of futurity, that he was subject to blue devils, and that suicide had often occurred to his mind as an event which appeared not at all unnatural or impossible in his case, though he had at no time actually thought of destroying himself. This applies exactly to L—, and with him Hope is moderate. With what feelings do you look upon suicide?

On the love of ostentation Mr Simpson remarks: “The love of ostentation and show may be a wrong expression. It did not mean mere empty show. So large a Self-Esteem and Love of Approbation *must* seek their natural food in love of renown, ambition, and ascendancy.”

Your fondness for high and dangerous situations I conceive to depend mainly on Combativeness, Concentrativeness, and Firmness. Combativeness likes danger. Is your power of maintaining equilibrium great, and if so, have you the consciousness that this power results from your ability to concentrate and direct your whole faculties to the act of keeping a just balance? Concentrativeness is large in rope-dancers, &c. Are you apt to fall into a brown study; and have you the power of sustaining continued attention towards any single occupation in which you choose to engage, to the exclusion of all extraneous thoughts? I presume you are not at all apt to fly from subject to subject, but have a tendency to go straight as an arrow to the point at issue? Have you strong attachments to places?

Do you prefer the stupendous, the horrific, the howling, the gloomy, the awful, the dreary, the rugged sublime, to the elegant and graceful;—wild mountainous scenery to rich and wooded landscape? Does a storm at sea excite your feelings strongly? Are you fond of Martin's pictures?

In what degree are you furnished with the power of recollecting dates? There was lately a discussion at the Phrenological Society, relative to the faculties on which this power depends, and your case may throw some light on the matter, which is yet in obscurity.

You are not fond of games of chance: neither is L——: Hope moderate gives him the idea that there is no probability of winning.

In what attitude do you habitually carry your head and body in walking? Do you stand straight upright, with an immoveable sort of feeling, as if your person were in some degree held up by a rope hooked to the organ of Firmness, and as if the joints of the neck were in a stiff condition? You incline neither backwards nor forwards; neither do you wag from side to side; but you maintain in all circumstances a nearly perpendicular attitude? Is it so? I did not observe your manner of walking when you were in Edinburgh.

I intend to read the papers relating to the present experiment, including this letter and your answer to it, to the Phrenological Society, on Thursday evening. Your name of course will not be publicly mentioned, without your permission, though I do not see any great reason why it should be suppressed. I am therefore anxious to receive an answer from you on Thursday morning, or at the *very latest* by the mail which reaches Edinburgh on the afternoon of that day, so that it also may be laid before the Society. Cases of this sort are interesting as lessons in practical Phrenology, and give rise to useful discussions. They have, moreover, a tendency to arrest the attention of unbelievers. Should a desire for publication be expressed, have you any objection to its being complied with? I would have sent you this letter yesterday, to give you more time, but as it has been written at broken intervals snatched from other business, I could not finish it and a copy sooner than this evening. In writing an answer, take it sentence by sentence, so as to avoid the possibility of overlooking any thing. I remain, &c.

ROB. COX.

5. *Letter from Mr B—— to Mr COX.*

MY DEAR SIR,

20th March 1833.

Many thanks for your excellent letter, and its accompaniments. I observe what you say concerning Amateness, and

believe that, after all, you are in the right. I have for many years been so actively employed both in body and mind, that I have no doubt this propensity and feeling must have been kept much in check. No one is less a woman-hater than I am: On the contrary, I am much attached to the society of females, especially when they are young and beautiful.

With regard to what you say about disputation, your views are equally correct and ingenious. I have a curious *penchant* for praising a man whenever I hear him depreciated, and depreciating him whenever I hear him praised. This, I suppose, proceeds from the same principle as argumentativeness. I hate to dispute upon any subject; for when I meet with an obstinate person, I am apt to lose temper with him, and to conceive—not a personal dislike, but a disrelish for his society. I believe no man living hates mulish self-sufficient people so much as I do. On the contrary, I am remarkably fond of modest persons, and I believe am as much liked by them, as disliked by the others. You thus see I can both praise and dispraise myself with one breath.

You are quite correct as to low comedy. I am much fonder of it than of the genteel. Farces, extravaganzas, harlequinades, especially the latter, are my particular favourites. I like to see drunken squabbles, fights, &c. on the stage, and, I am sorry to say, *off* it also. Tragedies also I am very fond of.

What you say with regard to the difficulty in finding places is probably true, for, when going anywhere, I am apt to be thinking on something else, and do not sufficiently direct the mind to the locality. Such at least is the case where the matter is not one of importance. This I suspect is the secret of my deficiency, as well as of frequently passing people in the street without recognising them, although my sight is remarkably good.

Talking of language, I am very apt to forget the names of people, places, songs, &c. I rather imagine I am bad at recollecting dates—not worse, however, than most people; but on this point I cannot speak correctly. My own belief is, that I am not a good date-monger. Facts I recollect capitally.

I am certain I ought to have good Concentrativeness. When determined to accomplish any thing, nothing confuses me, and I have great power of keeping the mind to the subject on hand. There is no doubt that the faculty of Equilibrium must also be powerful. I do not get giddy or afraid on heights, and, had I been trained up to it, could have made a good tumbler or ropedancer. I learned riding with remarkable facility. I have a very strong attachment to places.

I very much prefer bleak, barren, rugged scenery to that which is beautiful and highly cultivated. A tempest gratifies

me tremendously; and such pictures as those of Martin or Salvator Rosa, please me far more highly than any others with which I am acquainted.

Punning I abominate,—not, however, I should suppose, because I cannot make puns, for I never tried it,—but because I despise the accomplishment, as in itself essentially paltry, and generally practised by very paltry creatures. I cannot conceive a manly intellect much given to such an amusement. For the same reason, I detest charades, conundrums, &c. They are the occupations of ninnies, and not of men. My friend A— detests punning as much as myself. His head is large, and the organ of Language moderate.

I observe what you say about suicide. I have no doubt that self-murder is a very horrible and stupid thing, but its atrocity does not strike me so very awfully as it does many a one. I cannot conceive how a man condemned to be hanged, and having the means of self-destruction within his reach, should refrain from using them, always supposing that his belief in future punishment for so doing does not stand in his way.

What you say of Louis XI. I can easily comprehend. This is the kind of humour most congenial to my own mind, and I should have been more apt to have followed the king's example than that of Dunois.

I have precisely the same feeling as L— with regard to games of chance. I never dream of being a winner in such cases.

I believe one cause of my being so bad a public speaker (indeed I cannot speak in public at all), is my extreme sense of the ridiculous. I cannot tolerate the idea of making myself absurd or being laughed at. Now, I always feel inclined to laugh inwardly at people who make these displays, and I always fancy others would do the same to me. Independently of this, however, I never could have made any thing of public speaking.

Mr Simpson's inference, from the beginning of the third paragraph, is admirably accurate; but the previous part is by no means so good as yours.

My gait is peculiar, and makes me known to my friends at a great distance, when it is impossible to recognise the face, or even the dress. I walk very straight, and keep the head stiff and high, slightly inclined backward, with the hat cocked high upon it. I detest slow walking, and get over the ground quickly, whether in a hurry or not. I don't move in the least from side to side, but preserve strictly the perpendicular. I state these things, because it is your desire I should do so. Were I to state them without being asked, it would be a piece of insufferable puppyism and affectation. I am, &c.

6. *Letter from Mr B—— to Mr Cox.*

MY DEAR SIR,

26th March 1833.

MY last letter to you was terribly stupid, from the hurried manner in which it was written ; and I fear that some of the queries propounded in your long, truly able, and most interesting communication were not answered. If so, I have forgotten what they are ; and it is now too late to remedy the oversight.

Your remarks regarding my gait, I shewed to some friends, and they all at once confirmed the accuracy of your conjecture. One of them remarked, " It is perfectly true : you walk as if a poker were thrust down your back."

There can be no doubt that your first statement regarding *Number* is the more correct. This faculty is decidedly weak in my mind, calculation being the only matter on which I ever get confused.

I fully agree with you, that my life has not been one calculated to foster the activity of the cerebellum ; and this, combined with *Self-esteem* and *Caution*, have very probably kept the feeling in question within due restraint. These two faculties I look upon as my good angels, which are perpetually overawing the rebellious spirits in their desperate struggles to obtain ascendancy. For instance, I am passionately fond of rat-killing matches, cock-fighting, &c. and would be apt to indulge in these pursuits were I not restrained by pride from associating with the doubtful characters who frequently patronize them ; and by *Caution*, from addicting myself to practices which would lower me in the estimation of others.

I suspect that I have forgotten to answer your query with regard to the books which I am fondest of reading. My favourite authors have always been those who indulge in broad humour and burlesque, such as Smollett, Swift, Butler, and Cervantes, especially the first, whose novels I have read at least a dozen times.

I observe what you say with regard to *Hope*. I often wish I had a little more of this quality to clear more brightly the aspect of the future ; and yet it is perhaps better not, for people in that case are perpetually disappointed ; which is never the case with me.

How do you account for the fact, that all men who have a keen perception of the ridiculous, and a lively talent for humour, are almost uniformly *sad* dogs? Such was the case with the above mentioned authors, to say nothing of Carlin and Grimaldi. Nor do I doubt that the same rule holds with Yates, Matthews, Liston, Farren, &c. It occurs to me that there is a strong

analogy between humour and pathos, and that they are merely opposite points of the same scale of sensibility.

If you wish it, I have no objection that my name should be mentioned, nor have I any particular objection to the correspondence being published, of course *without* my name. I remain, &c.

7. *Letter from Mr Cox to Mr B*—.

MY DEAR SIR,

EDINBURGH, 29th March 1833.

Accept of my sincere thanks for your letters in answer to mine of last week. They are in the highest degree satisfactory.

My reason for making inquiry as to your manner of walking was, that each organ in the brain has its natural language or pathognomy, and that when any one organ, or group of organs, is energetic, the motions of the body have in consequence a peculiar character. In the fifth volume of his work *Sur les Fonctions du Cerveau*, pp. 442-443, Dr Gall states the following among other principles of pathognomy:—"The organs placed in the superior region of the brain, perpendicularly over the great occipital hole, elevate perpendicularly the head and whole body. The organs situated at the superior-posterior part of the brain, elevate the head and body, and carry them backwards." Now, the contiguous organs of Firmness, Conscientiousness, and Self-esteem, which are almost "perpendicularly over the great occipital hole," are greatly developed in your head; and the facts which you mention with regard to your gait, are, as I anticipated, in complete accordance with what is laid down by Gall. The top of my own head resembles yours, and my attitude in walking is, generally speaking, exactly the same: like you, also, I am utterly incapable of making a bow.—When an organ is very predominant, the motions and attitudes of the head and body are said to have a strong tendency to be in the direction of the position of the organ in the brain. Self-esteem is an obvious example; and Firmness leads to an attitude not less marked. This, however, is a department of the science which I have not sufficiently studied, and in which my observations are of an extent too limited to enable me to form a *decided* opinion as to the soundness of Gall's observations. Nothing *contrary* to the doctrine has fallen under my notice.

Your remark, that humorous men are generally low-spirited, holds true, I believe, in the generality of instances; but there does not seem to be any *necessary* connexion between these two mental qualities, for it is by no means unusual to find humour in combination with general cheerfulness, and mental

gloom unaccompanied by a penchant for the ludicrous. In the case of *sad* humorous individuals, there is probably a deficiency of the organ of Hope, with an excess of Cautiousness. I knew a very humorous gentleman who was seldom or never troubled with low spirits; and on looking at a cast of his head, I find Hope and Secretiveness large, with Cautiousness rather below par. It is comparatively seldom that the adjoining organs of Cautiousness and Secretiveness are found greatly different in size; so that when the organ of Secretiveness, which is the chief ingredient in humour, is large, that of Cautiousness also is perhaps more likely to be large than otherwise. May this be the reason why sadness and humour so frequently go together? Another cause of the depression of humorous individuals may possibly be, that they are apt to get into a state of excitement, and that when reaction takes place, their spirits fall as much below the mean as formerly they were above it. I am of opinion, however, that no general rule will be found universally applicable, and that every case must be judged of according to its own circumstances.

In your head, the back part of the organ of Ideality is larger than the front, and it has been conjectured that there are in fact two organs within the space generally considered as one. The function of the posterior part does not seem to be fully ascertained; but observation renders it probable, that there is some connexion between it and the feeling of the sublime; while the anterior portion seems to be allotted more particularly to the beautiful in general. This idea is supported by what you state in your last letter. Cautiousness, and Destructiveness, I think, contribute to deepen the emotion of the sublime. Farther observations appear requisite to settle this point.

I conclude by quoting from the System of Phrenology, third edition, p. 233, a passage which has just been pointed out to me, and which is well illustrated by the present case. It relates to the organ of Self-esteem; and the concluding portion seems peculiarly applicable:—

“The faculty inspires with the sentiment of self-esteem or self-love, and a due endowment of it, like that of all other faculties, produces only excellent effects. It imparts that degree of satisfaction with self, which leaves the mind open to the enjoyment of the bounties of Providence and the amenities of life; and inspires with that degree of confidence, which enables it to apply its powers to the best advantage in every situation in which it is placed. It aids also in giving dignity in the eyes of others; and we shall find in society, that individual is uniformly treated with the most lasting and sincere respect, who esteems himself so highly as to condemn every action that is mean or un-

worthy of an exalted mind. By communicating this feeling of self-respect, it frequently and effectually aids the moral sentiments in resisting temptations to vice. Several individuals in whom the organ is large, have stated to me, that they have been restrained from forming improper connexions, by the overwhelming sense of self-degradation excited in their minds by the mere prospect of such a circumstance; and that they believed their better principles might have yielded to temptation, had it not been for the support afforded to them by the instinctive impulses of Self-esteem."

Believe me to remain, &c.

ROB. COX.

ARTICLE III.

FACTORIES' REGULATION-BILL.

WERE the question at issue between the manufacturers and the Legislature, as to abridging the hours of labour for children, one merely of pounds, shillings, and pence, we would pass it over without notice. But, convinced as we are that it involves directly the moral and physical wellbeing or suffering of a large class of society, and indirectly the future character and prosperity of the nation, we feel ourselves called upon to express our sentiments in strong and intelligible language.

For some months past, the whole body of master manufacturers and spinners has been held up to public reprobation and indignation, as the hard-hearted and deliberate oppressors of the poor operatives and children, whose lives and comforts are wantonly sacrificed, for the purpose of swelling the coffers, and adding to the luxuries of men already rolling in wealth; and the natural consequence has been, a stirring up of passion and pity on the one hand, and of factious opposition on the other, which are alike inimical to sound and discerning legislation. In our view, the master manufacturers are neither more cruel nor more kind than the average of men of their own rank and of other professions, and we do not believe that half a dozen of them exist in the empire, who would knowingly and deliberately subject the children in their employ to wanton cruelty. But in expressing this opinion of them individually, we must be allowed to add, that, as a body, they seem to have sanctioned a system of labour, which, however blind they may be to its results, is in reality not less oppressive than it is injurious and demoralising. We know and admit the difficulties with which the spirit of competition has surrounded the masters, and the almost impos-

sibility of any of them restricting their operations within limits which are exceeded by the rest, however desirous they may be of following the dictates of common sense and sound morality ; but for this very reason, *if the present hours of labour be oppressive*, the Legislature is bound to interfere with a law which shall place all on the same footing, and effectually prevent the selfish from reaping advantages over their more humane and conscientious competitors.

Numerous meetings of cotton-spinners and manufacturers have of late been held, to petition Parliament against the proposed limitation of the labour of children to ten hours a-day, and to deny that the present system is either oppressive, or disagreeable to the operatives themselves. The consequences of such limitation, they assure us, will be fearfully calamitous : we shall be unable to compete with the foreign manufacturer ; the greatness of England will fade away ; profits will altogether cease ; wages will fall ; and the now half-fed children and weavers will be thrown out of employment, and placed in danger of actual starvation.

Leaving the question of oppression to be settled farther on, we think it right to declare, that our apprehension of mischief is not nearly so great as that expressed by the masters, and that, as every man is proverbially a bad judge in his own cause, we lay no great stress on these melancholy forebodings ; for we doubt if, in the history of the world, any change was ever made, altering even for the better the arrangements we had long been accustomed to, which was not instantly met with the same cry of "ruin and disaster" by those most interested in its accomplishment. And *even if our manufactures were to suffer*, this would still form no reason why thousands of our population are to continue subjected to a demoralising and exhausting system of over-labour. We, however, do not believe that the masters would suffer. Our conviction is that they, as well as their operatives, would gain by the change.

It is impossible for us to make an analysis of the mass of evidence contained in the Parliamentary Report, and fortunately it is not necessary for our purpose ; for even the Glasgow and other Scottish spinners, in their petitions against the proposed bill, distinctly admit the fact, that young children now work for **TWELVE** hours a-day, even in Scotland, where the evils of the factory-system are not regarded as so flagrant as they are in England. We shall pass over the charge of cruelty also, and confine ourselves to the one grand feature of the bill.

The question resolves itself into this,—Is daily labour for twelve hours more or less than the human constitution, before the age of maturity, can bear with impunity ? If it is more,

no consideration of gain ought to be allowed to stand for a moment in the way of granting the necessary protection which the law owes to the young, and which every civilized country would feel morally disgraced, were it to deny to any class of its subjects. If, on the other hand, it is less, the sooner the fact is proved, and the manufacturer delivered from the odium now hanging over him, and a proper understanding is restored between him and the labourers, the better for all parties.

In order to solve the problem, we may consider the present system of protracted labour as it affects a few of the principal functions of the human body, viz. the muscles and bones, or organs of motion; the brain and nervous system; the digestive organs; and the organs of respiration.

It is a well-known fact, that, at birth, the BONES are soft, and almost of the nature of cartilage, and do not acquire their greatest solidity and strength till after maturity; so that they often become bent when the child is induced to attempt to walk too soon, or is exposed at any subsequent period to exertion inconsistent with the degree of strength which he has at the same time attained. When we measure the state of the factory children by this test, we find it established, by both the manufacturing and medical witnesses, that *deformity* is unusually prevalent among them, and that several of the most able men in the profession ascribe the circumstance unhesitatingly to over-work acting upon the bones and distorting them, while their growth is unfinished and their structure comparatively soft.

When the muscles are duly exercised, the individuals gain in flesh and in strength, and growth is promoted. But when the exercise is excessive, they waste away, and become feeble and stunted; and no subsequent care is sufficient to repair the injury thus sustained. On this account, the utmost attention is paid not to over-work young horses, as a single occurrence of this kind might destroy their value for ever. In estimating the labour of factory children by this standard, we cannot hesitate for a moment to declare it greatly beyond the limits which the constitution can bear; for a mass of facts proves, that their growth is retarded on an average nearly two years, and that few, if any, ever attain the robust development and muscular vigour possessed by children of the same age and circumstances not so laboured; while it is known that many who were previously healthy, become thin, feeble and wretched, from the day they enter the mill. Well, then, might Mr Brodie declare, that even four or five hours' work daily was more than enough for children of nine or ten years of age. It is said that the work is so light and easy that it cannot be injurious; but it is well known that the monotonous repetition of the same unvaried

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movements, however light, is, when continued long, more exhausting than harder work which is varied, and not carried to excess.

The same rule applies to exercise of the mind and nervous system. If the various mental powers and moral feelings be called into regular play, the mind acquires strength, readiness, and activity; but when the attention is kept constantly fixed upon one object, and is deprived of all variety and relief, the mental powers become enfeebled and stunted in their development, and the nervous system prone to disease. On referring to the evidence to see to what extent this law is observed, we find the witnesses decided and unanimous in their complaints of the dulness, heaviness, and sleepiness of the children, and the impossibility of keeping them awake at school, or exciting them to farther application after their labour is done; while several of the medical witnesses notice the frequency of convulsions, typhus and other diseases, arising from exhaustion and debility of the nervous system. To such an extent, indeed, is this exhaustion carried, that, in many mills, *corporal punishment is, or was, regularly resorted to in the latter part of the day, to produce that wakefulness which nature can no longer maintain,* and in consequence, almost all the accidents from entanglement with the machinery happen towards the end of the day, when attention becomes obtuse.

It is a well known fact, that the animal system requires supplies of nourishment proportioned to the labour which is undergone. But on examining the cotton and spinning mills, we find this condition of health also grossly infringed. When the body is growing, food requires to be not only nourishing, but copious and well digested; and when labour is resumed immediately after eating, digestion is impaired, and the animal powers oppressed. Thus, if a dog be hunted immediately after eating a hearty meal, and killed on its return, the food is found lying in the intestines almost unchanged. Every one must be conscious, indeed, of unfitness for exertion after meals. In many of the factories, however, so far is this law of nature set at defiance, that no pause is allowed, and the unhappy wretches are obliged to eat in mouthfuls, as they can best snatch a moment for the purpose, while their food, from the lowness of their wages, is at best insufficient to maintain them in vigour, and is often spoiled by the floating dust. Is it to be wondered at, then, that want of appetite, bad digestion, and sallow unhealthiness of look, are prevalent among children so situated?

A constant supply of pure fresh air is another indispensable condition of health. Without it the food cannot be converted into proper blood as it passes through the lungs, and without well-made nourishing blood no part of the system can thrive.

In many manufactories and mills this condition is infringed to such an extent, from the nature of the processes carried on, the dust floating in the air, the high temperature and confined air of the apartments, and the number of persons employed in them, that few arrive at maturity without contracting some form of pulmonary disease, either asthmatic or consumptive, from which many never recover.

Such are the melancholy effects of the protracted labour of children in factories. Add to them, that in many stages of the operations, the temperature requires to be kept constantly as high as the average of tropical climates, viz. from 70° to 90°, and the results will appear still more frightful. We know how much opposed to continued exertion the climate of India is even in the open air, and yet here, in our *moral* country, we have children working from twelve to fifteen hours a-day, in a climate equally hot, and infinitely more contaminated by impurities of every description. But, bad as this is, the mischief unfortunately does not stop short at the *physical* degradation of the manufacturing population. Where the physical powers are broken down and exhausted by excessive labour, the moral and intellectual faculties, which are connected with the physical organization, must inevitably suffer in proportion, and give rise to ignorance, restlessness, and crime. It will not do to confine ourselves to merely lamenting the increasing turbulence of the industrious classes, and to punishing their violation of the law. If we wish to preserve them and the institutions of society, we must improve their condition as the most effectual barrier which can be raised against the commission of crime. Secure to them a larger share of health and comfort, and good order and morality will develop themselves in proportion. It is difficult to restrain beings already desperate, and whose whole existence is one scene of severe and exhausting labour and suffering. It is the superior comfort, leisure and education of the middle and higher classes which preserves them from crimes, and the same conditions will do more to improve the manufacturing classes than all other means put together. But if the system of over-working and under-feeding, of mental exhaustion and physical degradation, be continued, it requires no prophet to foretell what the tremendous result may be. Already there is a spirit alive in the manufacturing districts, which may yet be guided and turned to good, but which, if harshly trampled upon and contemned, will not leave it long doubtful whether our improvements in machinery and manufactures are not, by our misuse of them, to be converted into a curse upon the nation, instead of what God intended them to be, a blessing for the relief and more rapid improvement of the race.

We do not mean by these remarks to affirm that the same

abuses prevail to an equal extent in all mills and manufactories, or that the evidence given before the Committee is impartial, and worthy of implicit trust; for the contrary is the fact. Many masters limit the hours of labour so far as to give some time for meals and for education, and show a laudable anxiety for the welfare of the children employed by them; but these are a small minority of the whole, and even they greatly exceed the amount of exertion which children can bear unharmed. Propose to the master, who declares that the work is too light, and the hours too short a time to hurt any child, *to send one of his own children to the mill*, and see how his sentiments will change! and yet if the fact were as he represents, his own child, being better fed and clothed, ought to stand the labour better than those of the operatives! The evidence, too, seems to be partial in its nature; but, making every allowance, too much remains to admit a doubt of the banefulness and cruelty of the system, and of the results to which it will lead.

While we speak thus freely of the masters, let us add a word to the operatives themselves. They are men, and have the gift of reason and moral feeling. How can they reconcile to their own consciences devoting their children to such hopeless misery as awaits them in the factories? If they have themselves been reared in mills, they must know by bitter experience, that a worse than Egyptian bondage awaits their children in them; and that incapacity for any other employment is speedily produced by that occupation. They ought, therefore, to strain every nerve to bring their children up to other employments. If they cannot do so, they ought to forego the pleasures of marriage, rather than introduce offspring into existence, and provide for them misery as their sole inheritance. Until the operatives themselves shall feel and act like moral beings, it will be difficult for the Legislature effectually to benefit them.

To shew that it is the system, and not the individuals, against which we write, we had meant to extract from the excellent French work of Patissier on the Diseases of Asthma, a few pages descriptive of the physical and moral effects of excessive labour on the silk manufacturers and weavers of Lyons. The very evils described as affecting the children in our own mills and factories, are there delineated with a force and truth which shew that in both instances the sketches have been drawn from nature.

In concluding, we may add, that Lord Brougham, in a late speech on education in the House of Lords, declared the state of education among the *manufacturing* population of England to be deplorable almost beyond belief, and promised, ere long, to bring the extent of the evil under the notice of the House. If the rising generation continues to labour for twelve hours

a-day, where is time to be got for instruction in reading, morality and religion? We beg the masters to answer the question.

One word of caution must be added. Some of the masters, probably those who are conscious of kindness towards their operatives, invite an inspection of their mills, and of the children employed at them. Such inspections should be made generally, but they should not only include those who are actually at work at the mills, as it is necessarily those who have suffered least, who are the ablest for work; but the inspection should extend to the *houses and families* of the operatives, and of all who have been formerly employed at the mills. The sick and the infirm remain in the obscurity of their wretched habitations, while the strongest and healthiest members are busy at their daily toil. And hence it is, that many of the Sunday Schools in the neighbourhood of large manufactories, present a display of apparently healthy and vigorous children. But in inferring from this fact that the labour is not excessive, we commit an egregious mistake, as it is the best, in every sense of the word, and only the best of them, who are able and willing to make their appearance at a Sunday school.

We hope, then, that the Legislature will be firm, and pass the clause of the bill which restricts the hours of labour for children. Ten hours are still too much, but it is always something gained when two are taken off.

ARTICLE IV.

DR SPURZHEIM, THE MARQUIS MOSCATI, AND THE LONDON PHRENOLOGICAL SOCIETY.

At a meeting of the London Phrenological Society on 7th January 1838, a "Biographical paper on the Character and Phrenological Organization of Dr Spurzheim" was read by the Marquis Moscati, and introduced by the following remarks: "Should I, in the course of my historical and phrenological inquiries on Dr Spurzheim, *discover in his organization, the indication of some of his intellectual and sentimental faculties in harmony with his real conduct, and thus incur the displeasure and animadversion* of some of his most intimate friends, fellow labourers, and almost blind admirers, I shall be very sorry, but I must submit to my lot; and although I am fully aware that in so doing, the number of my enemies will increase, and that a new foment will be afforded to those who most poetically in-

vent behind my back and against my reputation the most unaccountable stories, I shall not mind the ungenerous attacks of those *quorum sub labiis venenum aspidum est, et sub lingua labor, et dolor,*" &c.*

As the Marquis seems from this announcement to be more familiar with attacks from enemies than with support from friends, we think it proper to mention in the outset, that he is an entire stranger to us, that we never even saw or heard of his name till it appeared in the *Lancet* at the head of his paper, and that we shall invent nothing behind his back, or against his reputation, but offer only such comments on some of his statements and inferences as the interests of truth shall seem to us to require.

It is strange that the Marquis should suppose, that he will excite the displeasure of Dr Spurzheim's friends, by *discovering harmony to exist between Dr Spurzheim's real conduct and some of his cerebral indications*. If Phrenology be true, such harmony must have existed, not only between the character and *some* of the indications, but between it and them all; and, instead of being displeased with the Marquis for pointing out the coincidence, every friend of Dr Spurzheim and of Phrenology would have rejoiced to see it successfully done. The only legitimate ground of displeasure would have been, the bringing forward as specimens of character or of development, circumstances really at variance with both; and this, we fear, has been done by the Marquis in more than one instance.

Both the Marquis and the President of the Society before which the paper was read, take pains to show that Dr Spurzheim "was nothing else than the secretary and assistant of Dr Gall" up to the year 1807, a period at which all the discoveries in the anatomy and physiology of the brain had been already made; and consequently, that he was in reality a very subordinate agent in the improvement of Phrenology. Dr Elliotson even holds it out as an encouragement to beginners, that—as Gall informed him—Spurzheim, with all his talent, was so awkward, that it was six months before Gall was able to teach him to dissect a brain properly. But without meaning to question either Dr Elliotson's accuracy or Moscati's intentions, we think they must have misunderstood what Gall meant; and we are inclined to this opinion still more by the fact, that Gall spoke English very imperfectly, if at all; and that, in communicating in what must have been to one of the parties a foreign tongue, a mistake might easily have happened. In his writings, Dr Gall speaks of having *associated* Spurzheim in his labours in 1804; and, on leaving Vienna in March 1805, he said to Spurzheim, "We must return

* Vide *Lancet*, 12th January 1833.

with honour, *you as Anatomist and I as Physiologist*;' and accordingly after that date till their separation, the plural *we* is always used. Nobody acknowledged more fully than Spurzheim himself the prodigious superiority of Gall, as the exclusive *discoverer* of Phrenology; but in proportion to the magnitude of that discovery, it becomes impossible to believe that a man who was conscious of having made it, could ever have thought of associating in the glory of it a person whom he looked upon as a mere secretary, writing and working according to his order. Spurzheim must even at that early period have done much to advance Phrenology, to entitle him in Gall's estimation to such an illustrious association, and no mere denial can ever nullify the published and recorded fact.

Moscato makes another remark equally calculated to under-rate Spurzheim, but equally unfounded. "In 1817," he says, "Dr Spurzheim returned to Paris and established himself in that capital, but he had no great influence where Gall lived, professed and lectured, and Dr Spurzheim's courses on Phrenology were thinly attended, while Gall had numerous pupils." From these statements, one would imagine that Dr Spurzheim's inferiority to Dr Gall was the *sole* cause of his smaller popularity in Paris. Whereas, in addition to Gall's dispositions being more in harmony with the character of the French people than Dr Spurzheim's, there was at that time the very notable difference, that Gall's course of lectures was *gratuitous*, while Spurzheim's was accessible only to those who *paid* a fee,—a circumstance which has a mighty effect every where on the number of hearers, and in no city more than in Paris, where so many lectures are free. In England, however, where Spurzheim's mind was more in harmony with the national character, it is well known that many of his courses were eminently successful, as was shewn in the crowding of the London Institution in 1826, by many hundred hearers, a large proportion of whom paid for admission.

The Marquis next tells us that "in 1824, Dr Spurzheim, *advanced in age*, married a French widow lady," &c. In this statement, the author is very far from correct; the phrase "*advanced in age*," applies only to a person whose physical and mental powers are impaired by years; and yet had the Marquis taken any trouble to ascertain the fact, he would have easily discovered that Dr Spurzheim married not in 1824, but early in 1818, when entering on his *forty-second* year, and in the highest vigour of mind and body; and that he died fourteen years afterwards, before the end of his *fifty-sixth* year—certainly no very advanced age for a man of a sound and unbroken constitution, and very temperate habits. The fact is in itself of little importance, but it shews that the Marquis has not been careful enough

in his inquiries, and that complete reliance cannot be placed on all his anecdotes.

The Marquis next examines the cerebral development, and points out its harmony with the character; but in various respects his estimate of both seems unsound. "In his youth, manhood, and *advanced age*, Dr Spurzheim showed, if not an aversion, at least a sort of indifference, to the fair sex;" and as for his "fondness, attachment, and love for his wife, they took their source in the organs of Conscientiousness, Self-Esteem, Approbativeness, Veneration, and Acquisitiveness, for in marrying Mrs Spurzheim, the Doctor obeyed the dictates of all these faculties." The Marquis seems from this to have been fully aware of Dr Spurzheim's fond attachment for his wife, the recollection of whom almost overcame his feelings to the last day of his life; but as he rates Dr Spurzheim's Adhesiveness as only moderate, and Amativeness as small, he resorts to the above extraordinary and most unphrenological explanation of the fact. Dr Elliotson, however, comes nearer the truth, when, in his concluding remarks, he speaks of Spurzheim's Adhesiveness as "so large;" for, by referring to page 140 of our last Number, it will be found stated as "rather large," by Messrs Combe and Tod, who carefully examined the living head in 1828. If the Marquis really believes that fondness, love, and attachment, may spring from Self-Esteem, Acquisitiveness, &c. we cannot see why he should retain Adhesiveness in the list of primitive faculties. In another place, however, and for another purpose, the Marquis himself protests against such unphilosophical substitutions of one thing for another, and maintains that no organ can manifest any other faculty than that which specifically belongs to it. We think, therefore, that the author will, on again consulting the bust, rectify his error, and ascribe Dr Spurzheim's attachment to its true cause.

The Marquis's erroneous estimate of Dr Spurzheim's organization has led him into a variety of other blunders. We have just seen him admitting Spurzheim's fond attachment for his wife, and explaining it on false principles. But in another place, apparently impressed with the notion of Adhesiveness being moderate, he sees the manifestations differently, and tells, that when he saw Spurzheim in Paris after the death of his wife, he spoke of that event "as a philosopher and a Christian, and appeared *perfectly at ease, and quite satisfied with the decree of Providence.*" That Spurzheim may not have chosen to unbosom his feelings to the Marquis, who was apparently not intimate with him, is highly probable; but to infer on that account that his mind was quite at ease and satisfied, or, in other words, that Dr Spurzheim was indifferent to his loss, is a most illogical proceeding. The writer of this article had the happi-

ness of enjoying Dr Spurzheim's friendship, and in his intimate communications with him in September and October 1831, two or three years after Mrs Spurzheim's death, it was affecting to hear the tone of deep feeling with which Dr Spurzheim constantly recurred to his loss, and to the effect produced upon his own mind by the want of the responding feeling in her; and it was evident to every one who knew him well, that he was even then still suffering physically and morally from the loss he had sustained. These facts harmonize with our view of Adhesiveness being rather large, but are at perfect variance with the Marquis's estimate of its size.

In speaking of Spurzheim's Secretiveness, Moscati says, that Gall told him that "Spurzheim, while he was living in Gall's house, and dining every day with him, applied to the study of the English language for six months, and made every preparation for his departure for England, and Gall was only informed of his intentions a week before Dr Spurzheim left Paris." We are quite aware of the activity of Secretiveness in the mind of Spurzheim; but the above anecdote is rather inconsistent with another passage of Moscati's paper, where he says that, after the disagreement between Gall and Spurzheim, the latter "*went to Vienna to take his degree of M. D., previous to his scientific travels, and to his visit to England;*" whereas the first statement leaves him practising Secretiveness in Gall's house till a week before his departure for England. The anecdote may, however, be essentially correct; and we notice the confusion only to shew, that the Marquis's perceptions were not sufficiently precise to be implicitly adopted as matters of history.

The Marquis, in allusion to Spurzheim's moderate Combativeness, speaks of his having "very little physical courage," and gives, in illustration, "*anecdotes, well known to those who frequented the society of Gall,*" of his having run away from a student not half so big as himself, who attacked him on the street, and from Gall, when the landlord of an inn was threatening him with violence; and of his having taken to his heels on another occasion, when Gall had an altercation with a postilion. That Spurzheim was greatly inferior to Gall in the blind animal courage inspired by Combativeness is quite true, and is obvious on comparing their casts; but that he was so destitute of every manly feeling, as to act the part of a coward as here represented, is at variance with his cerebral development, and with every thing we have seen of his character; and, in bringing forward such a charge after his death, we think the Marquis was bound to produce some more precise evidence, than "*anecdotes well known to every one who frequented Dr Gall;*" this "every one" being an authority equally nameless and vague. It is

quite true that, Combativeness being moderate, no combination of organs could inspire Dr Spurzheim with the blind disregard of life, and intense love of danger, manifested by those who, like the "*beau sabreur*" Murat, possessed it in excess; but it is equally certain, that no man possessed of Dr Spurzheim's unbending moral nature and innate dignity of character, could, in any circumstances, be guilty of the meanness of taking to his heels at the approach of danger to which he left his friend exposed. In the case of the student, for example, the story is not consistent. If "*the student was not half so stout a man as Spurzheim,*" and had only his fists to fight with, where was the danger? That Spurzheim would have felt ashamed to engage in a street brawl, every organ of his head and action of his life indicate, but that *fear* would have made him run from a foolish and angry boy, is inconsistent with both.

But, in point of fact, Spurzheim, although a lover of peace, averse to disputes, and little exposed to the blind impulse of Combativeness, was not so fearful of danger as the Marquis represents, *where he had any object in facing it*. The writer of these remarks happened to be with Spurzheim in Paris, during the serious tumults consequent on the arrival of the news of the fall of Warsaw in September 1831, when the Palais-Royal and adjoining part of the city were in a state of high excitement, the call to arms was sounding at every hour of the day and night, the whole streets in that neighbourhood were in possession of the military, and a serious collision was every moment expected. So far, however, did Spurzheim's curiosity to see human nature display itself in such circumstances prevail over his fears for his own safety, that he continued in the midst of the irritated mass in the garden of the Palais-Royal after a scuffle had taken place, and would not quit it till the garden was cleared by the military; after which he would move no farther than the Rue Richelieu, where the crowd was most dense, and patrols were passing at short intervals. In this street he was within fifty yards of a gunsmith's shop, which the mob was in the act of breaking open, when a charge was made, and the street cleared by the cavalry. He then sought shelter along with the writer behind the *porte cochere* of an adjoining house, and there awaited the result. During all this time, when many bystanders were in a state of agitation, Dr Spurzheim's whole mind seemed occupied in contemplating the ultimate issue of this state of things, and looking forward to its effect in accelerating the progress of man, although attended with the infliction of much present misery; and he never alluded to any personal fears. In reality the present danger was not great, but no man could tell, amid the prevailing excitement, at what moment of time some serious conflict might ensue; and while, therefore,

there was not enough to rouse positive alarm in a firm-minded man, there was more than enough to excite the fears of one so much alive to the sensation of fear, as Moscati represents Spurzheim to have been. That he would never have sought danger, or wantonly exposed himself to it, is most true; but in pursuit of a higher object, he was quite capable of meeting it, although it might cost him a greater effort to do so, than it would have required from Dr Gall or other naturally combative men.

In confirmation of his opinion that Spurzheim was destitute of physical courage, Moscati says that he was present at a lecture of Magendie, where Spurzheim inadvertently expressed aloud his disapprobation of Magendie, and that, on the latter thereupon ordering him to leave the room, Spurzheim did so; whence Moscati infers that Spurzheim had no courage. Now, we would ask, even granting the facts, what else could Spurzheim have done? Would the Marquis himself have remained in any man's lecture-room after being desired to leave it? And supposing Spurzheim to have been guilty of such a breach of good manners towards Magendie, would it have improved his position morally or as a man, to stay and insult him in addition to his incivility?

"Dr Spurzheim," says the Marquis, "was rather inclined to acquire wealth, and was not eminently generous, and his organ of Acquisitiveness proves the accuracy of my assertion. I must, however, say, that the character of Dr Spurzheim underwent a sensible alteration in this respect after his union with Mrs Spurzheim. That lady was fond of economy, and often put a dictatorial matrimonial restraint on the intended benevolent actions of her husband." Dr Spurzheim was eminently kind and compassionate by nature, but he was not eminently generous in giving money, because his means were moderate, and it required all the activity of his large Acquisitiveness to make him do himself justice in this respect. That he was not avaricious or selfish, is proved by a fact mentioned by the Marquis in relation to his connexion with Dr Gall; in which "he showed his attachment to the science, and also his disinterestedness," by preferring to accompany Gall with a salary of 1200 florins, when the Prince Piccolonimi offered him 3000 to act as tutor to his family.

By some extraordinary mistake, Moscati represents Dr Spurzheim's Philoprogenitiveness as moderate, and his Tune and Time as small, when to our eyes they are all beyond an average size; and in accordance with this, we are sure that most of our female readers who have heard him lecture, will recollect the tenderness and interest with which he always spoke of the "*little beings*," as he used to term children. It was often remarked as a feature of his character. His enjoy-

ment from music was equally in accordance with what we consider his development to have been.

We have made these remarks with reluctance, because the Marquis Moscati seems in many respects sensible of what Dr Spurzheim has really accomplished, and to have fallen into the above mistakes from the hurry of the moment, rather than any wish to do Spurzheim injustice; but, as matters of history, it was our duty to correct them. Even with all his anxiety to elevate Gall at the expense of Spurzheim, the Marquis says: "It must, however, be allowed, that Spurzheim proved a great acquisition to Gall, for he was not only a scholar, but a very industrious and laborious man, and usefully assisted his master in arranging and *even perfecting his discoveries*; and it was for this reason that, when Dr Gall undertook the publication of his great work on Craniology, Spurzheim ceased to be Gall's *secretary*, and became his *fellow-labourer*,"—an honour to which even Moscati tacitly admits him to have been then entitled, although it was in reality bestowed at an earlier period by Dr Gall, who could best appreciate the value of Spurzheim's assistance. In another place, the Marquis adds, "that, in England in 1814, Dr Spurzheim lectured with great success;" and, "by his observations and assiduous meditation, he *even perfected the work of his master*, by adding SEVERAL OTHER ORGANS to the craniological system."

ARTICLE V.

THE CEREBRAL ORGANIZATION OF SMITHERS THE INCENDIARY COMPARED WITH HIS NATURAL DISPOSITIONS. By JOHN ELLIOTSON, M. D., F. R. S., Professor of the Principles and Practice of Medicine in the University of London; President of the London Phrenological Society, &c. &c. Read before the Society on 17th December 1852. *

SINCE the object of our Society is twofold, the dissemination of phrenological knowledge no less than its increase, a paper which contains nothing original, but supplies an illustration only of the truth of the science, will not be unacceptable. Indeed, although it is now many years since I became convinced of the truth of Phrenology, my attention has been too much taken up with the observation and investigation of disease and the methods of remedying it, to attempt augmenting the science by original reasoning or observation. Even as a disseminator I feel conscious of having done far too little. I founded this Society, it

* This able and interesting paper we copy from the *Lancet*, No. 487.

is true, have written two phrenological critiques, contended for the reality of the science in the notes of my three last editions of "Blumenbach's Physiology," and written several papers for the Society; but when I reflect on the labours of Mr Combe, as a writer and lecturer, and on the labours of the editors of the Edinburgh Phrenological Journal, and of Dr Otto of Copenhagen, and some others, I feel shame, and my only excuse is, that other subjects more immediately in the path of my duty have occupied my attention, and prevented the possibility of my devotion to any thing else. My sole merit, if I have any, is to have studied the subject carefully, before I either condemned or defended it, and, when satisfied of its truth, to have avowed my conviction in spite of the pity and contempt of those of my own profession and others, who might formerly have been of assistance to me in a worldly point of view, and who, with others less influential, contributed for a time through their expressions of regret, to the slowness of my progress, although they never had qualified themselves to entertain any opinion upon the matter.

With the majority of those who are unacquainted with Phrenology, the correct declaration of a person's talents and feelings by the mere inspection of his head, is the method the most calculated to shake incredulity, and induce willingness to study the science. Yet, with the highly informed and reflecting, the enunciation of the metaphysics of Phrenology,—of the view which it takes of the human mind, without any reference to the brain or cranium, is sufficient to shew its great probability and its worthiness of being studied. Two of the most able writers of the present day, the one holding the highest rank in the church, the other a female, whose writings at this moment excite the admiration of thousands, have not hesitated to avow that the phrenological is the only rational and natural view of the mind; and when we consider that this view was the result of no reflection or device, but professes to be the result of the observation of the developments of the head, and their correspondence with talent and character, the solid foundation of Phrenology at once becomes in the highest degree probable, and the whole science becomes deserving of the investigation of every intellectual person.

But notwithstanding the true declaration of a character from the simple examination of the head is so striking to the ignorant, every instance of the correspondence of the development of the head with the *known* character of an individual, is one item in the solid proofs of the science; and the proper mode of determining its truth, is to compare the known character of individuals with their heads. It is proposed this season in the Society, to compare the characters of persons whose conduct and abilities are too well known to admit of dispute, with their

heads, and besides those which we shall ourselves select, we will take any others that visitors may desire, so that there can be no possibility of saying we select only confirmatory examples, and keep the rest out of sight.

If Phrenology be true, there can be no exceptions. It is proved by the absence of all exceptions. When no doubt exists respecting a person's abilities and character, phrenologists will never hesitate to declare the positive development of his head; they will never hesitate to declare that such a portion of the head must be largely developed, when a talent or feeling has been strongly manifested, though they will not, from the deficient appearance of a talent or feeling, pronounce that a particular portion of the head must undoubtedly be small; because a part may be large, without a corresponding size of brain, or of brain able to perform its functions well. Just as although, on seeing a portion of the head poorly developed, they will not hesitate to say that such or such a talent or feeling must be slight; they will not, on seeing a part largely developed, declare that such or such a power or feeling must be strong; because the part may be large, not from brain or good brain*. With positiveness of faculty, we always find positiveness of cerebral development; just as with deficiency of development, we always find deficiency of faculty. With deficient manifestation of faculty, we most frequently find deficiency of development, at least with respect to the feelings, because they generally have opportunities of excitement, though the talents may not. Those who have carefully studied Phrenology, know that its pronouncements can never be wrong. This they fearlessly assert; not that *they* can never be wrong, as a violent professed antiphrenologist, who, all the time, allows the anterior part of the brain to serve for the abilities, and the lower and posterior for the animal propensities, once misrepresented me to say; for any one may give a false judgment—but that no judgment, delivered in accordance with Phrenology, can be wrong.

The head which I purpose examining at present, is that of a man not distinguished by his abilities, but by his crimes. For the sake of acquiring property dishonestly, he artfully set fire to his house, and caused the death of some, and the ruin of others. He never expressed remorse for his crime, and denied it to the last. He and his wife were not on good terms, but al-

* If a phrenologist should find a prominence in the head of a sane individual, not beyond middle age, we conceive that he would be warranted in inferring "a corresponding size of brain," unless the part were one of the processes, or in the region of the frontal sinus. The general rule is, that when a part of the head is large, the protuberance is caused by brain. We do not mean to deny the *possibility* of exceptions, but these are exceedingly rare, and may in all cases be explained either by disease or by some very unusual peculiarity in the formation of the skull.—Ed.

ways quarrelled when they met. A few days before the fire, he had a dispute with his wife, and told her that if she did not give him the property belonging to her, which he wanted, by fair means, he would have all, and she should have nothing left. In his defence, he read from a voluninous MS., apparently under great excitation. He contended that the fire was purely accidental, that he had provided the shavings, found collected, for drying the veneers in his business; that he was not insured to near the amount of his property; and that, in his endeavours to stop the flames, he had suffered injury of great severity. He called many respectable witnesses to prove his assertions, and show that he was a most honest and humane man. While the judge was summing up, he frequently interrupted on points of evidence, and he retained his self-possession to the last. His criminality did not admit a shadow of doubt.

Now, as I remarked on a similar occasion, the organization was the same the day before his crime, while he mixed with respectable people. When so striking a misdeed is not the result of insanity—of disease of the organ of the mind—nor of some extraordinary external circumstances (though these indeed could not explain it, independently of the internal state), it is merely the result of the natural character (*nemo repente fuit turpissimus*); and if the phrenologist finds, after death, the development to be in accordance with the crime, so before the commission of the crime his pronunciations would be equally unfavourable, and a successful inquiry into the whole life would show it in an unfavourable light. Through the kindness of a friend, who, I am happy to say, has this evening become a member, I have learnt that he visited three or four women besides his wife, and had children by them, and that he even once attempted liberties with his own daughter; that he was cruel and tyrannical towards his servants and others who were, more or less, under him; that he was thought to have caused the death of one wife by miscarriage; that he was very quarrelsome, beat his wife and other women, but, if well resisted, ran away; that he was very proud, always speaking of *my* house, *my* property, &c.; that he almost always contrived to be chairman at the little meetings he attended, and was always very overbearing; that he was very firm, so that having, on one occasion, said he would make twelve dozen chairs in six weeks, he actually did so; but he was also obstinate, never yielded in argument or proposition, and when he had the worse began quarrelling, and never hesitated to tell falsehoods; that he was reserved and shy in the extreme, so that his wife knew little of his pursuits or intentions; that he cheated, and would do any thing for gain, and yet got rid of a great deal of money, though no one saw how; that he was destitute of religious feeling, and would not listen to reli-

string drawn around it over the lower part of the forehead, immediately above the ears, and over Philoprogenitiveness, is $23\frac{1}{2}$ inches in length, which is above the average. This must always shew great power, provided the brain be of good quality. Every part over which such a string passes is large. The extent of the forehead from the ear is no less than $5\frac{1}{2}$ inches,—above half an inch longer than the average of large heads, and the organs are well developed in general. At the sides, the development of Destructiveness is very great, the diameter of the head being there $6\frac{1}{2}$ inches, while the average in large heads is under 6 inches. Behind, the organ of Philoprogenitiveness is largely developed; its distance from the ear, at the most prominent part, is $4\frac{1}{2}$ inches, while the average in large heads is rather less. We clearly see that he must have been clever, passionate, violent, and selfish; yet fond of children, and often kind-hearted.

The head is altogether one of ugly shape. The lower central lateral parts are enormously developed, and must have given the chief character. The organs of Acquisitiveness, Destructiveness, and Secretiveness, form one large surface fearfully projecting at the sides. The top of the head is of a keel-shape, sloping down to the right and left in the most disgusting manner, the lateral portions of the vertex being very deficient. Where Dr Spurzheim considers Conscientiousness to reside, the development is defective; but I must remark that the whole of the vertex in a line drawn from that spot is equally deficient. My own observation has not enabled me to form an opinion on the assertion of Dr Spurzheim, that Conscientiousness resides on each side of Firmness. In unprincipled persons I have always hitherto seen a greater or less preponderance of the lower organs of the feelings over those of the coronal surface; a *general* declivity on each side of the coronal surface, and a preponderance of one or more of the organs of the animal propensities, is the utmost I have hitherto noticed. I have never met with a deficiency of that portion *only* of the coronal surface, called by him the seat of the organ of Conscientiousness, in decidedly unprincipled persons. Dr Spurzheim, too, refers to not a single example in proof, but merely makes a general assertion, that in criminals that part is small*.

The organ of Amativeness is also of great size, as well as that of Destructiveness, Acquisitiveness, and Secretiveness. The height is great at Benevolence and at Firmness; it is above the

* Dr Elliotson acts wisely in suspending his judgment as to the fact "that Conscientiousness resides on each side of Firmness," seeing that "his own observation has not enabled him to form an opinion" on the subject. It is proper to remark, however, that we have seen many heads in which the declivity on each side of the coronal surface was *not* general, and that, after extensive observation, we regard the organ of Conscientiousness to be completely established.—Ed.

gious exhortation even in prison; that he fancied to the very last he should

Before I detail the other particulars allow me to read an extract from the Great, in the Family Library Magazine.

"The character of Peter contradictions. Owing to placed, and the determined of remodelling try, he had to maintain and evil genius. Not for his comprehension mixed with the institutions for the followed by shrewd hearted, benevolent life. Owing Peter has never and in various his count he was the highest

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... and Love of Ap-
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... moral feel-
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THE ORGAN OF LAN-
... THE NATION. By Mr W. A. F.

... a mental power es-
... announcing, by
... of total obliteration,
... of the nations, which de-
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... associated with reason-
... in the error which
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... but to a faculty
... appears equivalent
... powers combined. By
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... and of its decay.
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disease. Yet until he and all men dedicated to minister to a mind diseased, can as boldly, and as consistently with the truth, declare their knowledge, as they now confess their ignorance, of the number, nature, and relations of the mental powers, their ministrations will not only be profitless but often pernicious; their interference with what they declare to be inscrutable and mysterious will be but a proof of presumptuous daring, not of rational benevolence or philosophical intrepidity. It is held almost as an axiom in medicine, that, without an acquaintance with the healthy functions and structure of an organ, all attempts to remove or relieve disease must be dangerous, empirical, and generally abortive. But this salutary rule appears to be altogether forgotten or neglected whenever *mind* is the subject of investigation or medical treatment; precisely in those circumstances where it is most applicable, and would prove especially efficacious.

It ought not, then, to occasion surprise, that no definition, or at least no satisfactory definition, of insanity, or the various modifications of disease comprehended under that term, has been given to the world by any unphrenological writer. For, while the distinguishing marks and powers of a sane intellect remain unascertained, it would be unreasonable to expect precise information as to any departure from this standard. While it is not known in what the peculiar attributes of a particular faculty or feeling consist, no experience, no reasoning, can supply a definition of the states of excitement, derangement, or lethargy, by which it may be affected. If, for example, it is impossible, by means of any of the popular metaphysical theories, to trace back to its original source that hauteur, that arrogance, that tone and look of superiority and command, which so often claim the homage and disturb the harmony of society,—would it not be highly illogical to attempt to elucidate the frantic pride, the vain-glorious boasting, and the contemptuous condescension, which convert the bare and gloomy walls of a mad-house into the tapestry and gilded pillars of a splendid palace,—the galling thongs of the camisole into the robes and insignia of royalty,—and the attendants, keepers, or surrounding maniacs, into subjects, slaves, or courtly flatterers?

That want or weakness of memory adduced by Dr Haslam, in common with almost all writers on the subject, as among the first and most obvious changes precursory of madness, is to be understood as applying indiscriminately to the affective as well as to the reflective and perceptive powers. It is, in truth, a general term descriptive of that hebetude, inactivity, or extinction of any number or combination of faculties, which, in the vague phraseology now adopted, is designated the first stage of lunacy. It is the purpose of the present memoir to introduce to

average of large heads. Those of Self-esteem and Love of Approbation are very large.

No phrenologist would hesitate for a moment to say, this is the head of a man who, if the brain were healthy, possessed excellent abilities, was firm of purpose, high in his own estimation, and fond of notoriety, but endowed with little moral feeling, and a prey to all the lower passions of our nature.

ARTICLE VI.

ON MORBID MANIFESTATIONS OF THE ORGAN OF LANGUAGE, AS CONNECTED WITH INSANITY. By MR W. A. F. BROWNE.

DR HASLAM has stated the memory to be a mental power especially obnoxious to the invasion of disease; announcing, by the usual indications of defective energy or total obliteration, the approach of that long succession of phenomena, which depend upon age, intoxication, insanity, or other unhealthy conditions of the brain. This proposition is associated with reasoning which entitles us to conclude that, sharing in the error which so effectually tends to nullify the grand end of education, and misleads even the intelligent portion of mankind as to the true interests and philosophy of mind, Dr Haslam alludes not to a special memory—that of words or events—but to a faculty which, from the various objects it embraces, appears equivalent to judgment, imagination, and the other powers, combined. By a singular selection, he quotes Ben Johnson as affording alike the best definition of the faculty, and, in his own person, the best illustration of its strength under cultivation, and of its decay. He laments the failure of philosophers in their attempts to give clear notions of its nature, or adequate explanations of its mode of operation, and endeavours to remove this obstacle to the study of mind, by comparing the faculty to a chain, the links of which, it is presumed, constitute a series of consecutive ideas, whose connecting medium represents the power of association, and the dissolution of such union that condition of madness which he is engaged in describing. Dr H., who has observed extensively and accurately, must not be hastily condemned for the conclusion at which he has arrived. He has argued, and he has interpreted nature, in the spirit of the school of philosophy to which he belongs. He has candidly confessed the difficulty he experienced in reducing Memory to its primitive elements, and in describing its phenomena in vigour and health. He ought, consequently, to be so far exonerated from whatever blame may attach to obscurity or vagueness in delineating the faculty under the influ-

ence of disease. Yet until he and all men dedicated to minister to the mind diseased, can as boldly, and as consistently with truth, declare their knowledge, as they now confess their ignorance, of the number, nature, and relations of the mental powers, their ministrations will not only be profitless but often pernicious; their interference with what they declare to be inscrutable and mysterious will be but a proof of presumptuous daring, not of rational benevolence or philosophical intrepidity. It is held almost as an axiom in medicine, that, without an acquaintance with the healthy functions and structure of an organ, all attempts to remove or relieve disease must be dangerous, empirical, and generally abortive. But this salutary rule appears to be altogether forgotten or neglected whenever *mind* is the subject of investigation or medical treatment; precisely in those circumstances where it is most applicable, and would prove especially efficacious.

It ought not, then, to occasion surprise, that no definition, or at least no satisfactory definition, of insanity, or the various modifications of disease comprehended under that term, has been given to the world by any unphrenological writer. For, while the distinguishing marks and powers of a sane intellect remain unascertained, it would be unreasonable to expect precise information as to any departure from this standard. While it is not known in what the peculiar attributes of a particular faculty or feeling consist, no experience, no reasoning, can supply a definition of the states of excitement, derangement, or lethargy, by which it may be affected. If, for example, it is impossible, by means of any of the popular metaphysical theories, to trace back to its original source that hauteur, that arrogance, that tone and look of superiority and command, which so often claim the homage and disturb the harmony of society,—would it not be highly illogical to attempt to elucidate the frantic pride, the vain-glorious boasting, and the contemptuous condescension, which convert the bare and gloomy walls of a madhouse into the tapestry and gilded pillars of a splendid palace,—the galling thongs of the camisole into the robes and insignia of royalty,—and the attendants, keepers, or surrounding maniacs, into subjects, slaves, or courtly flatterers?

That want or weakness of memory adduced by Dr Haslam, in common with almost all writers on the subject, as among the first and most obvious changes precursory of madness, is to be understood as applying indiscriminately to the affective as well as to the reflective and perceptive powers. It is, in truth, a general term descriptive of that hebetude, inactivity, or extinction of any number or combination of faculties, which, in the vague phraseology now adopted, is designated the first stage of lunacy. It is the purpose of the present memoir to introduce to

the notice of the reader a mental defect, less generally observed because more limited in its operation and affecting a power which is either identified or confounded with a quality common to all the other intellectual powers. The chief inducements to collect the following facts were, that they have never before been systematically arranged, many of them never published, and none referred to their true explanation; and that they tend to elucidate the general question of insanity, by exhibiting the phenomena of an individual power under disease. Could the unhealthy manifestations of each faculty be thus separated and apportioned, our notions would become clear and precise, not merely of the disease abstractly considered, but of each example submitted to our care. We would then be enabled to trace the disease to its primitive origin, to estimate the extent to which the mind is involved, and to adapt our treatment to the peculiarities presented. At present, lunacy is regarded as a disease of the mind, not of one, two, or more powers of that mind; and the cure is attempted, in all cases, by one and the same means. It would be equally rational to treat pneumonia, asthma, and phthisis by the same medicines, because they all impede the performance of the respiratory function.

The power of Language is that by which we invent or employ signs to represent the suggestions of the other mental powers, and by which we further recognise, appreciate, and apply the relations in which these signs require to stand to each other, in order adequately to indicate these ideas or feelings to ourselves or others.

Among the first and schoolboy observations of the great founder of our science, is to be classed the discovery, that there subsists a relation between the talent for acquiring a knowledge of language, and prominence of the eyeball. That he was led to remark this fact—then isolated and incidental, though pregnant with his own fame, with the fate of a new and pure philosophy, and, let us hope, with the amelioration and elevation of the condition of mankind,—by a want of proficiency in the exercises prescribed at school, by a consciousness of his own deficiency, and by the bitterness of spirit which disappointed emulation engenders, is highly probable, if it be not altogether certain. Punished, it may have happened, for his failure in a theme, or his inability to commit a certain number of words to memory, his young but even then inquiring mind was irresistibly prompted to ascertain by what means companions, in many other respects his inferiors in power and assiduity, should obtain so decided a pre-eminence in composition, recitation, and every subject where words were the objects of study. Naturally seeking in the countenance for that explanation which the general conduct, the acquirements, and other qualities

of his contemporaries failed to afford, he remarked the correspondence which has been stated; and, apparently, in consequence of the deep impression made by the circumstance, that series of observations was commenced, that spirit of investigation was aroused, which have produced results of which we can scarcely yet estimate the extent or importance. Neither at this period, nor for many years afterwards, did his researches assume a systematic or scientific form; indeed, until his acquaintance with physiology had suggested the true course to be pursued, they deserve no higher character than that of a highly curious and interesting collection of pathognomical observations. When his inquiries, acknowledging the guidance of science, had led to the true source of mental power, and an immense accumulation of facts entitled, nay compelled him to generalise on the special faculties by which eminence in the different pursuits and professions of life is attained, Gall ceased to regard "*les grands yeux à fleur de tête*," as indicating more than the extent and prominence of a mass of brain reposing on the orbital plate. When the glorious dayspring of truth has dawned, it is wonderful how rapidly and distinctly the landmarks which are necessary to guide our onward steps rise on the view. Illustrations and confirmations of the correctness of his opinion with regard to the connexion of this portion of the brain with the faculty of Language, were obtained by Gall almost unsought for, and of a nature such as to place all scepticism at defiance. Of these the pathological proofs are the only class which appear to be connected with the subject here under discussion. This class may be subdivided, *first*, into those cases where the faculty of Language was impaired in consequence of *external* injuries involving this part of the brain alone; and, *secondly*, into those where similar effects followed *internal* disease seated in the nervous tissue. A brief outline of these may be useful.

The following cases belong to the **FIRST** class.

1. An officer received the thrust of a sword immediately above the eye. From that period he could scarcely recollect the names of his dearest friends. The other powers were not enfeebled.

2. A young man, at Marseilles, was wounded by a foil above the eyebrow. The injury totally destroyed his recollection of the names of his most intimate acquaintances, even that of his father.

3. Baron Larrey submitted to Dr Gall the history of an individual, in whom the broken point of a similar instrument had penetrated, from below the internal canthus of one eye, through the cribriform process of the ethmoid bone, into the anterior lobe of the brain, resting on the orbital plate of the other eye. Hemorrhage and paralysis were the immediate ef-

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fects; which were succeeded by the extinction of the senses of vision, taste, and smell: the hearing was imperfect on the side principally injured. The voice was likewise lost. The senses gradually returned, and the patient was able to speak; but he could no longer affix the proper names to objects, though the perception of their qualities remained unaffected. He recollected clearly the person, figure, and features of M. Larrey, and recognised him at once; but, notwithstanding this, he could not recall his name, but designated him *Monsieur CHOSE*. *

The *SECOND* class comprehends individuals who, being attacked with apoplexy or some other disease peculiar to the brain, present a total or partial loss of the faculty. An example, extracted from Dr Gall's work, will suffice to convey an idea of the nature of this kind of evidence. A patient found, on recovering from apoplexy, that he could no longer express, by means of spoken language, his feelings or ideas. His appearance was not that of a lunatic. His intellect suggested replies to the observations addressed to him: he did all he was requested to do. An elbow-chair was pointed out to him, and he was asked if he knew the use of it: he responded by seating himself in it. He was incapable of articulating a word that was spoken in order to induce him to repeat it; but some time afterwards it escaped him involuntarily. In his embarrassment he pointed to the lower part of his forehead, evinced great impatience, and indicated that from that spot proceeded his impotency. His tongue was not affected, for he pronounced with perfect ease a certain number of isolated words. Nor was his general memory implicated, as he testified great sorrow that he was unable to express himself on any subjects of interest discussed in his hearing. He could no longer read or write.—The same author recounts six additional cases, exclusive of that met with by Dr Spurzheim at Inverness, which depended upon similar causes, and exhibited precisely a similar result.

In detailing what has previously been recorded of the diseased states of the faculty of Language, it is necessary to notice the very interesting observations of Mr Hood, as next in order of publication †. These are, in every respect, corroborative of the evidence derived from the collection of facts formed by Dr Gall, and even more instructive as to the precise nature of the function performed by the orbital convolutions of the anterior lobes. In neither of these cases was the loss of the memory of words permanent. In one it was total; in the other, the power of using signs by which to communicate thought appears to have been confined to a few vague and indefinite expressions, such as

* Gall sur les Fonctions du Cerveau, vol. v. p. 26.

† Transactions of the Phrenological Society, p. 236. Phrenological Journal, vol. ii. p. 82.

knowing "plenty" or nothing about the matter at issue, as the case might be: in both, a process of education rather than of recollection was instituted from the period of convalescence, advancing rapidly when the vigour and tone of the constitution were re-established. We are ignorant of the organic cause to which the symptoms of these patients are to be attributed. In both, indications of great cerebral excitement preceded or accompanied the mental affection, which, it is exceedingly probable, depended upon local inflammation or congestion; but this cannot be asserted positively without the aid of pathology; nor are we entitled, were the assertion correct, to speculate on the influence such a derangement of the circulation might exercise on the special faculty in question*. Appended to Mr Hood's paper in the Transactions are two cases, observed by Dr Gregory, which coincide entirely with those narrated by Gall. Wepferus and Dr Reid mention similar instances. The very important researches of M. Bouillaud, contained in the "Archives Generales †," must now be adduced.—M. Bouillaud, it may be stated, was, at the time of the publication of his memoir, to which it is due to the cause of truth to direct the attention of the scientific, a mere candidate for fame; a young, enthusiastic, and intelligent, but almost unknown student, who had recently completed his studies, and who was not a phrenologist, in the English acceptation of the term. He is now in the full enjoyment of a well-earned reputation; he occupies a distinguished place among the physiologists of his country; and his powers and industry augur still greater services to science and mankind. In this plenitude of fame, with intellect at its zenith, with his views matured and consolidated, he is now a zealous phrenologist, and the editor of the Journal of the Phrenological Society of Paris.—In his essay, three cases of the loss of the power of Language consequent on apoplexy are related, in order to demonstrate the existence, speciality, and locality of the organ. In two of these, the anterior lobe of the brain, at the part which corresponds to the orbital arch, was reduced to a soft purulent-looking matter. The third was restored to health. Not fewer than sixteen instances follow, in which the same correspondence of mental deficiency and organic lesion was discovered, —in which the recollection of words and their relations and application was altogether destroyed, although the patients generally

* The individual whose case is recorded by Mr Hood in the Phrenological Transactions, survived his recovery two years and eight months. He died of apoplexy, after repeated paralytic attacks experienced during the eight months preceding his death. His memory of words continued unimpaired to the last. Mr Hood published an account of the dissection of the brain, with additional observations on the case, in the 3d volume of this Journal, p. 26.—Ed.

† Archives Generales, vol. viii. pp. 25–45. 1826.

tion of the circulating fluid on the part of the brain with which it is connected. The pressure of this fluid, in a certain quantity, and propelled with a certain force and velocity, is essential, and appears, if we may so express ourselves, to be the material stimulus to the mental process. But, whenever that quantity is augmented, or rather when the equilibrium of the circulation in the encephalic mass is so destroyed as to throw the same quantity more frequently, and with increased impetus, in a given time, on a particular region, a disturbance simultaneously takes place in the functions,—these assuming the characteristics of inordinate, impaired, or suspended activity. We are altogether ignorant in what manner this stimulus acts, and of the influence by which the one effect or the other is produced; but that the relation which subsists is of the most delicate kind, ample testimony is afforded by the phenomena attending the ordinary emotions, the common occurrences of life, and the use or abuse of exhilarating liquors. By the magic touch of joy, one man is rendered eloquent as the Apollo a god; another mute as the Apollo a statue. Sorrow is said to be sententious, and brief, and harsh in her language; but occasionally her wailings are loud, and long, and querulous. Age, sex, temperament possess distinguishing tones of voice and equally marked characteristics of language. But wine works the most astonishing miracles: Not only do the dumb speak under its healing efficacy, but they speak, or attempt to speak, in tongues with which they are scarcely, if at all, conversant; or declaim with a facility and copiousness which contrast strongly with the poverty of their ordinary discourse. Let us attend them one step farther in their bacchanalian orgies, and we shall bear the tongue lag in its office: words are forgotten or negligently pronounced: the members of the sentence are clumsily, ungrammatically, or unintelligibly arranged: the stammer of the paralytic succeeds; and at last the inarticulate muttering of “second childishness and mere oblivion,” is all that reaches our ears. One case has been reported to us, in which an individual, when intoxicated, cannot be prevailed upon to speak any thing but Gaelic, of which he possesses, even when sober, but a very limited knowledge. A phthisical patient whom we attended during the last hours of life, addressed us, and all those around, in the language to which he had been accustomed in early life, and described his sufferings graphically, and as if unconscious that he did so, in words which were lost upon the greater number of his auditors. In the last stages of consumption, the blood sent to the brain is vitiated by imperfect oxygenation; but it is impossible to determine how far this may have influenced the scene we have described. In insanity likewise, the power of language occasionally labours under such exquisite excitement, that passages of

authors, and even whole languages, which had been acquired in childhood, but altogether forgotten during the intervening period, are, as it were, resuscitated in the mind. Such varieties of alienation are however rare. Two examples may be cited: A Welchman, during an illness affecting the brain, is affirmed to have lost all recollection of the language he had been in the habit of using for years; but, in compensation, to have regained that of his boyhood. M. Pinel* speaks of a lunatic who was cured by Dr Willis, and thus described the feelings he experienced during a paroxysm: "I always awaited," he says, "the accession of the agitation, which lasted for about ten or twelve minutes, with great impatience, because, during its continuance, I enjoyed a kind of ecstasy. Every thing appeared easy to me; no obstacle opposed my ambitious progress; my memory acquired suddenly a singular perfection, and I recalled long passages of the classics." It is quite evident that, as there is a special faculty, there may likewise be a special insanity affecting in various ways the healthy discharge of its functions. This disease is generally modified by involving a greater or less number of powers, such as Ideality, Wonder, and Veneration; but it may occasionally be detected limiting its influence to the sphere of this faculty alone. In illustration of this, a case may be cited from Gall, where an individual imagined himself endowed with the power of speaking all languages; and who, it is presumed, uttered some incoherent and discordant jargon under this impression. This species of hallucination is sometimes met with in the institutions dedicated to the use of the insane; but then it is arrogated, and not attempted to be practised, by some sage or philosopher, as one of the attributes essential to his character, and conducing to his fame.—In reflecting on this division of the subject, it becomes necessary to allude to the pretensions of a class of pietists who have arisen and attained some degree of notoriety and importance within these few years. By the majority of their countrymen, these schismatics have been stigmatised as fanatics and impostors. With the correctness or justice of these designations, or with the source or merits of the creed so enthusiastically adopted and zealously propagated, this inquiry does not interfere: It is sufficient for our purpose that they have manifested a very singular and striking exercise of the faculty of language; in conjunction with the religious feelings. No reader can have failed to perceive, that these remarks are directed to the appeals which formerly interrupted, but now appear to constitute a part of the service in the church of the Reverend Edward Irving. No one who has perused an authentic account of these admonitory ejaculations, or, above

* *Traité de l'Aliénation Mentale*, deuxième édition, p. 89-90.

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all, listened to their really awful and appalling effect, can for a moment doubt that the nervous and sanguineous systems of the speaker are labouring under a state of the most violent excitement. The sudden and abrupt manner in which the individual starts up,—the bright piercing eye which, with a dazzling activity, rolls from point to point,—the flushed feverish cheek,—the quivering lip,—the extended or waving arms,—and, especially, the loud, deep, and energetic tone, which gradually becomes more and more elevated and unearthly, until it is prolonged into a hysterical scream or subdued groan,—indicate a condition which may be associated with inspiration, but is generally the result of a disturbed circulation in the brain. These exhibitions have, it ought to be recollected, frequently terminated by the speaker's falling down affected with syncope or hysteria. Of the source or etymological relations of the words uttered, it would be superfluous to speak. Their import, as interpreted by the speaker, is to be referred to preternatural activity of Veneration, Wonder, and Cautiousness; and it is to be added, that the accent with which they are delivered, the sound, construction, and arrangement of the sentences, and the natural language which gives effect to the scene, are such as to inspire kindred feelings in the hearers, even when scorning the prophecy and sceptical of the authority of the oracle. As far as inquiry or analysis can be applied to these sounds, expressed in the written characters of a language of which they form no part and to which they bear no resemblance, it has been ascertained that, though possessing no roots in common with any known dialect, they are, in many cases, imitations of words or parts of words actually existing,—representing, however, ideas totally different from those which they purport to signify; and farther, that, in a still greater number of cases, they consist of modulations of voice, or inarticulate cries, indicative of the passions and appetites by which man and the lower animals are agitated, and of which they are, at the moment of enunciation, the actual signs or natural language. In both cases, the exercise of the mental power by which thoughts are embodied in words by which we communicate with one another, is clearly perceptible. And, when sounds are invented to express states of feeling which are capable of being defined and described, by adequate signs, in the current tongue of our native land; when a language is constructed or inspired, of the signification and syntax of which the speaker is altogether ignorant; it is certainly difficult to avoid drawing the conclusion, that the *faculty* of language is morbidly excited—no longer in a state of sanity—but to be classed with some of those cases of deviation from a standard of health, which, in our next Number, we shall proceed to record.

ARTICLE VII.

A MEMOIR OF THE LIFE AND PHILOSOPHY OF SPURZHEIM. By ANDREW CARMICHAEL, M. R. I. A., late President of the Phrenological Society of Dublin. Published at the Desire of that Society. Dublin: W. F. Wakeman; Simpkin & Marshall, and R. Groombridge, London; and John Anderson jun., Edinburgh. 1833.

MR CARMICHAEL was one of the earliest converts to Phrenology in the United Kingdom; though, like many who are now its warmest advocates, he had previously been under the influence of violent prejudice. When Dr Spurzheim visited Ireland in 1815, he found every mind poisoned against him by the abuse which had been lavished on him by the British Reviewers. "It was with difficulty," says Mr Carmichael, "I was persuaded to enter his lecture-room; but having then an abundance of leisure, I thought a few hours would not be much misspent in indulging an idle curiosity, and reaping some little amusement where I could hope for but little information. I listened to his first lecture, expecting it to breathe nothing but ignorance, hypocrisy, deceit, and empiricism. I found it fraught with learning, and inspired by truth; and, in place of a hypocrite and empiric, I found a man deeply and earnestly imbued with an unshaken *belief* in the importance and value of the doctrines he communicated." After devoting some attention to phrenology, Mr Carmichael obtained a thorough conviction of its truth; and "from that hour to the present," he adds, "I have regarded the science with increasing confidence and unalterable devotion. More certain or more important truths the Divine finger has not written in any of the pages of nature, than those which Spurzheim, on this occasion, unfolded to our examination—our study—our admiration."

This memoir was read before the Phrenological Society of Dublin, and it has been published at their request. "At the close of our last session," says the author, "we were extolling the magnanimity of our celebrated friend, in disregarding the quiet of home and the discomforts and sufferings of an Atlantic voyage, to visit, in the autumn of his days, a land of strangers, in the simple hope of being serviceable to mankind, by planting his science in another hemisphere. We anticipated the welcome those strangers would give him—we anticipated the vigour with which his science would flourish in that new and healthy soil—we were proud to believe that, under his own skilful and fostering hand, it would overspread that mighty continent—and, above all, we strenuously hoped, that the disappointments and vexations he had too often and too bitterly experienced in Europe,

would be expunged from his recollection in America ; and that the triumph of his doctrines, the increased splendour of his reputation, and the idolatry of his new friends (for the friendship with which Spurzheim was ever regarded was almost idolatry), would encompass him with a halo of happiness beyond any he could look for at this side of the Atlantic.—But we did not anticipate—we did not expect, that, at the opening of this session—so soon—so suddenly—we should have to lament that his active usefulness had ceased—his enlightened labours ended. Yet we have still wherewithal to console us. It is true, his lamp of life is extinguished ; but he has not left the world in darkness ; he has lighted up a flame in every civilized region of the earth. Philosopher after philosopher—phrenologist after phrenologist, may die—but Phrenology *can never perish*—IT IS EVERLASTING, LIKE THE OTHER TRUTHS OF GOD.”

Mr Carmichael proceeds to narrate the personal history of Dr Spurzheim, and the progress of Phrenology after his association with Dr Gall. With most of the details of these subjects our readers are already acquainted, and we shall therefore refrain from adverting to them on the present occasion. As the most profitable mode of occupying the few pages which we can devote to the consideration of Mr Carmichael's work, we shall transcribe such passages as appear likely to be most interesting and instructive.

The author makes the following just observations on the comparative merits of Dr Gall and Dr Spurzheim, in tracing the manifestations of the cerebral organs to primitive faculties :

“ Gall had been led to the discovery of all the organs he had yet ascertained, by observing the *actions* of individuals, and attending to their *mental operations* in a state of *activity* ; such, for example, as the facility in recollecting and repeating whatever series of words had been committed to memory—skill in the mechanical arts, designing, and music—the exercise of memory in respect of places, persons, numbers, events, and phenomena—the propensity to travel, to calculate, to search after knowledge, to compare the analogies of things, to ascend to causes, to descend to effects. These several faculties, during their activity and manifestation in individuals, betrayed one after another the seat of their respective organs. It was, therefore, not surprising, that Gall, when he abandoned the beaten track of the schools, after an irksome and unprofitable search for general organs of memory, judgment, and imagination, should seize with eagerness the conjecture, that every class of actions might have an appropriate organ in the brain. In considering, therefore, the most striking and energetic actions of men, he noticed rapine, murder, and lust—he observed benevolence, justice, and piety—unshaken firmness, and hesitating caution—

pride wrapped in its own opinion—ambition wrapped in the opinions of others—cunning that succeeds in the dark—violence, courage, and magnanimity, that disdains any but an open triumph. He visited the prisons, the hospitals, the schools, and the churches of Vienna; and he found organs which he did not hesitate to name as the organs of theft, murder, and cunning, benevolence, and religion. He considered the actions of men, whether good or evil, as necessarily flowing from the organization they received from nature, without adverting to the primitive power their organs were destined to exercise in a healthy and unvitiated state. But as no man is a universal genius, it was here his philosophy was eclipsed by that of his coadjutor. Spurzheim had the merit of pointing out the primitive powers of the different organs, and discriminating between the institutions of God, and the *abuses* of those institutions.”

Mr Carmichael quotes from a letter Dr Spurzheim’s description of the Scotch Highlanders, through whose country he travelled in 1816. “Scotland,” says Spurzheim, “contains several races of inhabitants. The genuine Highlanders are *entire feelings*; accordingly, I would consider them as the warmest friends or the most dangerous enemies, always acting by strong feelings. They have Adhesiveness, Combativeness, Destructiveness, Secretiveness, Self-esteem, Love of Approbation, Firmness, and Individuality, strong: many have Cautiousness. The upper part of the forehead is mostly narrow. Tune is good; Order is almost wanting. Of this I have seen many confirmations.”

Dr Spurzheim’s account of his meeting with Dr Gordon, the author of the critique on his Physiognomical System, in the 49th Number of the Edinburgh Review, is very interesting. The circumstances are thus described: “On the 24th of June he arrived at Edinburgh, that city which was then up in arms against his doctrines, but is now the strongest of the fortresses leagued in their defence. He brought with him many letters of introduction, and amongst them one addressed to Dr Gordon, the head of the party against him, and the well-known writer of that article in the Edinburgh Review which so cruelly and unjustly maligned himself, his principles, and his science.

“ ‘Generally speaking,’ he says, ‘I am very politely received by every one to whom I am introduced. There are parties, but I shall not interfere with any one. I wish to know them all, and shall make it a peculiar business to study their individual characters. I was naturally anxious to face my conscientious reviewer. The first day I presented myself at his door he was out. The servant advised me to come back on the next morning, between ten and eleven o’clock. I was there at ten. He again was out. On the third day, at nine o’clock in the morn-

ing, I found him. In reading the letter of introduction he kept good countenance. Then he feigned not to know me at all, supposed me to be quite a stranger in Edinburgh, and asked whether I had never been before in this town? He could not bear my facing him, and was evidently embarrassed. I put him at his ease as much as I could; spoke of the institutions, the university, the plan of teaching, &c.

“ ‘The next morning I breakfasted at Dr Thomson’s, whose partner he is. He came there, but more embarrassed than when I saw him at his house. *He feels his bad conscience.* I shall see how far he will mend. His partner, who has certainly contributed to the review, is an old fox, and may have escaped other snares. *He knows better to keep countenance.* I attend the lectures of both. *I shall never know the reviewer;* but keep every where the same free and open language, and provoke him to appear if he like truth.

“ ‘I had also an interview with JEFFREY, the editor. I was introduced to him at the hall of the courts. He asked me whether I was a stranger in Edinburgh? Whether I had come from London? and, whether I intended to make a long stay here? Yes! to give to the Edinburghers opportunity to learn what I maintain. He replied: *To instruct them.* I merely say, to show what I maintain. He: *We are infidel incredulous. I: IN NATURAL HISTORY THERE IS NO BELIEF. WE MUST SEE THE THINGS.* Then he was called off to plead. Hence our conversation was short, but long enough to see that he is a *rogue** with self-conceit. He has a fine forehead, Combative-ness, Covetiveness, Secretiveness, Self-esteem; not much Cautiousness, and less Approbation, Firmness, and Ideality. I shall see more of him. The melodrama has only begun. Its evolution requires time; at the end I shall give you a description of the scenes.’

“ ‘He kept his word. The next scene was his triumph over his reviewer, by proving, in the presence of himself and his class, and the most eminent members of the Faculty in Edinburgh, the truth and importance of his anatomical discoveries.

“ ‘From the beginning,’ says Spurzheim, ‘I requested these gentlemen not to lose an opportunity of getting a brain. The partner of the reviewer, surgeon of the Military Hospital, furnished me with arms to combat them in their own lecture-room. Indeed, I could never have expected such a gratification. The whole happened accidentally, but I could not wish it more favourably. I gave notice to a few of my friends that the opposite party might not be alone. The reviewer was to lecture at *two* to his class. I intended to cease and continue after; but

* “In Spurzheim’s language this merely means an adept in the *savoir faire*.”

he was so kind as to yield his hour to me, so that I had the pleasure of demonstrating the brain *to his own class* at his lecture-table, in presence of himself, Drs Thomson, Barclay, Duncan junior, Irwin, Emery, and many others.

“ There could not have been a better brain ; every thing was clear and satisfactory. The poor reviewer was in the most disagreeable predicament. However, as I was at his table, I did not wish to appear unpolite. I did not mention him ; and it was not necessary, as he was known to the audience. I only stated : *This is denied*, and then made the preparation. We are accused of such a thing, or blamed for shewing such or such a structure. And then I presented the structure in nature. At the same time I had our plates at hand, and asked the audience, whether they represented the preparations, as I had made them. The answer was always affirmative.

“ The reviewer avoids me entirely. After the lecture he went immediately to his little room. His partner spoke to me, and mentioned that now he will study our plates.

“ You perceive by this that I have taken a strong position, and am no longer on the defensive. My friends, who are in opposition to the reviewer's party, tell the story every where ; and I continue to invite every one to procure me an opportunity of showing what we maintain. As to the anatomy, complete victory is no longer doubtful, because competent judges were present ; and with that gratification I shall begin to speak to the public in November. The poor reviewer, as Physiologist, can scarcely avoid to come. I shall invite him, and he must be prepared to undergo a severe discipline. I certainly shall provoke him to appear, if he like candour and truth. I was right in showing, at my lectures in Dublin, a form of head which *could not be that of my reviewer*. He has too much Self-esteem, Approbation, Firmness, and Secretiveness ; but not sufficient of Cautiousness and Comparison.

“ Instead of retracting, he thinks he can make believe that his review is true. In conformity with the Review, he opposed my demonstration, and denied what others admitted, and disputed about words and definitions. The battle was quite unique. He lost his temper, while I remained calm. He ascribed to me things which I had never maintained. I was twice obliged to provoke him to show where he had read his proposition. He looked for the meaning in my book ; and, instead of finding it, found the opposite.”

There are here many severe strictures, but we beseech our readers to bear in mind the treatment that provoked them. There never was penned a more disgraceful effusion of pride, ignorance, and calumny, than that review. It attacked not only the talents, knowledge, and doctrines of Drs Gall and Spurz-

heim, but accused them of wilful fraud and imposture. An honest mind could not avoid feeling such treatment keenly.

"Before he left Edinburgh, Dr S. delivered two public courses, which were received with great approbation by the numerous auditors that attended them. Amongst them, however, was not to be found the reviewer, or any of his satellites. 'None of them,' says Dr Spurzheim, 'had candour enough to look at the proofs which I submit to the judgment of my auditors. It seems the opponents find it more easy to deny than to examine.'"

Mr Carmichael informs us, that before taking his final departure from Edinburgh, Dr Spurzheim "honoured Dugald Stewart with a visit. He waited on him with an introductory letter at his country residence; but Dugald Stewart refused to receive this distinguished visitor. He probably, however, lived to regret that he had suffered his petulance or prejudice, in an unhappy moment, to so far diminish the magnitude and weight of his long-established character, in the indignant regard of this high-minded man."

We doubt if Dugald Stewart ever regretted his contemptuous treatment of Dr Spurzheim. Stewart possessed neither originality nor magnanimity. He was so complete an egotist, that he read only the praises of himself; and he died, we verily believe, in the full persuasion, that in philosophy there were only two names destined to illuminate distant ages, those of Bacon and Dugald Stewart. He shewed his contempt of Phrenology in his latest work, the dissertation prefixed to the Supplement to the Encyclopædia Britannica. We regard Stewart's philosophy as dead, except in the minds of his personal pupils.

In alluding to one of Dr Spurzheim's speeches, at the dinner given to him by the Phrenological Society in 1828, Mr Carmichael takes occasion to make some strictures on various assertions of the Marquis Mosecati, on which we have commented in the 4th article of this number. The statement that "Spurzheim shewed, if not an aversion, at least a sort of indifference to the fair sex," is thus replied to:—

"During the sixteen years in which I had the happiness of knowing him, I had many occasions to witness his esteem for women, and the pleasure he derived from their conversation and society; and this also I witnessed—that the pleasure was reciprocal. Spurzheim had no aversions—or, if he had, they were reserved for affectation, presumption, hypocrisy, and vice: whatever shape they might assume, male, feminine, or angelic, his very nature would intuitively have recoiled from their contact."

During his residence in Dublin in 1830, Dr Spurzheim was invited to a public dinner by the Protestant Dissenting Con-

gregations of Strand Street and Eustace Street, where his health was proposed by the Reverend Dr Drummond, after some eloquent prefatory observations which we have not room to quote. The conclusion of his reply was the following:—

“Genuine philosophy and genuine religion are very nearly akin. The one explores the elder volume of nature, the other investigates the later volume of Divine Revelation. Both unite in their practical results,—both promote the present improvement of man,—both conduce to his ultimate felicity. Without attaching myself particularly to any of the religious denominations in the British Islands, I cannot but express my approbation of the liberal and enlightened views of that class to which the present meeting belongs. I admire their universal good will; I admire their fearless and zealous pursuit of truth; I admire their patient forbearance amidst calumny and misrepresentation. These must gain them the respect even of their opponents; these prove that they have caught the meek and generous spirit of Him, whose religion it is their object and end to vindicate from all corruption and abuse. May you prosper and be happy!”

Towards the close of 1830, he went to Oxford, and in a letter printed by Mr Carmichael, thus describes his reception in that capital of antiquated prejudices,—of “spiritual pride and learned ignorance:”—

“I intended to lecture in December in Oxford; but the Vice-Chancellor did not seem to approve of my doing so. I asked for his worshipful permission by letter,—but he gave an evasive answer, not allowing or refusing, but *advising* me not to lecture, since I might not meet with the encouragement I might expect. I replied, that his permission was the only encouragement I wanted; but he did not think proper to give either a refusal or the permission: he remained silent. How happy we are that priestcraft has no more power.—Oxford does in 1830 what the Jesuits did in 1822, and the Austrian government in 1802. The signs of the times, however, are strong; but the clergy will be satisfied only where they command.” It is proper to observe, that the refusal was the act of the individual Vice-Chancellor at that time (Jenkins). His successor not long afterwards gave permission to Mr Crook to lecture on Phrenology at Oxford.

Having finished the narrative of Dr Spurzheim's life, the author proceeds to advert to the philosophy which he taught. He shews, by referring to the works of Locke, Hume, Reid, Stewart, Shaftesbury, Hartley, Tucker, Brown, Warburton, and other writers on the human mind, that “the faculties of upwards of twenty of the organs discovered in nature by Gall and Spurzheim, have been described as innate powers of the mind by various eminent metaphysicians.” He might have add-

ed, that Lord Kames alone describes twenty of these faculties. A brief account of the functions of the cerebral organs is then given.

The author has some interesting observations on the origin of society and articulate language, the right of property, the moral sense, and the cause of genius in the sciences and arts. In reference to the last of these topics, we are told that the Abbé Dubos, who flourished upwards of a century ago, maintained, almost in the language of a phrenologist of the present day, that it was "a happy arrangement of the organs of the brain, and a just conformation of each of these organs." Dubos adds, rather theoretically,—“as also in the quality of the blood, which disposes it to ferment during exercise, so as to furnish plenty of spirits to the springs employed in the functions of the imaginations.”

In noticing Idiocy and Insanity, Mr Carmichael alludes to Dr Spurzheim's paper on the brain, read before the Royal Society, laments that it was never published, and says that, "if not discovered among his papers, it will be an incalculable loss to the scientific public." Happily Mr Carmichael errs in supposing that the paper was not printed. Dr Spurzheim published it in a small work, entitled, "Appendix to the Anatomy of the Brain, containing a paper read before the Royal Society on the 14th of May 1829, and some remarks on Mr Charles Bell's animadversions on Phrenology. By G. Spurzheim. With seven lithographic plates. London, Treuttel, Würtz and Richter, 1830." The titles of its different sections are,—“On the Brain as an aggregation of Parts.”—“The Parts of the Human Brain in the ordinary state of health are essentially the same, and only modified in size and quality.”—“In certain idiots, individual portions of the Brain are defective, or even wanting.”—“The Brain of the Ourang-outang does not contain all the parts of the Human Brain.”

The concluding part of the memoir is occupied by an account of Mr Carmichael's theory of dreaming and the proximate cause of sleep. He supposes the time of sleep to be the period when the process of assimilation goes on in the brain. "Powerful and overwhelming," he says, "must be the effects of this process on the delicate and fragile instruments of thought, feeling, and motion! and it would be irrational to suppose, that a change which affects their very structure by the deposit of new particles, must not be attended by a cessation of their functions—an actual, though a natural paralysis—**THE PARALYSIS OF SLEEP.**

“The deposit of these particles, not yet employed in the functions of feeling or thinking, must have a similar effect as the imposition of an extraneous body on those tender and exquisite

organs ; and their paralysing compression must continue, under the form of sleep, until the assimilation is complete and the new nervous particles are as fit as the old for the operations and uses for which they were designed by the Creator. The function then commences : internal organ after organ, nerve after nerve, enters into activity—the external senses resume their daily occupations—the mind is in communication with the external world—the recent slumberer is awake.”

These ingenious views have much probability, but our hopes that *certainty* on the subject will speedily be attained are not sanguine. The author proceeds :—

“ In the gradual progress from intense sleep, when there can be no dream, to the moment of perfect vigilance, see what occurs. The first cerebral organ that awakes enters on the train of thinking connected with its faculty ; some kind of DREAM is the result—as organ after organ awakes, the dream becomes more vivid, and as the number of active organs increases, so does the complication of dreams ; and if all the internal organs are awake, the man is still asleep until his awakening senses bring him into direct communication with the world.”

We take leave of Mr Carmichael, by transcribing the tribute of admiration which he offers to the founders of Phrenology :—

“ What a debt of gratitude and admiration do we not owe to Gall, whose wonderful talent for observation, whose unwearied perseverance, whose powerful and original mode of conception, led to this grand result ; and even from the very abuses, exaggerations, and deformities manifested in the exercise of the mental powers, struck out and established the constitution—nay, the very organization of mind ! But a still deeper debt do we owe to Spurzheim, whose sagacity, amidst a labyrinth of apparent absurdity, found a clue to guide him to the shrine of Reason—whose resistless understanding penetrated the chaos of deformities, exaggerations, and abuses, and saw beneath the crude and shapeless mass, the true design of Omniscient Benevolence. It is no longer a chaos, but a creation ; not the creation of the philosopher, but the creation of God, where every thing is good.” With the general tenor of these sentiments we heartily concur : the author, however, undoubtedly over-estimates the labours of Spurzheim, in asserting that to him is due—what he never claimed—“ a still deeper debt” of gratitude and admiration than to Dr Gall. Dr Elliotson, we think, speaks more accurately when he says, “ The whole praise of discovery belongs to Dr Gall ; but Dr Spurzheim has made such advances and improvements as to have *almost equal merit* *.—We would

* Elliotson's Translation of Blumenbach's Elements of Physiology, 3d edit. 1820, Notes.

farther remark, that the phrase "constitution and organization of mind," employed by Mr Carmichael in the passage quoted, is neither unequivocal nor strictly correct, and ought therefore to be modified in subsequent editions: The essence and structure of the mind are, and in all probability ever will be, altogether unknown; and Gall and Spurzheim were far from pretending to dispel the obscurity in which the subject is enveloped.

Phrenologists are much indebted to Mr Carmichael for this valuable contribution towards a full biography of Dr Spurzheim. A fine spirit of devotion to the cause of calumniated merit, and of affection for the man, pervades every page of it; and it is impossible not to love and admire the author, in perusing the glowing and beautiful effusions of lofty feeling with which his work abounds.

ARTICLE VIII.

REFLECTIONS ON THE DEATH AND CHARACTER OF DR SPURZHEIM*.

"Far may we search before we find
Such kindly heart, such noble mind."—SCOTT.

THE disappointment of human hopes is a trite theme, and the obituary record an oft-told tale. But there is something startling, almost appalling, in the death of Dr Spurzheim:—something to make the most unreflecting pause, and think, and feel!—Just as he had entered on his labours in our country, a new field, where he was ardent in his expectations of doing great things for the cause of truth and human improvement, he has been called upon to give up his trust, to resign the spirit which seemed as if it had not felt one breath of decay steal over its clay tenement. And who can calculate the loss to society when such a mighty mind, devoted to doing good, is removed from our earth?

It is only when feeling a perfect trust and confidence in the ways of our heavenly Father, that we can be reconciled to his providence when removing those who are labouring to make the world better and happier. But all who had the high privilege of hearing Dr Spurzheim lecture, will recollect how often and how fervently he urged the duty of entire submission to the Divine laws. It seemed his constant aim to impress on his audience the necessity and the happiness of cultivating this humble spirit—of saying in reference to all events and circumstances, "*Father, thy will be done.*"

* Extracted from "The Ladies' Magazine and Literary Gazette," edited by Mrs Sarah J. Hale, vol. v. No. 12. Published at Boston, United States, December 1832.

His own death is an event which most deeply tries the faith of his friends. Why he should have been taken away, when so able and so ardent to perform his part, and when with such long observation and severe study he had matured a system which promises so much for science and education, and which he only of all living men seemed capable of explaining and enforcing, is to our short-sighted ken incomprehensible. The mind almost refuses to believe that one so perfect in life's best energies should be dead.

“ Dead, dead ! when there is on our earth
Such waste of worthless breath !
There should have gone ten thousand lives
To ransom him from death !—
Ay, twice ten thousand might have gone
Nor caused the blank that's left by *one*.”

Short biographical sketches of Dr Spurzheim, and notices of his sickness, death, and the funeral honours paid him by our lamenting citizens, have appeared in many of our papers. These our readers have doubtless seen, and we shall not repeat them here, because we purpose, when the eulogy is published, making extracts respecting his private character, many traits of which were delineated by his eulogist Dr Follen, in a manner most impressive and beautiful.

We have seen no description, however, which has done justice to the character of Dr Spurzheim. Great men are too often rated only by the standard of mind. The brilliancy of genius without reference to the manner in which it is displayed, is worshipped. Dr Spurzheim was great in goodness as well as talent. It was this combination of philanthropy and philosophy, rendered active by the enthusiastic temperament of genius, and effective and useful by a judgment so quick and discriminating that it seemed almost like the spirit of prophecy, which gave him his immeasurable superiority. There needs no surer proof of this superiority, than the influence he had obtained during the little time he resided among us. He had been in Boston but about ten weeks, and in that short space he had literally “gained the hearts of the people.” Those who saw and heard him, and in that number is comprised our best and most eminent people, gave him not merely their admiration, but their esteem, reverence and love. They felt he was a friend of the human race, and that in honouring him, they honoured the noblest of human virtues, benevolence.

The ode written for his funeral expresses the feelings called forth by his decease, in the hearts of his numerous friends ; and we insert it here because we wish to preserve it in our work ; and also to thank Mr Pierpont for the just and touching tribute he has rendered to the memory of this excellent man, in thus giving expression to the sorrow felt for his loss.

REFLECTIONS ON THE DEATH

- “ STRANGER, there is bending o’er thee
 Many an eye with sorrow wet :
 All our stricken hearts deplore thee :
 Who, that knew thee, can forget ?
 Who forget what thou hast spoken ?
 Who thine eye—thy noble frame ?
 But that golden bowl is broken
 In the greatness of thy fame.
- “ Autumn’s leaves shall fall and wither
 On the spot where thou shalt rest :
 ’Tis in love we bear thee thither,
 To thy mourning Mother’s breast.—
 For the stores of science brought us,
 For the charm thy goodness gave
 To the lessons thou hast taught us,
 Can we give thee but a grave ?
- “ Nature’s priest, how pure and fervent
 Was thy worship at her shrine !
 Friend of man,—of God the servant,
 Advocate of truths divine.
 Taught and charmed, as by no other,
 We have been and hoped to be ;
 But while waiting round thee, brother,
 For thy light—’tis dark with thee !—
- “ Dark with thee !—no, thy Creator ;
 All whose creatures and whose laws
 Thou didst love, shall give thee greater
 Light than earth’s, as earth withdraws :
 To thy God, thy godlike spirit
 Back we give in filial trust ;
 Thy cold clay—we grieve to bear it
 To its chamber, but we must.”

Dr Spurzheim was a phrenologist ; that is, he devoted himself to the study of the human mind as it is manifested in the affective and intellectual faculties of man. In the pursuit and establishment of his theory, he was actuated by the noblest and purest motives. He sought to improve our systems of education, as the sure and only means of perfecting the character of the human race. The principles for which he contended seemed to him all-important. They involved the knowledge of human nature, and the art of education ; and he laboured, and as we may say, died, in the cause of Phrenology ; for all agree that it was his over-exertion and zealous desire to benefit others which caused him to neglect himself, and thus gave to his disease the fatal ascendancy over his constitution which terminated his life. The best and most heartfelt tribute, then, which we can render to his memory, will be to examine carefully and cordially the principles he held thus dear and sacred. This can be done, for he has left works which embody his peculiar sentiments, and which will soon be published in this city. We shall refer to them hereafter.

There are reasons which should make my own sex revere his character and be zealous in studying his doctrines. He was the friend of woman. He entertained exalted views of the great benefits which would result to society and the world, from the influence of female intellect, judiciously cultivated and rightly directed. And it was to be an intellectual and moral help meet for man that he would have her trained.

In a conversation with the editor of this Magazine, respecting female education and the best mode of introducing improvements into our systems, he remarked :—

“ Excepting Christianity, Phrenology will do more to elevate woman than any other system has ever done. It gives her a participation in the labours of mind. She must understand its principles and practise them in the nursery. And her influence it is which must mould the minds of her children, and thus improve the world.” “ If,” continued he, “ I possess any excellence of character, I owe it all to my early training. In the first place, my mother gave me a good physical education,—then she cultivated my moral feelings, and she taught me to *think*.—I owe every thing to my mother !”

Those only, who have seen his face when suddenly kindling with the enthusiasm of intellect and benevolence, and the smile that broke over his features which seemed the gush of heart, soul and mind in the cause he was advocating, can understand the expression of countenance that accompanied these words—“ I owe every thing to my mother.” The effect on my own feelings will never be forgotten. Here was this great and good man, before whom our best and wisest men were proud to come for instruction, laying all his honours on the altar of filial piety, and ascribing all his excellences to the influence of his mother. What a triumph for woman, and what a responsibility such influence should impose on our sex !

In thus highly appreciating the character of woman, Dr Spurzheim is entitled to her confidence, so far as the examination of his principles of education, and the particular manner he has suggested for the improvement of society, is concerned. He wished no one to adopt these principles without scrutiny. He asked to be trusted for his own purity of purpose and honesty of assertion ; the belief in Phrenology, he always insisted, could only be justified by personal observation and study.

To his writings, therefore, and the exertions of our citizens who are earnest to promote the cause of human improvement, we must now be indebted for instruction in this new science. We shall hear his voice no more. The charm of ease, simplicity, and attractiveness his manner could impart to subjects the most abstruse, difficult and dry, is dispelled ; but truth, he always insisted, would prevail ; and if the principles he inculcated

were true, what a great responsibility rests on the people of Boston and Cambridge! They only of all our waiting nation, have been privileged to hear the teachings of Dr Spurzheim. They know his generous purposes, his exalted views; and it is for them to build his monument—not with perishing marble merely, but by disseminating the truths of his philosophy, and encouraging the practice of that universal benevolence which made such a prominent feature in his system. In this work ladies can surely do something. Their encouragement and approbation will aid in making the Phrenological Society just established in Boston, popular and permanent. Let them consider it an honourable distinction that their fathers, husbands, brothers, or sons, are assisting in its formation and progress. Let them name it as a proof, that good and great men are here sure of admirers and followers. Let them look to it with confidence as the source from which correct information respecting the science of Phrenology, its usefulness and progress, will be obtained. Such feelings and sentiments will surely have an effect on public opinion, and contribute to hallow the name of Spurzheim, as his virtues and talents deserve, in the hearts of the people.

ARTICLE IX.

PROCEEDINGS OF THE PHRENOLOGICAL SOCIETY.

15th November 1832.—Mr Simpson read an Essay on Colonial Slavery, considered in relation to phrenological principles. A case in which character was inferred from a Hottentot skull was likewise read. An application for admission of William Gregory, M. D., 10. Ainslie Place, was presented. The following donations were received, for which the best thanks of the Society were ordered to be returned to the respective donors; Two Parsee Skulls; Skull of a Hottentot; and Skulls of two Roebucks (male and female), and of two Grey Bucks (male and female); presented by Dr Mackintosh.—Six Skulls from the Ancient Cemetery of St Giles's, Edinburgh, found in September 1832, in digging the foundation of the New Court-rooms on the south side of the Parliament Square; presented by Charles Maclaren, Esq.—*Théorie des Resemblances; ou Essai Philosophique sur les Moyens de déterminer les Dispositions Physiques et Morales des Animaux, d'après les Analogies de Formes, de Robes, et de Couleurs.* Par le Chevalier da Gama Machado. Paris, 1831. Presented by the Author.—*Journal de la Société Phrenologique de Paris, No. 1*; presented by the

Publishers.—Two Peruvian Skulls from the neighbourhood of Africa; presented by James Steel, Esq. of H. M. S. Volage. —A Chinese Skull, taken from a body in the Native Dress, found floating in a Chinese River; presented by William Scott, Esq. surgeon, H. E. I. C. S.

29th November 1832.—Mr Robert Cox read an Essay on the Dispositions and Cerebral Development of the Esquimaux. Dr William Gregory was unanimously admitted an ordinary member of the Society. An application was presented for the admission of John Davie Morries, M. D. 4. Ladyfield Place. The following office-bearers were elected for the ensuing year :—James Simpson, Esq. advocate, *President*; W. C. Trevelyan, Andrew Dun, George Monro, Bindon Blood, *Vice-Presidents*; David Clyne, J. Anderson jun., James Crease, Patrick Neill, John F. Macfarlan, Arthur Trevelyan, *Councillors*; Dr William Gregory, *Secretary*; Robert Cox, *Conservator of the Museum*; Donald Campbell, *Clerk*.

13th December 1832.—Mr Simpson read a Report of Two Cases, in which Natural Dispositions and Talents had been inferred by him and Mr Robert Cox from two plaster casts sent from a distance—one of the head of an Educated Female, and the other of that of an Uneducated Male. The sketches by Messrs Simpson and Cox accorded with the actual characters of the individuals, not only generally, but, with very few variations, minutely.

After a discussion on the cases above mentioned, the President, with the deepest feelings of regret, announced to the Society, in a speech already published in No. 35. of this Journal, p. 126, the death of Dr Spurzheim at Boston, United States, on 10th November. Mr Combe then read a letter, dated New York, 16th November 1832, from Dr Robert MacKibbin of Belfast, detailing the particulars of Dr Spurzheim's death; and another letter, dated Boston, 15th November 1832, from Nahum Capen, Esq. to a similar effect. These two letters, also, are printed in our 35th Number, pp. 127–130. Dr Morries was unanimously admitted an ordinary member. An application by Charles Maclaren, Esq. editor of the *Scotsman*, for admission as an ordinary member, was presented.

10th January 1833.—Dr William Gregory read a case of a Singular Affection of the organ of Language, produced by the action of Morphia. Mr Robert Cox read a Phrenological Notice of the "Characters" of Theophrastus; with a Vindication of Phrenology from the charges of a recent Annotator on that ancient philosopher. Mr Charles Maclaren was unanimously elected an ordinary member of the Society.

24th January 1833.—Mr W. A. F. Browne read an Essay

on Morbid Manifestations of the organ of Language, as connected with insanity.

7th February.—Mr Combe read Remarks on the Principles of Criminal Legislation.

The following recommendation by twelve members, in terms of the laws of the Society, was presented:—"We, the undersigned, ordinary members of the Phrenological Society, hereby recommend that Dr Jh. Vimont of Paris be admitted as an honorary member of the Society, in consideration of the important services which he has rendered, and is likely yet to render, to the cause of Phrenology, by his researches into the physiology of the brains and nervous systems of animals, in general, and by the publication of his *Treatise on Human and Comparative Phrenology* in particular. (Signed) ANDW. COMBE, GEO. COMBE, JAMES SIMPSON, JOHN ANDERSON JUN., ROBT. COX, JOHN COX, R. AINSLIE JUN., ARTHUR TREVELYAN, GEO. MONRO, BINDON BLOOD, CHA. MACLAREN, ANDREW DUN."

An application by Mr James Cox, student of medicine, Gorgie Mill, for admission as an ordinary member, was read.

21st February.—Dr William Gregory reported a case in which the dispositions of a gentleman had been predicated by a member of the Society, from examination of the head; with remarks by himself on the dispositions of the individual, with whom he was well acquainted. Mr W. A. F. Browne read an Essay on the Influence of certain abuses of Amativeness in producing Insanity. A ballot took place for the admission of Dr Jh. Vimont of Paris as an honorary member, when he was unanimously elected. Mr James Cox was unanimously admitted an ordinary member.

7th March.—Mr Simpson read Hints on a Change in the Treatment of Criminals, following up to farther practical consequences the views of Mr Combe lately submitted to the Society. Casts of two foreheads, shewing a large and small development of the organ of Tune, presented by Robert Macnish, Esq. Glasgow, were laid on the table, and the Society's thanks voted to the donor.

21st March.—Mr Robert Cox read an Account of the Natural Dispositions and Talents of a Gentleman, as inferred by Mr Simpson and him from a Cast of the Head, sent from a distance; with a description of the gentleman's character, subsequently furnished. An application for the admission of Henry Thornton Maire Witham, Esq. of Lartington, as an ordinary member, was read.

4th April.—Mr Robert Cox read an Essay on the Character and Cerebral Development of the Peruvian Indians, including Remarks on the Compression of the Infant Head by various American Tribes. He read also Observations on the Natural

Provisions for the Security of the Brain, with Remarks on an Argument urged by Sir Charles Bell against Phrenology. A letter from Dr Vimont of Paris to the Secretary, in answer to the intimation of his election as an honorary member, was read; also a letter from Nahum Capen, Esq. of Boston, U. S., giving an account of the Phrenological Society of that city. Henry M. T. Witham, Esq. was unanimously admitted an ordinary member. The Society then adjourned till next session.

ARTICLE X.

PHRENOLOGY IN GLASGOW.

ABOUT fourteen months ago, as the reader possibly recollects, a discussion on Phrenology took place in the Andersonian University, Glasgow, in consequence of a phrenological essay read by Dr Robert Hunter, the Professor of Anatomy. A report of the discussion was published in Vol. VII. of this Journal, No. 33, September 1832, p. 622. In noticing (p. 665.) the very able manner in which Dr Hunter on that occasion replied to the arguments of his opponents, we expressed our "confident expectation, that the time was not distant when influential men, like himself and his brother professors, would join in the good work of spreading the knowledge of a doctrine which promises to urge mankind forward in the career of improvement." Our hope has not been disappointed; for, not many months afterwards, viz. on 12th January 1833, a course of lectures on Phrenology was commenced by Dr Hunter, in the Glasgow Mechanics' Institution. These lectures, which terminated on 27th April, were attended by nearly three hundred individuals of all classes of society, and have made a very powerful impression. Such is the excitement which they have produced, that three phrenological Societies (off-shoots from the class), have been formed in different parts of the city; and we learn that phrenological books are in great request. On a late occasion, Dr Hunter delivered a lecture for the benefit of the Mechanics' Institution Library, the proceeds of which (upwards of L. 10) are to be appropriated to the purchasing of phrenological works. During the last few months, there have been four public discussions on Phrenology in the Andersonian University, to all of which ladies were admitted. Dr Hunter opened the discussion at two succeeding *soirées*, and although the admission was one shilling, four hundred of the most respectable citizens attended on each occasion. Dr Scouller, Professor of Natural History in the University, opened the discussion on the third night by reading an elaborate

essay, modestly entitled "A Refutation of Phrenology;" to which, on the fourth, Dr Hunter made a triumphant reply. Dr Scouller's paper was very long and rambling, and his arguments surpassed in absurdity even those which he brought forward last year, and of which the curious reader may find a report in the 7th Article of our 38d Number. So unphilosophical, in fact, was the exhibition which the Doctor made, that more than one anti-phrenological medical gentleman present expressed himself almost converted to Phrenology by listening to the hostile essay! The impression left on the minds of the audience in general, was strongly in favour of Phrenology. We hope that the success of Dr Hunter's lectures will induce him to repeat the course, and that our other friends in the west will not become "weary in well-doing."

ARTICLE XI.

DEATH OF PROFESSOR UCCELLI OF FLORENCE.

IN the necrological department of the Journal of the Phrenological Society of Paris, No. III., we find a notice of the death of Professor Philip Uccelli of Florence, whose history and writings have been adverted to in this Journal, vol. VI. pp. 29, 201. He died on the 1st of March 1832. "That physician," says M. Cassimer Broussais, "of extensive knowledge, of the highest skill in the anatomical sciences, filled with the love of truth and with independence of character, had composed an important work, in which he gave an exposition of the doctrine of Gall, and supported it by observations. A blind fanaticism saw in that profound and conscientious treatise, a blow directed against those superstitions which it was interested in maintaining; and it resolved to embitter his life. Condemnation of his works, deprivations—nothing was spared to afflict and humiliate him. He supported all with courage and resignation, and never for a moment swerved from his consistency. But death has overtaken him on the 1st of March in the present year, (1832). He was honoured and esteemed by virtuous men, and loved and respected by his pupils. Even after death, the same power which had persecuted him during life continued to pursue him. The censorship prohibited the publication of biographical accounts of him, and suppressed, in a notice which was purely necrological, a passage which stated that the students had accompanied his body to the grave. These young men intended to perform a funeral service in their church, but they were prohibited from doing so, and even from asking permission. Such

meanness and tyranny cannot always endure. A day of deliverance will arrive, when the rays of a sound philosophy, emanating from Phrenology, will enlighten and guide the minds and the conduct of men. For the arrival of that time we are permitted to hope—if not for ourselves, at least for our descendants; and it is this hope which encourages and sustains us.”

ARTICLE XII.

PHRENOLOGY IN THE UNITED STATES.

IN the first article of this Number, are detailed the proceedings at Boston consequent on the death of Dr Spurzheim. An Association, denominated the BOSTON PHRENOLOGICAL SOCIETY, was organized on the 31st December 1832, the birth-day of Spurzheim; and on 22d February 1833, the number of its members was about seventy-five. A letter, of the latter date, from one of the members, contains the following particulars:—

“Our Society is composed of persons from the various professions, and from almost every sect of Christians. The medical faculty is fully represented—there being no less than twenty of our members belonging to that profession. Dr William Ingalls, one of our oldest and most respectable physicians, lectures on the brain, and Dr Barber on the cranium.

“Investigation is our aim, and truth our object. Preconceived opinions and prejudices are suspended, and we are determined to abide by the result of our studies.

“We are already warned to beware of the consequences of the doctrines of Phrenology: ‘Fatalism,’ ‘necessity,’ ‘infidelity,’ ‘materialism,’ ‘the entire destruction of free-agency and responsibility,’ and the like, are expressions constantly repeated in our presence, as the legitimate and inevitable fruits of Phrenology; but we heed them not. We are in pursuit of truth, and shall fearlessly multiply facts and observations until blessed with a conviction founded on the immutable principles of our nature.

“Since all men acknowledge Truth to be the highest attribute of the Deity, the pursuit of it cannot be less than the noblest attribute of man, and its attainment the highest possible perfection. What is quite singular, Phrenology finds friends among religionists of almost every denomination, each one discovering something in the science to sustain his peculiar doctrinal tenets. This being the case, our Society is relieved, in a degree, from that worst of all opposition to true philosophy, the dictatorial spirit of religious intolerance and prejudice.”

We anticipate from the formation of the Boston Phrenologi-

cal Society the happiest results. Its members have not assumed Phrenology to be true, and associated themselves for its defence and promulgation; but, feeling themselves in want of knowledge, they have, with a truly philosophical spirit, entered upon the task of ascertaining, by observation and study, whether the doctrines of Gall and Spurzheim be really founded in nature: Their object, as set forth in the constitution of the Society, is "the examination of the science of Phrenology, in its bearings upon the moral, intellectual, and social relations of man."

From another source we learn that Phrenology is making decided progress in other parts of the United States. In March last, the question, "Is the science of Phrenology a good one?" was discussed in the Hall of Science, New York, and decided in the affirmative. A second American edition of Mr Combe's work on "the Constitution of Man considered in relation to External Objects," was published a few months ago. A gentleman of the name of Dean has prepared a course of lectures on Phrenology, which we understand he is about to deliver. Dr Spurzheim's works, so far as reprinted in America, have sold rapidly.

ARTICLE XIII.

PRESUMPTIVE EVIDENCE OF THE TRUTH AND REASONABLENESS OF PHRENOLOGY; a Lecture delivered before the Members of the Chichester Literary and Philosophical Society, on Friday, January 11. 1833. By RICHARD CHURCH, Esq. Chichester, 1833.

PHRENOLOGY has now become a general subject of discussion in literary and philosophical societies throughout Britain, and is in consequence steadily advancing. This excellent and unpretending lecture of Mr Church, was read before a Society at Chichester, and displays at once an intimate acquaintance with the department of Phrenology which he has chosen for his subject, and no mean amount of literary talent. "There are many persons," says Mr Church, "who, though not acquainted with the doctrines of Phrenology, yet still suppose it was the wanton, not to say insolent, invention of a German doctor; that in its growth it has been as sudden and marvellous as the gourd of the prophet; and that, as was said of another celebrated nuisance, 'it has increased, is increasing, and ought to be diminished.' To such persons it may be useful to indicate, even in the most superficial manner, that Phrenology is not very unreasonable in its pretensions; that it is intimately connected with previously established truths, and that if such a science does not exist at present, it is fairly to be presumed that it hereafter must."—

“The sciencoc,” he adds, “whose pretensions I shall presently discuss, is no longer an obscure system depending on precarious support, but one which has its journals and its societies, and all the external apparatus of a recognised and extended system. If the grave professor from his chair does not always acknowledge it as his creed, he at least condescends to denounce it as an error. It is no longer left to the minnows of science, in the infinity of their conceit, to think they can proscribe it by a frown, or sentence it to contempt and oblivion by a jest.”

The essay contains a good exposition of the chief presumptive arguments by which the principles of Phrenology are supported. Into a detailed examination of these our limits do not permit us to enter; but as we could say little on the subject that would be new to our readers, this is perhaps not much to be regretted. The work, however, deserves to be attentively studied by those who have not sounded the depths of Phrenology; its price is extremely moderate, and we cannot doubt that it will have a wide circulation.

The following is a fair specimen of the style in which it is written.

“Look at the diversities of memory, according to some a general law of the mind. How happens it, that it retains one class of sensations rather than another, and not all; nay, that while it freely reproduces one, it but feebly recalls another? This man, for instance, remembers the notes of a song, having heard it once, but can scarcely recal a date by any effort of his memory; another might hear the song to infinity, and not retain it, but for dates he is a chronology. This person recalls objects by their colours, and that by their form. One is a *quid-nunc*: no event is too trifling for him; no occurrence is unwelcome to him; he can forget nothing that he hears; he is contemporary history. Another discriminates your dress, your features, your furniture; but though he is your neighbour, he is careless about the gossip of your house—he would not walk across the street to read of an eruption of Vesuvius, but would take any pains if you could promise to shew him a piece of its lava. He delights in sights, and remembers every thing he sees: he is a living catalogue. Such are the diversities of memory,—which, however lightly I may have treated them, are neither fantastic nor unimportant. Dugald Stewart has noticed certain irregularities in this presumed law, and has even alluded to a remarkable case of palsy, in which the memory was so singularly affected, that the name of an object was known to suggest the ideas of it as formerly, although the object ceased to suggest the name. But he makes no use of it. Even Magendie, the great physiological opponent of Phrenology, admits ‘there is a memory of words, of places, of names, of forms, of music. It is rare that one man

enjoys an union of all these memories. They scarcely shew themselves except in an isolated or solitary state, and almost always form the distinguishing trait of that understanding of which they make a part.

“It is delightful,” adds Mr Church in a note, “to contrast the antiphrenologists with each other. We hear what Magendie says; let us now hear Mr Godwin, who, in what he calls his ‘loose and undigested thoughts on Phrenology,’ treats this division of memory with supreme contempt. ‘Nor can any thing,’ he says, ‘be more *ludicrous* than this author’s (Gall’s) distinction of the different organs of memory—of things, of places, of languages, and of numbers—*organs which must be conceived to be given in the first instance long before names, or languages, or numbers, had an existence.*’ Profound objection! In the first place, where does Mr Godwin find his imaginary interval? Certainly not in Scripture. If his philosophy can prove it, it will do him a shrewd service. But suppose we admit it! Does Mr Godwin believe that man was formed ‘in the first instance,’ with reference only to his actual, and not to his future, condition? Does he forget that man was designed to be not a solitary, but a social creature? How, then, can it be unreasonable to suppose that he was organised in relation to his appointed ends? Where can be the difficulty of conceiving that he might be endowed with mental faculties, capacities, or organs adapted to his social condition, long before the circumstances which should call them into action were destined to arise?”

ARTICLE XIV.

POPULAR EDUCATION IN EDINBURGH.

IN our 33d Number, we printed a “Proposal for Courses of Lectures on Natural History, Chemistry, and Phrenology combined with Physiology,” issued by a body of Students who had attended Mr Combe’s Lectures on Phrenology, delivered in the summer of 1832. The scheme met with very great encouragement; and Courses of Lectures on Chemistry and Geology, by Dr Murray—and on Phrenology and the elements of Physiology, by Mr Combe—were delivered in Edinburgh during last winter. The following Report was published by the Directors in the end of March 1833.

“Report.

“The objects of this Association were detailed in the Report which was read to a public meeting in the Waterloo Rooms, on the 29th October last, and the preliminary steps mentioned which had been taken for carrying them into effect. In that

Report it was stated, 'that the aspect which society now presents, with respect to the pursuit and application of scientific knowledge,—the increase of the number of professions, either dependent altogether on the acquirement of such knowledge, or into the qualifications for success in which it enters in a considerable degree,—and the demand which society now makes for some degree of acquaintance with the objects and powers of nature, from every station and employment, but especially from those who are destined to take an active share in the direction of its concerns,' render it highly desirable for all ranks to become generally acquainted with some at least of the leading departments of Natural Science. Accordingly, several individuals, at the close of Mr Combe's Course of Lectures last summer, resolved to form themselves into an Association for obtaining such instruction, and made arrangements for the Winter Courses of Lectures on Geology, Chemistry, and Phrenology, now about to be concluded, and which are intended to be succeeded by others embracing all the most interesting departments of Natural Science.

"In carrying these purposes into effect, however, two obstacles at first presented themselves, viz. the difficulty which was apprehended of procuring gentlemen properly qualified for giving not only a scientific, but at the same time a comprehensive and generally interesting view of their respective subjects; and the uncertainty of obtaining sufficient funds for defraying the necessary expenses. But, fortunately, through the well known abilities and kindness of Mr Combe and Dr Murray, both of these difficulties, with regard to the winter courses, were soon removed,—Mr Combe very handsomely agreeing to give his own services, the use of his Hall, lighting, &c. without any other guarantee as to remuneration than what the proceeds of his course might ultimately amount to; and Dr Murray, without requiring any obligation on the part of the Directors, named L.85 as the smallest sum he should consider a remuneration, leaving it to them to judge whether, in the event of his Lectures proving successful, that sum should be increased. For Dr Murray's classes, accommodation was secured in the Waterloo Rooms, at a rent of L.5 per month, for which, and the other expenses of advertising, &c. a Sub-committee were authorized by the projectors to become personally responsible. The prices of the tickets for the different classes were fixed as follows:—For Geology alone, 7s. 6d.; Chemistry alone, 10s. 6d.; Phrenology and Physiology alone, 10s. 6d. For Geology and Chemistry combined, 13s. 6d.; Geology, Phrenology and Physiology combined, 15s.; Geology, Chemistry, Phrenology and Physiology, combined, L.1.—*Tickets transferable.*

"As already stated, a public meeting was held on the 29th

Brought forward, L.279 17 0

EXPENDITURE.

GEOLOGY & CHEMISTRY. —Paid Dr MURRAY, L.52, 10s. : Fittings in Waterloo Room, L.16 : 11 : 8; Room Rent, Door-Keeper, and Cleaning, L.30, 15s.8d. proportion of advertising and printing, L.8, 10s. 11d. Gas, Coals, Stationery, &c. L.5 : 12 : 0	} L.115 0 3
PHRENOLOGY. —Paid Fittings in Clyde Street Hall, L.9 : 15 : 4; proportion of advertising and printing, L.6 : 5 : 10; Mr Combe, per agreement, L.91 : 7 : 4,	
Total outlay,	222 8 9
Surplus on GEOLOGY and CHEMISTRY Classes,	L.57 8 3
Donation from Mr Combe,	21 0 0
Total SURPLUS at 22d March 1833, in the Bank of Alex. Allan & Co.	<u>L.78 8 3</u>

“ It thus appears that there is a surplus of L.78 : 8 : 3 from the proceeds of the Winter Lectures, to which there will come to be added the proceeds of the Three Lectures, to be delivered by Mr Combe, on Popular Education, before referred to, and intimated in the Notice appended hereto.

“ The results of the undertaking have certainly proved highly gratifying, and have shewn that the time is now arrived for successfully teaching not only the manifold advantages of science, but likewise the beautiful adaptation of all external nature to the wants and enjoyments of mankind, as well as the proper mode of exercising all the faculties of the human mind. With this in view, and on the faith of the above surplus, the Directors have next to state the steps which have been taken for carrying the farther objects of the institution into effect.

“ In pursuing any particular line of studies, it is of course always desirable that the different subjects which it embraces should be considered in the order in which they will most naturally or advantageously follow each other. Accordingly, in the former Report it was stated, that the principal departments of Natural History should be taken in the following order, viz. Geology and Mineralogy, Botany, Zoology, Natural Philosophy, &c.; and agreeably to this arrangement, the Directors have taken the necessary steps for obtaining a Botanical course of Lectures during Summer, leaving the other departments till a future opportunity.”

“ Such, then, is a summary of the origin and progress of the Association up to the present date; and it only remains for the Directors now to state, that, agreeably to the views originally entertained, and expressed in the Report read to the last General Meeting, there is every prospect of the Association being

speedily established upon a permanent footing; but, before finally bringing the details of such a measure before the Subscribers, it has been deemed expedient to await the result of the Summer Course, as the measure of success with which it is attended will better enable the Directors to judge of the support which a permanent Institution is likely to receive from the public.

“The funds already in possession, and those which may hereafter be received, will, after defraying the necessary expenses, be deposited in a bank, at the credit of the Association, for such purposes as may be afterwards agreed on.

“Preparatory to the commencement of the Botanical Course, an Introductory Lecture will be delivered, in the Waterloo Rooms, the date of which will be afterwards advertised.”

At the date of this Report the Lectures on Geology and Chemistry had just terminated: those on Phrenology continued during the three subsequent weeks. In the course of these, 290 tickets were sold to visitors, thus making the total number of tickets for single lectures, sold during the course, 990.

Dr Drummond's lectures on botany are now attended by upwards of 200 auditors. We heartily congratulate the Directors of the Association on the success which has attended their efforts; and anticipate the most beneficial results from the instruction thus provided, at a moderate expense, to the industrious classes.

ARTICLE XV.

PHRENOLOGY AND THE PENNY CYCLOPÆDIA.

It is the professed object of every cyclopædia to furnish a condensed summary of all the various branches of human knowledge. Phrenology is a science, for information regarding which a desire is rapidly extending, and of whose truth and importance many talented individuals have, after patient investigation, become thoroughly convinced. It was not unnatural, therefore, to imagine that a few pages of the Penny Cyclopædia would be occupied in communicating to the public, what in general they are much in want of, some information as to the real nature of Phrenology—the facts and arguments by which it is supported—and the practical results which its cultivators hold out as likely to flow from it. Such a course might, we think, be followed with perfect propriety, without in any degree implying that a single member of the Society for the Diffusion of Useful Knowledge is tainted with a belief in Phrenology. On the 11th of October 1832, Sir G. S. Mackenzie, one of the earliest and most zealous of the British phrenologists, wrote a

letter on the subject to Mr Coates, the secretary of the Society. In this letter he stated his conviction that in Phrenology is to be found a system of moral and intellectual philosophy, which, if generally known, would prove of great utility to the public; and undertook to procure a treatise on the science for the Cyclopædia, free of all expense, if the Committee of the Society would admit it into their work. The following answer was returned:—

" Society for the Diffusion of } 59. LINCOLN'S INN FIELDS, 18th March 1833.
Useful Knowledge.

" SIR,—I HAD the honour of replying to your letter of the 11th of October last, but I presume that my answer was mislaid by the member of the Committee to whom I sent it to be franked.

" After consulting the editors of the Cyclopædia upon the subject of your letter, I was authorised by them to thank you very sincerely for your proposal, and to say that the opinion which they entertain of Phrenology, and its connexion with the moral and intellectual sciences, is not such as would justify them in adopting the offer so kindly made by you.

" I apologize for the delay which has accidentally taken place in communicating this answer to you; and I have the honour to be, SIR, your very obedient servant,

" THOMAS COATES."

" Sir G. S. MACKENZIE, Bart.
Coul, N. B."

It thus appears that the Society for the Diffusion of Useful Knowledge declines to be in any degree instrumental in spreading what every one, who has fairly studied it, finds to be a department of "Useful Knowledge" surpassed in importance by none. The fact is worthy of being recorded, and at some future time the Society may find reason to be ashamed of it. All that we think it necessary to remark is, that however long they may refuse to assist in diffusing this knowledge among the people, the people cannot be prevented from diffusing it among themselves. We are not without hope, however, that the editors of the Cyclopædia will yet alter their opinion.

In connexion with the subject of this article, we cannot refrain from commending the fearless manner in which an article on Phrenology was admitted into "Mitchell's Portable Encyclopædia," 8vo., published in 1826, when the tide of opposition and ridicule ran much higher than at present. It contains "an abstract of the doctrine of Phrenology, as exhibited in the most recent publications of its advocates," and is illustrated by an engraving of three views of the marked bust.

NOTICES.

EDINBURGH.—Phrenology appears to have excited the attention of the medical students of Edinburgh very much during the last winter session. At the Hunterian Medical Society, two papers connected with this branch of science were read; the one elucidating, on phrenological principles, the hitherto inexplicable disease Monomania; the other an account of a case where mental manifestation was inferred from the cast of a head sent from a distance. The cast itself was exhibited. Each of these papers called forth a most spirited discussion from the members of the society, who assembled on both occasions in great numbers. At the annual supper of the society, the memory of Gall and Spurzheim was appointed as one of the regular toasts of the evening, and was drunk most unanimously.

On the 22d March last, an essay in support of Phrenology was read at the Royal Medical Society. A very long discussion ensued, in which the opponents displayed great ignorance of the subject, and had recourse to the grossest misrepresentations.

We have learned with much satisfaction that a number of young gentlemen in this city have formed themselves into a society for the purpose of studying and practising Phrenology. At a meeting held in Dr Gregory's Lecture-room, on the evening of 21st May, the Society was constituted, under the title of "The Ethical Society, for the prosecution of the study of Phrenology, and for promoting its practical application to the various duties and relations of life." Twenty-four gentlemen entered the Society immediately after the meeting, and a great increase of numbers is anticipated.

DEATH OF M. ROYER.—It is with deep feelings of regret that we announce the death, about a month ago, of Mons. A. A. Royer, of the Jardin des Plantes, Paris. He was a zealous and industrious phrenologist, and a most amiable and benevolent man. To his kindness the Phrenological Society owes many of the most interesting specimens contained in its museum.

The first part of the letter-press of Dr Vimont's Treatise on Human and Comparative Phrenology has been published, and shall be noticed in our next Number. We are compelled to postpone an Analysis of the Journal of the Phrenological Society of Paris, No. III., a Review of Epps's Life of Walker, a Letter on the Dumfries Times and Phrenology, and several other articles, for which we have not room at present.

Dr Judson's letter from New York, relative to Dr Spurzheim, arrived too late to be acknowledged in last Number. We return him our best thanks for his attention. The letter of Mr Samuel G. Howe, corresponding secretary of the Boston Phrenological Society, dated 12th February 1833, has been received. Dr Paine's "Letters on the Cholera Asphyxia, as it has appeared in the City of New York," and Mr Richard Cull's "Observations on Impediments of Speech," London, 1833, have also come to hand.

EDINBURGH, 1st June 1833.

CORRIGENDUM.

The word "medicine" ought to be inserted in the blanks near the top of p. 215 and bottom of p. 220, of this Number.

THE
PHRENOLOGICAL JOURNAL.

No. XXXVII.

ARTICLE I.

ON THE CHARACTER AND CEREBRAL DEVELOPMENT OF
THE ESQUIMAUX.

It seems to be an established fact, that different nations or tribes of mankind exhibit peculiar configurations of head, corresponding to the dispositions by which they are in their collective capacity distinguished. While such, however, is the case with nations taken in the mass, we not unfrequently find in individual heads and characters a considerable divergence from what may be called the national standard; and even among those which more closely approach that standard, each single head and character differs, to *some* extent, from the rest. Hence the phrenologist who compares the general character of a tribe with the prevalent cerebral development indicated by the skulls of individuals belonging to it, cannot draw conclusions with the same confidence and precision as if his attention were directed to a single individual. It often happens, moreover, that travellers who give accounts of the dispositions of foreign races, have little opportunity of obtaining a sufficiently minute acquaintance with the habits and ideas of the people; and, where the case is otherwise, are themselves frequently not very skilful observers and describers of the manifestations of the human mind. In fact, the accounts even of the same author are sometimes contradictory—a circumstance probably arising chiefly from the variety of disposition which everywhere, in a greater or less degree, exists. By comparing, however, the details given by different observers, it is possible to discover, with tolerable certainty, the more prominent mental characteristics of the great body of a nation; and, from a reasonably numerous collection of skulls, we may infer the prevalent cerebral development.

If a particular disposition be invariably ascribed to a nation, and if we find, in a vast majority of such of the skulls of that nation as fall under our notice, a particular shape, corresponding to the disposition, it seems perfectly legitimate to state the two circumstances in conjunction, as an illustration of Phrenology, or even as an addition to its already numerous evidences. Such being our conviction, we shall proceed, without farther preface, to compare the cerebral development and character of the Esquimaux, a race of whom an account may be acceptable even to the unphrenological student of human nature.

The Esquimaux constitute the population of the frozen wilds of North America and Greenland. Previously to the recent expeditions of Ross, Parry, Franklin, Lyon, and Beechey, little was known respecting their dispositions and habits; and even yet, our information on many important points is rather superficial. Enough, however, has been recorded, to enable us to form a tolerably correct estimate of the general character of the race; and as the Phrenological Society has the fortune to possess twelve specimens of the Esquimaux skull, brought from the shores of Baffin's Bay, and other arctic parts of America*, we have been enabled to obtain a pretty accurate idea of the cerebral configuration which prevails in those regions of the world.

A striking uniformity of general appearance is presented by the skulls of the Esquimaux†. They are long, rather narrow in proportion, and frequently of respectable magnitude. The coronal region is narrow, and slopes rapidly toward the sides of the head. The forehead also is narrow; the occiput protuberant.

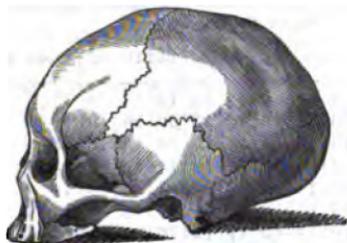
Of the following cuts, those on the left represent three views of the Esquimaux skull No. 1. in the Museum of the Phrenological Society; those on the right, of the skull of a Papuan, or inhabitant of New Guinea, which forms an excellent contrast to the other, and to which we shall solicit attention by-and-by.

* Six of these are real skulls, and six casts. No. 1. was presented by Thomas Buchanan, Esq. of Hull; No. 2. by Thomas Turnbull, Esq. surgeon, Galashiels, who found it, in 1825, at Disco, an island on the eastern coast of Baffin's Bay; No. 3. (which was found in the snow by Captain Parry) by James Wardrop, Esq. of London; and No. 4. (from Baffin's Bay, lat. 74° 20' N.) by James Hay, Esq. of Leith. No. 5. was procured at Hopedale, Labrador, (lat. 55° 31' N.) by Mr R. Morrison, and was presented by Sir G. S. Mackenzie. No. 6. was brought from Icy Cape, near Behring's Strait, by Mr Collie, surgeon of H. M. S. Blossom, who added it to the Society's collection. Four of the casts were presented by the Phrenological Society of London; but we have no information regarding the exact places where the originals were procured. Surgeons of whale-ships would confer a benefit on Phrenology, by bringing to this country such Esquimaux skulls as may fall in their way. Indeed, the Phrenological Society look upon crania from every part of the world as valuable acquisitions to their already extensive collection. Any from the South Sea Islands would be especially acceptable.

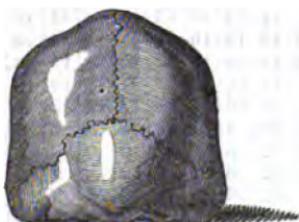
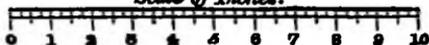
† This is remarked also by Blumenbach, respecting four Esquimaux skulls in his possession, to which more particular allusion will afterwards be made.

—*Decas Quart*

ESQUIMAUX.



PAPUAN.

*Scale of Inches.*

The first of the following Tables exhibits the dimensions of the twelve Esquimaux crania, of which either originals or casts are in the Phrenological Society's collection, and also of the Papuan skull above delineated. In the second are noted the cerebral developments of the whole—the Society's scale of numerals being employed to indicate the size of the organs. It may be necessary to remind the reader, that, in this scale, the figure 2. signifies Idiocy; 4, Very small; 6, Small; 8, Rather small; 10, Moderate; 12, Rather full; 14, Full; 16, Rather large; 18, Large; and 20, Very large. In the penultimate column of each Table, we have stated the average development and dimensions of the Esquimaux skulls.

THE ESQUIMAUX.

DEVELOPMENTS.

ORGANS.	No. of Skull or Cast.												Aver.	Pap.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.		
1. Amativeness, . . .	16	17	18	16	20	18	16	18	12	18	18	20	17½	15
2. Philoprogenitiveness, . . .	20	20	16	17	20	16	19	18	13	20	20	19	18½	12
3. Concentrativeness, . . .	18	16	13	16	16	15	15	16	12	18	18	16	15½	12
4. Adhesiveness, . . .	14	14	17	14	14	15	12	16	12	14	14	14	14½	18
5. Combativeness, . . .	12	16	18	16	18	18	18	19	13	13	15	16	16	18
6. Destructiveness, . . .	14	14	18	16	16	18	12	18	11	16	16	16	15½	21
7. Secretiveness, . . .	14	14	18	16	16	17	12	17	12	16	16	16	15½	22
8. Acquisitiveness, . . .	10	12	14	15	14	16	10	16	12	14	14	12	13½	17
9. Constructiveness, . . .	10	15	12	14	16	18	14	16	12	15	13	14	14	18
10. Self-esteem, . . .	16	18	16	18	18	18	15	16	14	17	17	14	16½	20
11. Love of Approbation, . . .	16	16	18	16	14	14	14	18	13	17	14	14	15½	18
12. Cautiousness, . . .	16	15	16	15	12	15	13	16	14	18	15	14	15	20
13. Benevolence, . . .	14	14	13	16	12	12	14	13	13	16	15	14	13½	16
14. Veneration, . . .	16	18	16	14	17	14	16	16	15	14	17	19	16	18
15. Firmness, . . .	16	15	14	15	14	18	16	18	15	14	16	13	15½	16
16. Conscientiousness, . . .	10	11	10	11	8	16	8	14	10	10	8	8	9½	14
17. Hope, . . .	12	10	10	12	9	12	8	12	12	10	9	10	10½	13
18. Wonder, . . .	10	14	12	12	10	12	8	12	11	12	8	9	10½	15
19. Ideality, . . .	9	14	11	11	10	12	10	12	11	10	10	9	10½	17
20. Wit, . . .	9	10	10	10	10	16	12	11	8	9	8	8	10½	15
21. Imitation, . . .	9	11	12	12	12	12	12	13	11	13	12	11	11½	13
22. Individuality, . . .	14	16	14	13	12	12	11	14	14	10	12	10	12½	14
23. Form, . . .	10	12	10	11	10	10	8	11	12	8	8	8	9½	14
24. Size, . . .	10	13	10	10	8	10	8	12	10	10	8	10	14	14
25. Weight, . . .	8	10	8	10	8	10	8	12	8	11	10	8	9½	12
26. Colouring, . . .	6	8	8	10	8	10	8	10	7	8	8	8	8½	8
27. Locality, . . .	12	12	12	11	10	11	10	12	12	10	12	8	11	14
28. Number, . . .	6	8	14	10	10	10	8	8	6	8	8	8	8½	8
29. Order, . . .	6	8	8	9	10	10	8	8	8	8	8	8	8½	8
30. Eventuality, . . .	10	14	10	10	10	10	12	12	12	8	11	10	10½	12
31. Time, . . .	8	11	8	10	8	8	10	10	10	8	8	8	9	12
32. Tune, . . .	8	11	10	9	10	10	10	12	8	8	8	10	9½	15
34. Comparison, . . .	12	14	10	12	8	10	10	14	8	13	12	12	11½	13
35. Causality, . . .	8	13	10	12	10	8	12	14	10	9	10	10	10½	14

DIMENSIONS.

FROM	No. of Skull or Cast.												Aver.	Pap.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.		
Individ. to Philoprogen.	7½	7½	7½	7½	8	6½	7½	7½	7½	7½	7½	7½	7½	7½
Compar. to Concentr.	6½	6½	6½	6½	6½	5½	6½	6½	6½	6½	6½	6½	6½	6½
Ear to Individuality, . . .	4½	4½	4½	4½	4	4½	4½	4½	4½	4½	4½	4½	4½	4½
..... Philoprogenit.	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4
..... Benevolence, . . .	5	5½	5½	5½	5½	4½	5½	5½	4½	5½	5½	5½	5½	5½
..... Veneration, . . .	5	5½	5½	5½	5½	4½	5½	5½	4½	5½	5½	5½	5½	5½
..... Firmness, . . .	5	5½	5½	5½	5½	4½	5½	5½	4½	5½	5½	5½	5½	5½
Cautiousness to Cautious.	4½	5	5	5	5	4½	4½	5	4½	5	5	5	5	6
Secretiveness to Secret.	5	5½	5½	5½	5½	5	4½	5½	4½	5½	5½	5½	5½	6½
Destruct. to Destruct.	5½	5	5½	5½	5½	4½	4½	5½	4½	5½	5½	5½	5½	6½
Construct. to Construct.	4	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½
Ideality to Ideality, . . .	3½	4	3½	4	4	4	3½	4	3½	3½	3½	3½	3½	4
Mastoid to Mastoid*, . . .	5½	4½	4½	4½	5½	4½	4½	4½	4½	4½	4½	4½	4½	5

* This measurement is from the outer surface of one mastoid process, about a quarter of an inch from its extremity, to the same point in the other.

The dimensions and development (published in this Journal, vol. iv. p. 365.) of four skulls found by Mr Collie, surgeon of the Blossom, at St Lawrence Island, near Behring's Strait, closely resemble those above noted. The inhabitants of that island, as Mr Collie informs us, "are evidently an Esquimaux race."

The life which is led by the Esquimaux, when contemplated by persons accustomed to the comforts of civilized society, appears full of privation and hardship. The ground, frozen for more than nine months of the year, yields neither root nor herb on which they can depend for subsistence; and hence their chief employment is the pursuit of the animals which inhabit the sea and the shore, and which furnish them not only with food, but also with the skins and rich furs of which their clothing is made. They are rather migratory in their habits, and travel over the snow with great rapidity, in sledges drawn by dogs. Their winter-dwellings are huts of snow; and for light and warmth, during the long continuance of the sun beneath the horizon, they are indebted to the fat of the whale, seal, and walrus, with which their lamps are supplied. The leading features of the character of the Esquimaux, as observed by travellers in different parts of the Arctic Regions, are in general uniform; and the accounts given by the older writers are, for the most part, consistent with those of recent authorities.

The stature of the Esquimaux is decidedly below the European standard. The tallest whom Captain Lyon ever saw, was five feet nine inches and three quarters in height, and the shortest only four feet ten inches. The highest woman was five feet six inches, while the smallest was four feet eight inches only; between these, of course, there were intermediate sizes, all, however, inclining to the lowest scale*. Their temperament, so far as it may be inferred from the published descriptions of their personal appearance, is decidedly lymphatic. Captain Lyon calls them "a phlegmatic people †," and informs us, that "even in the young and strong men, the muscles are not clearly defined, but are smoothly covered as in the limbs of women," and that "the skin in both sexes appeared to be, and was, quite smooth ‡." The younger individuals among the Esquimaux described by Captain Parry, "were all plump, but none of them corpulent; the women inclined most to this last extreme; and their flesh was, even in the youngest individuals, quite loose, and without firmness." The faces of the Esquimaux, he adds, "are generally round and full §." Captain Franklin mentions that

* Lyon's Private Journal. London, 1824. p. 307.

† Ib. 353.

‡ Ib. 307-309.

§ Parry's Second Voyage, 4to, p. 492-3.

the Esquimaux whom he met at Savage Island, in Hudson's Strait, "were broad and flat," and that "all of them appeared of a plethoric habit of body*." The faces of the natives seen at the River Clyde, on the western coast of Baffin's Bay, are described as "round and chubby†." The *Arctic Highlanders* of Ross, whose residence is at the north-eastern extremity of the same bay, have "their bodies corpulent‡." In the Greenlanders, "the face is commonly broad and flat, with high cheek-bones, but round and plump cheeks§." All the Esquimaux seen by Captain Lyon at Savage Islands, "were fat and in good case||." At Salisbury Island, (about 68° 30' N. and 77° W.) the same voyager met a number of "boisterous, noisy, fat fellows**." In Beechey's "Narrative of a Voyage to the Pacific and Behring's Strait," engravings are given of a number of the natives of the north-western angle of the American Continent — all indicating a highly lymphatic temperament. The same peculiarity distinguishes six Esquimaux delineated in the 7th plate of Captain Lyon's "Brief Narrative;" and the plates which illustrate the publications of Ross and Parry, almost without a single exception represent the natives with that rotundity of visage which is generally the sign of a lymphatic constitution.

In glancing at the skulls under consideration, the phrenologist is immediately struck with the great development of the organ of PHILOPROGENTIVENESS, indicated by the elongation of the occipital region of the head. The average development of this organ in the twelve skulls, appears from our table to be "18½," or somewhat above "large:" in five cases it is "20," or "very large," and in only one instance below "rather large." Blumenbach remarks an "occiput protuberans" in an Esquimaux skull from Labrador, of which he has given a representation in his 8d Decade, plate 24††. His next plate contains an engraving of another Esquimaux skull, in which the same feature is observable; and he notices this conformation in the crania of two Greenlanders from the Danish Colony of Godhavn, represented in his 36th and 37th plates. As every phrenological

* Narrative of a Journey to the shores of the Polar Sea, in the years 1819-22, p. 18.

† Parry's First Voyage, 4to, p. 282.

‡ Ross's Voyage, 4to, London, 1819, p. 125.

§ Crantz's History of Greenland, translated from the High Dutch. London, 1767. Vol. I. p. 132. Crantz was sent from Denmark to collect information as to Greenland and its inhabitants. He resided about thirteen months in that country, in the years 1761-2. See also Egede's Description of Greenland, p. 118. (London, 1745).

|| Private Journal, p. 40.

** Lyon's Brief Narrative of an unsuccessful attempt to reach Repulse Bay, &c. p. 129.

†† J. F. Blumenbachii Decas Tertia Collectionis suae Craniorum diversarum Gentium illustrata, p. 9.

reader must anticipate from these facts, the propensity of Philoprogenitiveness is very strongly manifested by the Esquimaux: indeed, when we consider the extreme rigour of the climate, and their own constitutional laziness and selfishness of disposition, the necessity of a strong endowment of this faculty is sufficiently obvious. "The affection of parents for their children," says Captain Parry, "was frequently displayed by these people, not only in the mere passive indulgence, and abstinence from corporeal punishment, for which the Esquimaux have before been remarked, but by a thousand playful endearments also, such as parents and nurses practise in our own country. *Nothing, indeed, can well exceed the kindness with which they treat their children*, and this trait in their character deserves to be the more insisted on, because it is in reality the only very amiable one which they possess." It is farther mentioned that "the custom of adoption is carried to very great lengths among these people *." The testimony of Captain Lyon is equally strong: "Nothing," he says, "can be more delightful than the fondness which parents shew to their little ones during infancy. The mothers carry them naked on their backs until they are stout and able walkers, and their whole time and attention are occupied in nursing and feeding them. The fathers make little toys, play with, and are constantly giving them whatever assistance lies in their power. A child is never corrected or scolded, but has its own way in every thing †." The same author relates, that when he sent a supply of food to a party of starved natives whose "hunger was quite voracious," "the grown people first supplied all the children, and afterwards divided the remainder in equal portions among themselves ‡." Crantz describes the same trait in the inhabitants of the eastern coast of Greenland. "The Greenlanders," says he, "love their children excessively. The mothers suckle them wherever they go and whatever they are about, in a conveniency made in their dress between their shoulders. They suckle them till they are three or four years old, and longer, because their country affords nothing to make proper food for a tender infant §." And, in another place, this writer, after mentioning that "you will scarce find a Greenlander do good to another without the mercenary hope of some speedy retribution," informs us, that, "on the other hand, there are traces of a stronger love between parents and children, and of

* Journals of Parry's First, Second, and Third Voyages, 5 vols., 12mo, London, 1828. Vol. V. p. 273, 277. This work we shall refer to by quoting the name of Parry, without any other addition than the number of the volume and page. Captain Parry wintered twice near the huts of the Esquimaux, near the north-west corner of Hudson's Bay, and it is the natives of that quarter chiefly whom he and Captain Lyon describe.

† Private Journal, p. 355-6.

‡ *Ib.* p. 138.

§ History of Greenland, i. 162. See also Egede, p. 146.

the many passions arising from it, than there are in other nations. A mother cannot suffer her child to be out of her sight, and many a mother has drowned herself because her child hath been drowned." The contrast between this ardour of parental affection and want of general benevolence, seems to have made a forcible impression on Crantz, and has led him to throw out a conjecture—the soundness of which is demonstrated by Phrenology—that the phenomenon can be accounted for only by supposing the existence of two independent faculties: For he adds,—“ But just so it is with the irrational creatures; they are insensible to the pleasure or pain of other animals, but their love and concern for their own young is so much the stronger: This would almost lead one to think, that the Greenlanders act more from the instinct and movements which the irrational animals have in common with mankind, than from human reason*.” Captain Ross found the same strong attachment to children among the Arctic Highlanders. He asked two of them whether they would allow one of their sons to go with him; to which, says he, “ they answered, they would not; nor could either of them be tempted with any presents to consent to part with a child †.”

Not much inferior in size to Philoprogenitiveness in the heads of the Esquimaux is the organ of the sexual propensity; and the strength of the feeling corresponds. Connubial fidelity is almost entirely unknown amongst them. “ It may be safely affirmed,” says Parry, “ that in no country is prostitution carried to greater lengths than among these people ‡.” Captain Lyon mentions that “ the women are treated well; are rarely, if ever, beaten; are never compelled to work; and are always allowed an equal authority in household affairs with the men. Though a phlegmatic people,” he adds, “ the Esquimaux may be said to treat them with fondness; and young couples are frequently seen rubbing noses, their favourite mark of affection, with an air of tenderness. Yet even those men and women who seem most fond of each other, have no scruples on the score of mutual infidelity, and the husband is willingly a pander to his own shame. A woman details her intrigues to her husband with the most perfect unconcern, and will also answer to any charge of the kind made before a numerous assemblage of people. Husbands

* History of Greenland, i. 189.

† Ross's Voyage, p. 134.—Captain Franklin mentions, that among the Crees, “ both sexes are fond of, and excessively indulgent to, their children. The father never punishes them, and if the mother, more hasty in her temper, bestows a blow or two on a troublesome child, her heart is instantly softened by the roar which follows, and she mingles her tears with those that streak the smoky face of her darling.”—Narrative of a Journey to the Shores of the Polar Sea in the Years 1819–22, p. 68.

‡ Vol. v. p. 273. See also p. 300.

prostitute wives, brothers sisters, and parents daughters, without shewing the least signs of shame. It is considered extremely friendly for two men to exchange wives for a day or two, and the request is sometimes made by the women themselves*." Crantz informs us that the Greenlanders are inclined to licentiousness, and adds,—“ I have been assured that they can read the language of the ogling eye, unattended with the least concomitant mien or motion, better than the adepts in Turkey †.” These facts shew that the amative feeling manifests itself in every part of the world with an energy not materially affected by climate and temperature.

CAUTIOUSNESS, though not absolutely deficient, is, in proportion to Combativeness, smaller in the heads of the Esquimaux than in those of any savage tribe with whose cerebral development we are acquainted. Hence they are not in general subject to alarm, and their bold and fearless disposition has attracted not a little the attention of the English navigators. Unlike some barbarous races, they met their European visitors not only without fear, but with strong indications of cordiality and friendship. Captain Parry details the undisturbed behaviour, on their first appearance, of a party which he met when the ship was laid up at Winter Island. They quietly awaited the approach of the English, and “ there was as little apprehension or distrust visible in their countenances or manner, as it was possible for one strange set of persons to evince on meeting another. As soon, therefore,” continues Parry, “ as we had bought all they had to sell, and made them a number of valuable presents, we expressed by signs our wish to accompany them to their huts, with which they willingly complied, and we immediately set out together ‡.” On another occasion, Captain Parry was received by the Esquimaux with looks which “ betrayed a mixture of stupidity and apprehension ; but both,” says he, “ wore off in a few minutes, on our making them understand that we wished to go to their habitations. With this request they complied without hesitation, tripping along before us for above two miles §.” The Esquimaux continued to display the same fearless confidence during the long period of their intercourse with the English, while the ships were laid up for the winter. The tribes met by Beechey manifested little or no alarm ||.

The Arctic Highlanders of Captain Ross at first shewed

* Lyon's Private Journal, pp. 353-4. See also pp. 197, 168.

† History of Greenland, i. 192. A similar account is given by Egede, p. 139.

‡ Parry, iii. 183.—Captain Lyon says: “ We gladly accepted an invitation to the huts.” “ We were led,” he adds, “ into the first dwelling, where we found six families quietly awaiting our approach.”—*Private Journal*, p. 110.

§ Parry, iii. 112.

|| Beechey's Narrative, pp. 242, 248, &c.

something like distrust and apprehension, arising in some degree from the extraordinary appearance of the Europeans, and a belief that the ships were enormous animals which had descended from the sun or the moon. It was not long, however, before every appearance of terror left them, and they were induced to go on board. A few days afterwards, another party of the natives was met, among whom were several who had been seen before. "They now came forward," says the Captain, "not only without alarm, but without ceremony; and having with them a seal-skin, made into a bag and filled with air, they began to kick it at each other and at us; and in this play we heartily joined, to the great amusement of both parties. We invited them to the ship, and they accompanied us without hesitation."

In this respect the dispositions and skulls of the Esquimaux are remarkably different from those of the Papuans. Quoy and Gaimard, surgeons to the expedition round the world under Captain Freycinet, brought to France six of the skulls of these islanders, which were added to the collection of Dr Gall. A cast of one of them was presented to the Phrenological Society by M. Dumoutier of Paris, and is delineated above, p. 291. They shew an extreme development of the organ of Cautiousness; "and hence," says M. Gaimard, "the distrust and suspicion to which the Papuans are so subject." "When M. Quoy visited, in a small boat, the village of Boni, all the inhabitants took to the woods before he was able to perceive them."*

The Esquimaux are extremely improvident, in consequence of which, as their supply of food is very precarious, they are occasionally subjected to severe privation. Yet they are "proof against the repeated lessons of bitter experience they are doomed to endure †." "So singularly happy," says Captain Lyon, "is the disposition of the Esquimaux, that when their wants are for a moment relieved, they forget that they have ever suffered from hunger, or that they may on the morrow be again in the same distress ‡." Crantz gives a similar account of the Greenlanders §.

"Courage," says Captain Lyon, "and that, too, in an eminent degree, must be allowed to a people who dare to face the terrific Polar bear, and even to kill it in single combat, with only the assistance of their dogs. There is an independent fearless expression in the countenance and person of an Esquimaux, which is highly striking. The firm walk, erect head, and unbending eye, all denote a man who feels confident of himself ||." In their expeditions on the ice, they display great fearlessness.

* Memoir read by M. Gaimard to the Royal Academy of Sciences. See Quoy et Gaimard, *Zoologie du Voyage autour du Monde de M. le Capitaine Freycinet*. Paris, 1822.

† Parry, v. 306. ‡ Private Journal, p. 161. See also Parry, iv. 199.

§ Vol. i. pp. 145, 169.

|| Private Journal, p. 351.

On one occasion, we are told, some of them had been so far led to sea upon the floating and detached masses of ice in pursuit of walruses, that Captain Lyon had it in contemplation to go to their assistance in a boat. "They seemed, however, to entertain no apprehensions themselves." Occasionally they are carried out to sea, and thus miserably perish*.

While their Combativeness is sufficient to supply them with courage in circumstances which call it into exercise, they are not by any means quarrelsome and irascible. This, we imagine, is, to a considerable extent, the result of the sluggish temperament above alluded to †. Men of warm tempers have generally active and vivacious constitutions. Destructiveness, moreover, is not remarkably great in the Esquimaux. "Though they do not possess much of the milk of human kindness, yet their even temper is in the highest degree praiseworthy. In pain, cold, starvation, disappointment, or under rough treatment, their good humour is rarely ruffled. Few have ever shewn symptoms of sulkiness, and even then for a short time only. Those who for an instant feel anger at neglect, or at being punished for some offence, are in a few moments as lively and well disposed to the persons who affronted them as if nothing had occurred. No serious quarrels or blows happen amongst themselves ‡." Revenge seems to be unknown among the Esquimaux described by Captain Lyon, for that gentleman could learn of no instances of any one man killing another, or of a son imbibing from his father any dislike towards particular persons. Parry speaks of them in the same strain. When he related to them the massacre of the Esquimaux recorded by Hearne§, and gave them to understand that the Indians spared neither age nor sex, it seemed to chill them with horror, and he was almost sorry that he had told them the story. He mentions, also, that when some of the Esquimaux brought tidings that, during a grievous famine, one party had fallen upon another and killed five of them, on whose raw flesh they afterwards subsisted, the English themselves "scarcely regarded it with greater horror than those who related it ||."

Captain Ross affirms, that the people whom he saw in Baffin's Bay "could not be made to understand what was meant by war, nor had they any warlike weapons ¶¶." The Esquimaux

* Parry, iii. 214, 255. Lyon's Private Journal, p. 180, 351.

† See Spurzheim's Phil. Prin. of Phren. p. 38. ;—also Egede's Description of Greenland, p. 121, where the author tells us that "the Greenlanders are commonly of a phlegmatic temper, which is the cause of a cold nature and stupidity: they seldom fly into a passion, or are much affected or taken with any thing, but of an insensible indolent mind."

‡ Lyon's Private Journal, p. 350. See also Parry, v. 282.

§ Hearne's Journey, 153.

|| Parry, iii. 268; and v. 274, 321.

¶¶ Voyage, p. 135.

of Labrador, too, are described as "a harmless people, not apt to steal from one another, or to give way to violent anger*." They are said to be covetous and dishonest towards strangers, but to have a great abhorrence of murder.

Here again, the dispositions and cerebral development of the Esquimaux and Papuans may be contrasted. "The most remarkable part of the character of the Papuans," says M. Gaimard, in the memoir already quoted, "is that denoted by the amazingly prominent and *tres bombée* projection of Destructiveness, which is so large, as to convert the animal energy of a properly developed organ into an actual propensity to murder,—a dreadful propensity, in which these islanders indulge with fury, and of which the skulls now before us are very probably the results. The chief of Kimulahu of Guébé assured us that tribes of anthropophagi exist in the interior of the territories of the Papuans, and this assertion recalled to me having seen, in the island of Ombai, in the hut of a native of the village of Bitoka, a row of lower jaw-bones strung up together. In that island, we, being few in number, incurred the greatest danger, twelve Englishmen having, only six months before, been killed and devoured by the ferocious Ombayens." Although a sufficiently full development of the organ of Destructiveness is indicated by several of the Esquimaux skulls in the possession of the Phrenological Society, in none of them does it appear nearly so large as in that of the Papuan, which exhibits a prodigious development of the middle lobe of the brain. This circumstance clearly accounts for the wide difference of the strength of destructive propensity in the two races. The comparative excess of this feeling in the sanguinary and revengeful North American Indians is likewise very great, and the corresponding dissimilarity of such of their skulls as we are acquainted with, is equally well marked. The Phrenological Society has casts of two skulls of these Indians, both exhibiting a very large development of Destructiveness: of these, and the character of the Indians, an account will be found in the second volume of this Journal, p. 588. The skull of an individual belonging to the same tribe is represented by Blumenbach in the 9th plate of his First Decade, and indicates a similar conformation. Blumenbach describes it thus: "*Vertex depressus, amplus, versus latera supra tempora protuberans †.*"

Captain Parry gives the following picture of the domestic life of the Esquimaux of Winter Island:—"In the few opportunities we had of putting their hospitality to the test we had every reason to be pleased with them. Both as to food and accommodation the best they had were always at our service; and their attention, both in kind and degree, was every thing that hospi-

* Edinburgh Encyclopædia, voce LABRADOR. † Decas Prima, p. 21.

tality, and even good, breeding, could dictate. The kindly offices of drying and mending our clothes, cooking our provision, and thawing snow for our drink, were performed by the women with an obliging cheerfulness, which we shall not easily forget, and which commanded its due share of our admiration and esteem. While thus their guest, I have passed an evening not only with comfort but with extreme gratification; for, with the women working and singing, their husbands quietly mending their lines, the children playing before the door, and the pot boiling over the blaze of a cheerful lamp, one might well forget for the time that an Esquimaux hut was the scene of this domestic comfort and tranquillity; and I can safely affirm with Cartwright,* that, while thus lodged beneath their roof, I know no people whom I would more confidently trust, as respects either my person or my property, than the Esquimaux." This description must seem a little too highly coloured, if we reflect for a moment on the selfish spirit before adverted to, and on the rather moderate development of Benevolence which appears from the skulls; and, indeed, it is broadly enough qualified by the Captain himself in the very next sentence: "It is painful," he says, "and may perhaps be considered invidious, after this, to inquire how far their hospitality would in all probability be extended if interest were wholly separated from its practice, and a stranger were destitute and unlikely soon to repay them. But truth obliges me to confess, that, from the extreme selfishness of their general conduct, as well as from their behaviour in some instances to the destitute of their own tribe, I should be sorry to lie under the necessity of thus drawing very largely on their bounty." † Captain Lyon tells us that, though he experienced from them much hospitality, "if he the next day entered the hut, and asked even a bit of moss, he was required to pay for it; besides which, every thing in his possession was begged of him." ‡

The skulls of the Esquimaux shew an uncommonly moderate endowment of Conscientiousness,—a circumstance altogether consistent with the fact that, perhaps, no race on earth has made itself so notorious for dishonest and thievish dispositions. There is a vast body of evidence to shew that the Esquimaux are sadly deficient in the sentiment which leads us to respect the rights and property of others; and to this deficiency more than to strength of Acquisitiveness (for the Esquimaux do not seem to hoard §), we ascribe the dispositions alluded to. Mr Ellis, who

* Cartwright's *Labrador*, lii. 232.

† Parry, v. 264-5.

‡ Private Journal, p. 360.

§ Crantz says of the Greenlanders: "They are not covetous to scrape a heap of stuff together, but they are liberal in giving." Vol. I. p. 134.—According to Egede, "they will never steal from one another, though they will sometimes from strangers."—*Egede's Description of Greenland*, p. 124.

was sent, in 1746, to explore the seas on the north-east of America, describes the natives whom he met on the western shores of Hudson's Bay as "very subtle, designing, cunning, and deceitful; great flatterers, and much addicted to pilfer from strangers."* The inhabitants of Savage Islands are spoken of by John Davis, who visited them in 1586, as "marvellously given to thieving, especially of iron." The same spirit characterizes the Arctic Highlanders. Even on their first visit to Captain Ross's ship "they shewed that desire of possessing what they admired, which is so universal among savages." As soon as the second party came on board, "they proceeded both to beg and steal, laying hands on every small piece of wood they met with, and pocketing every nail they could meet with about the ship;" and while the crews were engaged in looking at the gestures which some of them were performing on deck, another, says Captain Ross, "took occasion to steal into my state-room, and purloined my best telescope, a case of razors, and a pair of scissors, which he artfully concealed in his tunic, rejoining the party and the amusements as if nothing had happened." The Captain thought of sending a present to their king, but inquiry having been made of some of the party respecting the probability of its being delivered, "it was found that their propensity to pilfering rendered this object hopeless."† On the shore of Hudson's Strait, Captain Parry had communication with "people who possessed in an eminent degree the disposition to steal all they could lay their hands on, which has almost universally been imputed to every tribe of Esquimaux hitherto visited by Europeans. They tried," says he, "more than once, the art of picking our pockets, and were as bold and unembarrassed as ever immediately after detection."‡ Not far to the south of Winter Island, he found another colony, in whom the same characteristic appeared. "We had hitherto," says he, "been much pleased with our new acquaintance, who were certainly a good-humoured, decent sort of people. We therefore loaded them with presents, and endeavoured to amuse them by shewing them the manner of rowing our boats, which were hauled up on the beach. While the men and children were occupied in observing this, the women were no less busily employed, near the tents, in pilfering, and conveying into their boats, some of our cups, spoons, and other small articles, such as they could conveniently secrete. This they accomplished

* Ellis's Voyage, p. 63.

† Ross, pp. 93, 107, 109, 110. A skull of one of these people was brought home by Captain Ross, and is now in the Museum of the Royal College of Surgeons, Edinburgh. It shews a small development of Conscientiousness, and is in other respects very similar to the Esquimaux skulls in the Phrenological Society's collection.

‡ Parry, lii. 19.

with so much dexterity, that no suspicion would have been entertained of their dishonesty, had not Mr Sherer fortunately missed a cup which was required for supper. A general search was instituted in consequence, and the cargo of the women's boats brought back to our tents *." The natives whom Davis met in the south of Greenland shewed "a very inconvenient propensity to appropriate every article, especially iron, which came under their notice."—"The leading personages of the crew remonstrated with Davis, that for their security he must dissolve this new friendship, and leave the company of these thievish miscreants. Davis fired two pieces over their heads, which 'did sore amaze them,' and they fled precipitately. But in ten hours they again appeared with many promises and presents of skins; when, on seeing iron, 'they could in nowise forbear stealing †.'"

The Cree Indians of North America who were visited by Captain Franklin, appear to be greatly superior to the Esquimaux in their endowment of Conscientiousness. After alluding to the lamentable want of morality displayed among them by the white traders, he states that "notwithstanding the frequent violations of the rights of property they have witnessed, and but too often experienced in their own persons, these savages, as they are termed, remain strictly honest. During their visits to a post, they are suffered to enter every apartment in the house without the least restraint; and although articles of value to them are scattered about, nothing is ever missed." "They will rather pass several days without eating, than touch meat entrusted to their charge, even when there exists a prospect of replacing it ‡."

The morality of the inhabitants of Winter Island seems to be of a somewhat higher description than that of any of the other Esquimaux tribes visited by Europeans. During the early part of Captain Parry's intercourse, indeed, his impression of their honesty was extremely favourable. Many instances occurred (some of which he has related), where they appeared even scrupulous in returning articles which did not belong to them; and this, too, when detection of a theft, or at least of the offender, would have been next to impossible. As they grew more familiar, however, "and the temptations became stronger, they gradually relaxed in their honesty, and petty thefts were from time to time committed by several individuals, both male and female, among them §." Captain Lyon gives a still more favourable account of their honesty. "I verily believe," says he, "that there does not exist a more honest set of people than the

* Parry, iil. 117.

† Murray's Narr. of Discov. and Adventure in the Polar Regions, p. 188.

‡ Franklin's Narr. of a Journey to the Shores of the Polar Sea, p. 66.

§ Parry, v. 253.

tribe with whom we had so long an acquaintance. Among themselves they never even touch each other's property without permission, and on board the ships their scruples were the same*." Probably the organ of Acquisitiveness is smaller in this than in the other tribes; for it appears from sundry manifestations that their Conscientiousness and Benevolence are not to be boasted of. Thus: "Gratitude is not only rare, but absolutely unknown amongst them†." "In general, however considerable the benefit conferred; it was forgotten in a day; and this forgetfulness was not unfrequently aggravated by their giving out that their benefactor had been so shabby as to make them no present at all." Of this trait, Captain Parry has given several examples, the account of which he concludes by remarking, that "selfishness is in fact almost without exception their universal characteristic, and the mainspring of all their actions, and that, too, of a kind the most direct and unamiable that can well be imagined‡." They shewed also "an extreme disposition to jealousy and envy, which displayed itself on various occasions." When a present was made to the inmates of one hut, those of the next did not fail to shew their spite towards the favoured party; and if any individual with whom the ship's crew had been intimate happened to be implicated in a theft, "the circumstance became a subject of satisfaction too manifest to be repressed, and we were told of it with expressions of the most triumphant exultation on every occasion §. It was indeed curious, though ridiculous," adds Captain Parry, "to observe that, even among these simple people, in this obscure corner of the globe, the little gossip and scandal so commonly practised in small societies among us, were very frequently displayed. This was especially the case with the women, of whom it was not uncommon to see a group sitting in a hut for hours together, each relating her quota of information, now and then mimicking the persons of whom they spoke, and interlarding their stories with jokes, evidently at the expense of their absent neighbours, though to their own infinite amusement ||."

It appears, however, that gratitude is not unknown among all the Esquimaux tribes. Captain Lyon mentions that on the south-east coast of Southampton Island (62° 30' N. and 82° 30' W.) he gave the natives some knives, "which," says he, "the poor fellows received with silent and trembling delight, first eyeing me, then the knife, and at last uttering a long sighing "*kooyena*" (thank you) in a tone expressive of the deepest gratitude; and this display of their feelings was not confined to the moment, for

* Private Journal, pp. 249, 347.

† Private Journal, p. 348.

‡ Parry, v. 263-4.

§ Parry, v. 256. See also iii. 240, and Lyon's Private Journal, p. 349.

|| Parry, v. 260.

it was constantly repeated, with every appearance of sincerity, during the whole of our stay on shore." He adds: "I observed that each individual, on receiving a present, immediately offered to the donor the choice of his property *."

It is a just observation of Goldsmith, that "the most ignorant nations have always been found to think most highly of themselves †;" and to this rule the Esquimaux form no exception. "Superior," says Parry, "as our arts, contrivances, and materials must unquestionably have appeared to them, and eager as they were to profit by this superiority, yet, contradictory as it may seem, they certainly looked upon us in many respects with profound contempt; maintaining that idea of self-sufficiency which has induced them, in common with the rest of their nation, to call themselves, by way of distinction, *Innuce*, or mankind. One day, for instance, in securing some of the gear of a sledge, Okotook broke a part of it composed of a piece of our white line, and I shall never forget the contemptuous sneer with which he muttered in soliloquy the word "Kabloon!" (European), in token of the inferiority of our materials to his own. It is happy, perhaps, when people possessing so few of the good things of this life can be thus contented with the little allotted to them ‡."

This is a pleasing example of the wise and beneficent institution of Providence, by which the ideas of men are made to harmonize with the circumstances in which it is their lot to be placed, even when these seem to afford little reason for contentment and satisfaction. So equally is unhappiness distributed among mortals, that even in the most barren and savage countries of the earth, it is seldom or never that symptoms of repining can be discovered. "Even here," says Beechey, speaking of the Esquimaux to the north-east of Behring's Strait,— "even here we had the satisfaction of seeing a set of people happy, who did not seem to possess a single comfort on earth §." According to Ulloa, the South American savages, "though half naked, are as contented as a monarch in his most splendid array ||." Captain Ross describes the Arctic Highlanders as a "most happy and contented" people, who, previously to his appearance on their coast, "believed themselves to be the only inhabitants of the universe, and that the rest of the world was a mass of

* Lyon's Brief Narrative, pp. 57, 61.

† Citizen of the World, letter 115.

‡ Parry, v. 286. See also Lyon's Brief Narrative, p. 40, and Crantz, i. 132.

§ Beechey's Narrative of a Voyage to the Pacific, &c. p. 266.

|| Ulloa's Voyage to South America.

ice *." Iceland, in the words of Malte-Brun, "is, strictly speaking, nothing but a chain of immense rocks, the summit of which is "covered with snow;" a country where, "within the space of one century, the inhabitants reckon forty-three bad seasons, among which there were fourteen years of famine:" yet they sound its praises in terms absolutely ridiculous, and are so much attached to it as to be miserable everywhere else †. In like manner, as Dr Robertson informs us, the inhabitants of Labrador, "with that idea of their own superiority which consoles the rudest and most wretched of nations, assume the name of *keralit*, or men ‡." Nor have the Caribbees a less ample endowment of self-complacency: "We alone are a nation," they say proverbially; "the rest of mankind are made to serve us §." The Chipewyans of North America, as Captain Franklin relates ||, "assume to themselves the comprehensive title of 'The People,' whilst they designate all other nations by the name of the particular country." " 'Tis true," says Crantz, "the Greenlanders live a poor toilsome life in our eye; but they are cheerful under it, and they have all that nature requires in the little they possess. Therefore they think they have no cause to envy but to pity us, because we have multiplied our wants so exceedingly, that we cannot subsist with their little and homely stores ¶." And again: "They have a good share of what we may call rustic or peasant's pride, set themselves far above Europeans, or *Kabluncet*, as they call them, and make a mock of them among themselves **." Captain Cook tells us in the Narrative of his First Voyage, that the inhabitants of Terra del Fuego are "the most destitute and forlorn, as well as the most stupid, of all human beings; the outcasts of nature, who spend their lives in wandering about the dreary wastes where two of our people perished with cold in the midst of summer; with no dwelling but a wretched hovel of sticks and grass, which would admit not only the wind, but the snow and rain; almost naked; and destitute of every convenience that is furnished by the rudest art, having no implement even to dress their food: yet they were content. They seemed to have no wish for any thing more than they possessed, nor did any thing that we offered them appear accept-

* Ross's Voyage, pp. 123, 134. This reminds us of a notion of the New Zealanders, that "their country comprises all the habitable globe, and that the men who come to it in ships live always upon the waters."—See Lib. of Ent. Knowledge, vol. entitled *The New Zealanders*.

† Malte-Brun's Universal Geography, vol. v. pp. 100, 103.

‡ Robertson's Hist. of America, b. iv.—"The people on the north shore of Hudson's Strait also style themselves "mankind." *Lyon's Brief Narrative*, p. 40.

§ Humboldt's Personal Narrative, vi. 29.

|| Journey from the shores of Hudson's Bay to the mouth of Coppermine River, p. 159.

¶ History of Greenland, i. 184.

** Ib. p. 134.

able but beads, as an ornamental superfluity of life. What bodily pain they might suffer from the severities of their winter we could not know; but it is certain that they suffered nothing from the want of the innumerable articles which we consider, not as the luxuries and conveniences only, but the necessaries of life. As their desires are few, they probably enjoy them all; and how much they may be gainers by an exemption from the care, labour, and solicitude which arise from a perpetual and unsuccessful effort to gratify that infinite variety of desires which the refinements of artificial life have produced among us, it is not very easy to determine: possibly this may counterbalance all the real disadvantages of their situation in comparison with ours, and make the scales by which good and evil are distributed to man, hang even between us*."

The high estimate which savages form of their own importance, is undoubtedly to be ascribed to the activity of Self-Esteem, a faculty which, when "powerful, and ill-regulated,"—as it generally is among uneducated and ignorant individuals,—“fills the mind with unbounded sentiments of self-excellence, without reference to merit †.” The absence of that extent of misery which civilized nations are apt to look for in circumstances so wretched as those above described, may, we think, be accounted for, by attending to the constitutional qualities which savages seem to possess. We have already seen that the Esquimaux are distinguished not only by moderate organs of the intellectual faculties and Ideality, but also by a lymphatic temperament, indicative of little activity of the nervous system, including the brain; and it is highly probable that the same constitution will be found to prevail among such tribes as the inhabitants of Terra del Fuego and New Holland. Now, as desire is the effect of, and in proportion to, the activity of the faculties ‡, these savages, possessing feeble and sluggish intellectual powers and Ideality, have few or no desires thence originating; their moral and intellectual faculties are, as it were, half asleep; their sensations are blunt; and they suffer little uneasiness from exposure to influences which, in the case of men with active nervous systems, would be productive of acute suffering. As their means of gratifying desires are scanty, so those desires are few. “Happiness,” in the words of Spurzheim, “depends on the gratification of active faculties, and unhappiness on their non-satisfaction.” “He who has many faculties active which he can sa-

* Hawkesworth's Collection of Voyages, ii. 174.—The concluding reflections were probably added by Dr Hawkesworth, who prepared the papers of Captain Cook for publication.

† Trans. of the Phren. Soc. p. 384.

‡ Spurzheim's Phil. Prin. of Phrenology, pp. 33, 36.

tisfy, is more happy than he who has no desire whatever; it is, however, better to be without desire than to possess very active faculties, with no means of ministering to their cravings *.”

The happiness of savages seems to consist more in the absence of disagreeable sensations; than in the experience of a variety of pleasurable emotions. Nearly the whole of their enjoyments have reference to their animal nature alone; their minds have no longing after unattainable felicity; and when the few desires which they possess are satisfied, they experience perfect contentment. Civilized man has many desires, to the cravings of which he frequently cannot administer; and, in consequence, he suffers misery. If he could satisfy them all, he would have a greater amount of happiness than the savage at the limit of *his* felicity; for enjoyment is great in proportion to the number of satisfied desires. We have frequently expressed a conviction that the misery which at present scourges civilized nations is in a great measure the result of ignorance and folly; and that, by attending to the conditions prescribed by the Creator for the attainment of happiness, the amount of human suffering may be incredibly diminished. By the extension of knowledge, men will be enabled to regulate their desires to a much greater extent than is now practicable, and at the same time to provide more complete gratification to such desires as they possess.

We shall return to the Esquimaux in next Number.

ARTICLE II.

ON MORBID MANIFESTATIONS OF THE ORGAN OF LANGUAGE, AS CONNECTED WITH INSANITY. By Mr W. A. F. BROWNE. (Continued from p. 260.)

WE now approach a new class of facts, depending upon similar causes, though presenting different phenomena. There is at present in the hospital at La Salpêtrière a woman of a swarthy complexion, with dark hair and eyes. Her expression is wild, agitated, and anxious, but not malignant. Her age is about thirty years, a considerable number of which have been spent in her present melancholy prison-house. Her air, countenance, and moral deportment, bespeak a high degree of excitement of Cautiousness, Secretiveness, and the lower propensities; yet, either from the still unimpaired action of a large Benevolence, or from its predominating through diseased influence in the general confusion of her mind, that feeling of repulsion is not experienced which such a combination is so apt to produce in the spectator. Whenever she encounters the physi-

* Philosophical Principles of Phrenology, pp. 177-8.

cian, or other of the attendants, or when her anger is provoked or the jarring chord of her mind touched, she bursts forth into an address, which is sometimes an appeal to the humanity and sympathy of her hearers, but more generally an abusive or ironical declamation against the tyranny, cruelty, and injustice to which she is exposed. The quality, however, which chiefly deserves attention in this maniacal oratory, is the frightful and almost incredible rapidity and vehemence with which it is uttered. Our term *volubility* is insufficient to convey a just conception of the impetuosity with which the words, distinctly enunciated and perfectly significant, rush forth. They appear to outstrip the swiftness of thought itself. Another character, which, if clearly established, is still more calculated to excite astonishment and claim philosophical examination, is—that, when they once flow in a particular direction, or, to write more correctly, in accordance with a specific morbid train of feeling, their utterance is so irresistible, as to be almost beyond the control of the will and inclinations of the speaker. That, to a certain extent, it is in her power to command or prevent this manifestation of derangement, is demonstrated by the fact of her intercourse with the obnoxious individuals whose presence generally calls it forth, being sometimes unmarked by any thing save the natural language which accompanies the exacerbation. But there is a circumstance which would lead us to believe, that, after the feelings which accompany—if they do not produce—the paroxysm have assumed dominion over the less diseased faculties, her efforts to arrest the progress of either her thoughts or her words are unavailing: The tenor of all the entreaties, requests and declarations—interspersed parenthetically, but spoken in the same exalted tone and hurried manner as the context—is, that she does not mean what she says; that though she vows vengeance, and showers imprecations on her medical attendant, she loves him and feels grateful for his kindness and forbearance; and that, though anxious to evince her gratitude and obedience by silence, she is constrained by an invisible agency to speak. While speaking, and even when unexcited, she walks backwards from the person to whom her address is directed. This retrograde movement appears to indicate extensive disease of the parts at the base of the brain, independent of that organic lesion to which the other symptoms are to be traced. Let us, however, carefully distinguish between what we actually know and what we conjecture. Beyond the conclusion, that the power by which we recognise and apply artificial language, has become involved in the general mental affection, and is on certain occasions excited to preternatural activity over which the patient possesses no control, we are not entitled to proceed. Nor is it probable that further observation or patho-

logy will convey to us the concluding history or the explanation of this interesting case; for during my attendance at the Hospital, the patient was declared by the arbitrary, and, in this as in almost all circumstances, unjustifiable fiat of the physicians, to be incurable,—and consigned to a department of the establishment, where, from the absence of all pretence to treatment, and from association with the furious, the imbecile, and the fatuous, she will, in all probability, be reduced to that condition. In this, the most humiliating and heart-breaking of all scenes of human misery—where suffering, in its most exquisite form, is pronounced to be without hope, without cure, and without alleviation—and where the boasted powers of human knowledge are lethargic or unexerted, because pronounced by the same authority to be erring, unavailing, and presumptuous—no record whatever is kept of the origin, progress, or termination of the individual cases. The duration of many is so great, and the changes of aspect so considerable, that, were it not that the name of the patient remains on the books of the Institution, no means would exist of ascertaining whence they come, their age, their profession, or aught concerning them. When one of the number dies, the body is of course carefully dissected, but by men totally ignorant of the history of the case, and without reference even to the characteristic symptoms existing at the period of dissolution.

Cases very closely resembling that above related have recently fallen under my observation. There is resident at Charenton (an asylum near Paris) an old lunatic, who has occupied a long series of years in collecting the pebbles with which the garden-walks are covered, or the shreds of paper he may discover in the passages, and which he regards either as pieces of money, ingots of the precious metals, or bank-bills of enormous value. The floor of his apartment is cumbered with large heaps of these imaginary coins, while his table and escritoire present an equally extensive assortment of paper-money. His time is devoted to the calculation of the wealth he has accumulated, and to determining the amount of his gains, when it is lent out on usurious interest. In accordance with that spirit of benevolence which distinguishes the treatment pursued by M. Esquirol, his treasures are unmolested, and his privacy almost undisturbed; but occasionally, when it is absolutely incumbent on the superintendents to ascertain the old miser's condition, a singular scene takes place. I may mention, that if instances of what are popularly designated imbecility or general mania are excepted, it would not be easy to find a case in which the whole brain appears so completely to participate in long-continued diseased action, as in the one under consideration. The intellect of the individual is incapable of recognising the relations in which he

stands to the external world: his perceptive powers fail to discover, or deceive him respecting, the qualities of the objects submitted to his senses; and his sentiments, sharing in the general disturbance, outrage alike justice and propriety. On saluting him, his look is that of distrust and suspicion: he rises, but it is to watch your approach to the objects of his solicitude and idolatry. If, by accident or for experiment, you touch one of these; assert your belief that it is a piece of stone, wood, or paper; and tell him that you perceive in it the ordinary colour, texture, and weight of these substances, and not those of gold or silver, or suggest a doubt as to either the intrinsic or the conventional value—his agitation becomes extreme and his gesticulations menacing, and he speaks with a rapidity and in a manner almost unparalleled. At first the words—which always imply accusations of dishonesty—are uttered fluently and without restraint: gradually the sounds become indistinct and confused; the final syllables are left unpronounced; whole words are omitted; the eyes appear fiery and inflamed; the face becomes turgid and distorted; the muscles of the jaws are affected with spasm; the teeth are ground convulsively against each other, and he yells forth his imprecations with the aspect and tone of a demoniac. What is especially deserving of attention is, that when the provocation is removed; when he is left to solitude, or soothed by the sympathy and acquiescence of those around; when the powerful excitement under which the paroxysm was ushered in has abated or disappeared, and when he is unconscious of what has happened—the babbling declamation continues for an indefinite time, until he sinks into a state of sleep or stupor.

In the same hospital is another lunatic, who, though impressed with the idea that he is confined for the purpose of depriving him of the fruit of his literary labours, is certainly one of the most intelligent and eloquent men of whom his country can boast. His talents are not permitted to slumber: he speaks constantly; sleep itself does not yield an intermission; and there is strong reason to believe that a part, at least, of his waking orations are delivered either without the cognizance of the other powers, or without consciousness on the part of the speaker.

It is clear, that, however different these cases may be in other respects, they agree in this—that the lunatic is unable, even when disposed to make the effort, to restrain or arrest the exercise of the power of language. The impulse to speak, and the act of clothing in words the ideas by which the mind is occupied, is in them as the pulsations of the heart, or, what furnish a more apt illustration, the convulsive motions of the epileptic. The rapidity is the result of disease; for in health, and even in the greater number of cases of lunacy, a certain proportion exists between the rapidity of thought and the flow of speech—a

proportion which can be preserved or departed from at will. Here this salutary institution of Nature is set at defiance, in one instance contrary to the inclination, and in two independently of the direct exercise of the will. Cases and circumstances do occur, where, from temperament, mental constitution, or the nature of the exciting cause, the accordance generally subsisting is destroyed, and passion appears to seek vent in the celerity with which its instigations may be expressed; but the faculty by which this is accomplished still obeys the will; and, by this very celerity, shows how immediate and unconditional that obedience is. In the *first* of the cases above narrated, on the contrary, the faculty under investigation is for a moment employed to protest against what may be uttered being received as the voluntary expression of the actual feelings of the individual at the time—to declare that she is impelled to speak what she does not think and believe: in the *second* case, a succession of phrases pertinent to the original state of excitement continues to be poured forth unconsciously, and after the removal of that state; and in the *third*, the rapid and unceasing repetition of words, and even long harangues, when the speaker is evidently engaged with some other thought, and, be it remembered, during sleep, incontestibly prove that the excitement which may exist throughout the brain is so far localized as to stimulate the organ of language to a morbid manifestation, characterised chiefly by rapid involuntary action.

In traversing the wards of a French asylum, it is at once interesting and appalling to remark the character of the vociferations with which the ear is assailed and disgusted. Were human ingenuity in its most debased condition taxed to the utmost to invent a language replete with indecency, obscenity, and blasphemy, its device would be pure and innocent when compared to the yells of these miserable maniacs. This is, in many instances, to be regarded as degeneracy dependent on the malady, the confinement, or the companions of the individual. For although it be true that these institutions are as much receptacles for the vicious as hospitals for the diseased,—houses of refuge where the victims of passion, the violators of the moral laws, the drunkard and debauchee, and those decaying under the ravages of syphilis and mercury, come to pay the penalty of their crimes in madness,—yet there are many who, sharing in the fate of these, have not participated in their culpability; who owe their sufferings to other sources; who have been educated in refined society; and whose lips had hitherto been unpolluted by words of such a shocking import. In a great majority of such melancholy cases, it appears pretty certain, both from my own observation and from that of others, that such ejaculations are involuntary, and result not from the gene-

ral affection of mind, but from a special excitement of the organ of Language, by which certain words are called up, without the assent of the speaker and inefficient in representing his feelings. In maniacs whose malady does not intermit, it is difficult to ascertain this point; but where the symptom presents itself as the sole indication of alienation, or where the recurrence of lucid intervals permits suitable inquiry to be made, the correctness of the opinion ventured above is amply verified. The following is one of the very few cases in point with which I am acquainted.

Mademoiselle de D——, aged 26, of good rank and education, is affected with continual spasmodic contractions, especially of the muscles of the forearm, face, and tongue. What is principally to be noticed is, that in the midst of conversation in which she takes a lively interest, she suddenly, and without the power of preventing herself, interrupts what she is saying or what she is listening to, by wild cries and by words still more extraordinary, which contrast in a deplorable manner with her disposition and refined manners. These are generally coarse oaths, obscene epithets, and, what are equally embarrassing to herself and to her auditors, expressions of an unfavourable opinion of the persons present. The explanation she gives of the preference that her tongue appears to accord during a paroxysm to such expressions is rather plausible. She says that the more revolting they appear, the more is she tormented by the fear of uttering them, and that it is precisely this pre-occupation which urges her tongue to pronounce them when she can no longer control it. It should be added, that there exists not the slightest evidence of mental derangement of any other kind. During her earlier years (for the disease has existed for nearly twenty), she is stated to have uttered wild cries and words without any meaning—thus evincing a still greater disturbance of the power*.

This phenomenon has been noticed by other observers, though not in reference to the question under discussion; indeed, in utter ignorance of the cause. Portal alludes to a case where he was consulted by a woman of a fiery and irritable temper, who made several fruitless efforts for some minutes to exercise the power of speech; but no sooner did she succeed in commencing her monologue than she found great difficulty in holding her tongue, "physically considered." The concluding words are ambiguous, but cannot, of course, refer to the mere physical act of speaking; inasmuch as, were the faculty of language not in co-operation, no words, either representative of the ideas of the speaker or suggested by memory, could be uttered. Dr Parry records an instance of diseased Language and Tune, where a

* Archives Gen., vol. viii. p. 403, Mem. par Itard.

set of symptoms somewhat similar appeared *. A young lady, who had been present at an exhibition of fireworks when but recovering from slight indisposition, complained of weariness, giddiness, and pain of head, on which ensued spasmodic contractions of the hands and fingers, and convulsive actions of various parts, which continued for some hours. Two days afterwards the attack returned; and as she lay on her back rather towards her right side, she threw her left arm and body backwards at measured intervals, exactly keeping time with two or three notes which she sung out with a strong and clear voice: this scene was repeated every day from 11 to 3 in the day, and from 8 to 10 at night, leaving her much fatigued, after which she slept well. She was fond of music, and could play and sing; but could assign no reason for the particular song so often repeated, except that "it was irresistible." A somewhat analogous case, observed by Dr Andrew Combe, is recorded in the third volume of the *Phrenological Journal*, p. 362.

In a modified degree, and unmarked by any rapidity of utterance, a similar condition of this faculty is observed in various classes of maniacs. While the mind possesses its native strength and integrity, but is disturbed by anxiety or abstracted in the contemplation of some interesting and engrossing subject; involuntary ejaculations are of common occurrence, and are not to be esteemed as indicating any thing more than the undue preponderance or irregular exercise of some particular faculty. But under the pressure of disease the origin of these exclamations is different, their frequency much greater, and their importance as an indication of the true state of the mind infinitely increased. Words and sentences escape from the lunatic which may prove of great service in ascertaining the predominating feeling, and the extent of the hallucination under which he labours. More frequently, however, these bear little or no reference to the general insanity; and, proceeding from the aberration of one faculty, may constitute a disease affecting language alone, and calculated to lead the practitioner widely astray from the real malady of his patient. This is abundantly proved by the fact of these words either representing no idea—being in many cases the repetition of a word or part of a word which alone signifies nothing—or representing ideas which we know by other means are not entertained by the speaker. Thus the name of a person, place, or inanimate object is repeated incessantly, and introduced into conversation, without any relation to the subject. Every asylum affords examples of this affection. The following is one of rather an instructive nature, which occurred at Salpêtrière during the summer of 1832.

* Posthumous Works.

A young woman had been secluded in that hospital, by her friends, on the grounds of restlessness, taciturnity, and inattention to personal cleanliness; these being assumed as justifying isolation or punishment, according as they might originate in mental alienation or perversity of disposition. For some weeks she presented no other symptoms: but ultimately her desire to move from place to place was supplanted by a tendency to rock herself backwards and forwards on a chair; her bright wandering eye subsided into a fixed and dull stare; and she repeated constantly the word "Adeline." No other change occurred, and she expired with the word half uttered on her lips. The anterior lobes of the brain were found to be in a state of ramollissement, though none of that tetanic rigidity asserted by Lallemand to be essential to this disease, had preceded death.

In this, as in every case of the same description, the word uttered, although inexpressive of the actual feelings, or irrelevant to the actual situation of the lunatic, has, without doubt, reference to some previous state of feeling, which has left a deep and imperishable impression on all the powers concerned either in its origin or manifestation; these being probably, at the time, diseased. The same reasoning is applicable to that numerous class of the insane who exhibit a propensity to repeat, during periods of excitation, but with a perfect knowledge of their actions and in complete consonance with the ruling passion, certain phrases or forms of language in preference to all others; such as portions of former conversations, pious expressions, prayers, hymns, poetical quotations, and the like. Such ejaculations may always be traced to the nature of the delusion, or the circumstances by which it has been produced, whether these be real or imaginary. In one of the French hospitals is a woman who, conceiving herself to be an incarnation of the divine essence, and the spouse of our Saviour, says, on all suitable opportunities, "Je suis immortelle, je suis immortelle." A singular feature in the history of her case is, that she is either insensible to pain, or has the power of effectually concealing her suffering during its infliction. If a moxa be applied to her skin, needles thrust into her arms, or other means taken to establish the fact, no change of countenance is detectable; not a muscle moves; she lies perfectly quiescent, tranquil, and smiling, as if in the enjoyment of pleasurable sensations*; and to an interrogatory if she does not feel the heat or puncture, the never-varying reply is, "Ah non, monsieur! vous ne savez pas que je suis immortelle. Je suis immortelle." There was for some time under my charge a person who, convinced that he had been deprived, by a long series of calumnies and conspira-

* See, in the second volume of this Journal, pp. 34, 155, the case of A. R., where a similar apparent insensibility to pain existed.—F.D.

cies, of the affections of a young lady to whom he was attached, could not refrain from repeating, when under the influence of the prevailing powers,—

“ This is the flower she loved so much,
And this the bower she planted ;
This is the harp she used to touch,” &c.

Upon questioning these individuals, and others similarly situated, it is found that they are constrained, by a predilection which they cannot explain, to use a certain form of words in expressing their emotions, in preference to all others. It is true, that in some cases this choice may be determined by adventitious circumstances, or by the activity of other powers than that of language, such as Time, Tune, &c., but generally no such explanation will suffice ; and the difficulty or impossibility they experience in signifying the same idea by any other series or arrangement of terms, shews clearly a deviation from health in that faculty by which artificial language is suggested to the mind.

I have purposely avoided all allusion to a somewhat analogous phenomenon observed in idiots and cretins of the most degraded order, inasmuch as it is my intention to treat of the subject in a separate paper. From such individuals you frequently hear no other words than *papa*, *mamma*, or short syllables without meaning ; but this limited vocabulary proceeds either from the non-existence or ineducability of the power of language, or from the destitution of those ideas which it is the office of this power to represent, and not from any departure from original sanity or strength. Nor is it here proposed to comment upon the habit which almost all lunatics acquire of thinking aloud, or addressing objects and persons that either do not exist or are not present ; for there, as in cases of incoherence, it is obviously other faculties of the mind than language which have succumbed under the pressure of disease. These faculties people the loathsome cell with the loved and lost of other years ; they fill the mind with a crowd of recollections ; they convey false impressions, or erroneous interpretations of real impressions : but the power of language, though acting in compliance with the suggestions of disease, discharges its duty faithfully, if these are voluntarily represented in an intelligible manner, and in accordance with the laws regulating the relations of words ; for incoherence consists in the want of connexion between the ideas—the things signified,—not between the different words or signs. There is, however, a modification of disease which bears nearly the same relation to the unimpaired exercise of language which incoherence does to the other powers of the mind. This constitutes the second division of the subject, and comprehends cases of impaired function and decreased activity of language. Our examples of these must be deferred till next Number.

ARTICLE III.

FUNERAL ORATION: DELIVERED BEFORE THE CITIZENS OF BOSTON ASSEMBLED AT THE OLD SOUTH CHURCH, NOVEMBER 17, 1832, AT THE BURIAL OF GASPARD SPURZHEIM, M. D. BY CHARLES FOLLEN, J. U. D., Professor of German Literature in Harvard University.

‘ It is finished.’—These were the last words of the only Being on earth, who when he was called off from the great work assigned to him in this world, could stand before his employer and say, ‘ The work which thou gavest me to do, behold I have done it.’ Many, very many, who are born into this world, though fitted for extensive usefulness, leave it without having so much as begun to understand and laid hold on the great object of existence; while the most gifted and most successful of men have to close their last account with the sad consciousness that they leave their work unfinished. At the close of life they look back on all the great undertakings in which they had engaged, with the same mournful anticipation with which a dying parent contemplates his uneducated children. Still their parting look upon life is cheered by the conviction, that although they have not finished they at least have begun to live, and left the germs of life to ripen in the minds of an improved and grateful posterity.

Amidst innumerable instances of ample means and noble talents neglected and abused, it is a source of consolation and of hope to meet with an individual, who, being born to great intellectual riches, employs them, not in order to establish his own superiority over others, but rather to counteract the partiality of nature, by endeavouring to elevate the condition of his fellow-men, until his own greatness be lost in the general advancement of society. It is a source of philanthropic enthusiasm to meet with an individual who uses his superior knowledge, not to eclipse, or to dazzle, or to enslave others, but to enable and to induce all men to see the truth, that the truth may make them free.—It has been *our* privilege lately to become acquainted with such a true friend of human freedom, and universal happiness; to have our minds called forth by his invigorating and inspiring energy; while our affections grew up around him to prepare a home for the solitary stranger. Our eyes have followed his noble figure in the streets of our city; we have sought his presence in the crowded hall, to listen with interest and delight to the original thoughts, the generous senti-

ments, the practical wisdom, flowing forth in rich streams of native eloquence from the pure fountains of his soul; and there we have waited till the crowd had dispersed, to press his hand in gratitude for our share of the general benefit. We have seen him sitting down to sumptuous meals provided in honour of him, and have seen him fasting for the want of food adapted to his simple taste. We have welcomed him at our firesides; we have seen him surrounded by our children; and the hearty applause he drew from these little hearers, who listen with their hearts and judge by their affections, has convinced us, that the charm which had attached us to the successful lecturer was not the spell of a great name, or of talent, learning, or eloquence; that the light which shone in his countenance, was not the reflection of many lamps, or of admiring eyes; but that it was the spirit of truth and goodness within, which lighted up his face, and gave life and meaning to every sound and every motion.

And of all this power of eloquence, by which words became pictures to the eye and music to the ear,—of all those bright manifestations of a mind that had searched into the kingdoms of nature and the institutions of man, that had studied the wonderful architecture of the human frame in order to reach the more mysterious recesses of the mind,—of all these powers and charms, which but a few days since excited, engaged, and delighted so many of us,—of that fulness of thought and action embodied in a frame which nature herself seemed to have designed to be a stronghold of life and health,—is there nothing left of all this?—nothing but what is enclosed in the narrow case before us?

Our hands shall let down into the grave what our eyes have seen; but that which we have known with our hearts, what we have venerated and loved, no eye has ever seen, no hand can ever touch. The disembodied spirit has joined the invisible company of brother spirits above; while his memory remains with us, embalmed in grateful hearts, where it has power still to stir up to the pursuit of truth, to generous actions, to universal love.

The solemn task to speak the praises of our departed friend, has been assigned to me, as his countryman by birth, and by adoption and domestic ties, a citizen of this country. I wish to perform this duty in *his* spirit, not attempting to present what my own mind might invent, or my personal feelings dictate; but from the scanty records I can obtain, give you the simple story of his life, which is his best eulogy*. (Here Dr Follen

* This account has been compiled chiefly from the writings of Gall and Spurzheim, and from an article in No. III. of the Foreign Quarterly Review, by Richard Chenevix, published in a separate pamphlet, with notes by Dr

relates facts essentially included in the biographical sketch published in our 35th No., p. 132, and which it is unnecessary now to repeat.)

In Paris, Dr Spurzheim married a lady of great merit. She was a widow and had three daughters when he married her. Dr Spurzheim had no children of his own. Several ladies of this city, who were introduced to Mrs Spurzheim in Paris and in London, remember her with the highest esteem and delight. Her whole manner expressed a union of true humility, tender attachment, and conscious power, which excited at once affection and confidence. She entered fully into her husband's pursuits, and aided him by her uncommon skill in drawing. To her pencil we are indebted for a number of those excellent drawings used by Dr Spurzheim in his lectures. But far more important to him was the aid which he derived from the unseen and inexhaustible treasures of a true and devoted heart. It was often observed how well their characters seemed to be fitted for each other. They were both adepts in that profoundest of all sciences, and most pleasing of all the fine arts, Christian benevolence shewn forth in beautiful manners. It is characteristic of Dr Spurzheim, that one of the reasons which influenced him in the choice of his wife, was the knowledge that she had undergone great suffering, which he thought essential to the perfection of human nature. An ancient philosopher thought that no one could become a good physician, who had not himself endured many diseases. Whatever be the merits of this speculation as regards the medical profession, it is certainly true in morals,—that no one can so readily perceive and deeply understand, and so successfully alleviate the sufferings of others, as he who is himself a man of sorrows, and acquainted with grief. Dr Spurzheim was devotedly attached to his wife, and he remained so after her death to the end of his own life. While he was in this country, though surrounded by many whom he had soon made his friends, he often mourned the loneliness of his situation, particularly when indisposition or fatigue made him long after those small services of domestic affection and ever watchful care, of which those who devote themselves wholly to one of the great general interests of mankind, be it the cause of religion or of science, stand in special need;—that wholesome atmosphere of constant love, the absence of which seems to be felt more painfully, the more unconscious we are while we inhale it. In his last sickness, he, in a mournful manner, ascribed his illness to the want of warm linen on his return from his lectures, saying, with a sigh, that if his wife had been living, it would have been before the fire ready for him. The disease of his heart he as-

Spurzheim. For a number of anecdotes, illustrating his character, I am indebted to the kindness of friends.

cribed to his loss of her, saying, his pulse had intermitted ever since her death.

The death of his wife, which took place about three years since, seemed to remind him more strongly that his life and his labours belonged to all mankind, whose vital interests he thought most effectually to promote by developing particularly the principles of education, morality, and religion, to which his studies of human nature had led him.

In the summer of the present year, Dr Spurzheim came to this country, where lectures on Phrenology had been delivered long before his arrival, and a phrenological society formed at Philadelphia. On board the ship he proved himself a friend in need to a number of poor emigrants, many of whom being taken sick on their passage, experienced his kind and successful medical assistance. Dr Spurzheim arrived at New York on the 6th of August, in the heat of summer, while the Cholera was raging there, and immediately went on to New Haven, where he stopped a few days. A letter from one of the most eminent men of Yale College, in whose family Dr Spurzheim spent much of his time, speaks of the "amiable, winning simplicity of his manners, and his unpretending good sense, and good feeling." From New Haven he came on to this city, with which he felt already familiar, through a number of Bostonians, with whom he had become acquainted in Europe. He intended to stay in this country about two years, to lecture in the principal towns, then to visit the different tribes of our Indians, and at last to return to Paris. The easy access which that city presents to so many treasures of science, and its being the place of residence of some of his most intimate friends, gave rise, now and then, to feelings of homesickness, which were soon merged, however, in that universal benevolence which made him consider any portion of the human family with which he happened to be connected, and to whom he could do some good, as his nearest relatives.

The time of Dr Spurzheim's residence amongst us is familiar to so many of my hearers, that I shall confine myself to those points which, if they be rightly improved by us, will be a lasting benefit to this community. Permit me to make some remarks,—first, on his lectures, and then on his private life and character, and his death.

He delivered in Boston one course of lectures on the anatomy of the brain, principally for medical men; and two courses of popular lectures on Phrenology, one in Boston and another in Cambridge, which he had nearly completed when death overtook him in the midst of his labours. In his anatomical demonstration of the brain, he endeavoured to unfold the design of nature in the complicated structure of this organ, by tracing its

gradual development from its lowest and simplest beginning in the spinal marrow, to its continually increasing, various, and harmonious ramifications. This scientific demonstration of the brain, which was made without any reference to the peculiar doctrines of Phrenology, together with his discoveries of some of the constituent parts of this organ, obtained for Dr Spurzheim here the same high respect as an anatomist of the brain, which had been accorded to him in Europe by the eminent men in that department.

Of his lectures on Phrenology, which were attended by large numbers of our fellow-citizens, it would be vain to attempt to give an account that would in any degree satisfy those who have enjoyed the high privilege of hearing from his own living lips the results of his original and vast inquiries. Who but he, whose lips are now sealed in death, could set forth his ideas with that natural eloquence which seemed to annihilate the difference between words and things, with those accents, so full of impressive earnestness and persuasive sweetness, which made natives listen to the broken English of a foreigner with the same intense delight with which a stranger, far from home, hears the sounds of his mother tongue, and the voice of a friend?

Instead of entering into a minute criticism of the peculiar opinions advanced in these lectures, I will only set before you the general character, and the ultimate object of all his teaching. His mode of reasoning was that which Bacon pointed out as the only way to arrive at truth. He rejected all metaphysical speculations, which turned only upon nominal distinctions; for his maxim was to seek things, not words, (*res non verba*). Theory, he thought, could teach nothing but what is taught by nature. Nothing but facts, the results of actual observation, he considered as established truths;—all doctrines contrary to observation, he rejected as false; every other supposition he thought more or less probable, as it was more or less confirmed by observation.

From the first observation made by Gall, which gave rise to the new doctrine of mental functions and their cerebral organs, it was natural that the inquiries of phrenologists should be directed chiefly to three subjects. Their studies were directed, on the one hand, to the actual structure of the brain, as ascertainable by anatomical demonstration; and on the other, to the variety of dispositions and talents among men. The conformity between certain forms of the brain and particular dispositions and talents, was the third object of inquiry, strictly designated the *physiology* of the brain.

The importance of Gall's and Spurzheim's anatomical demonstrations has been recognised by competent judges, though not all have allowed them the same degree of merit. The observations upon different dispositions and talents, which are laid down

in their works, are highly interesting and instructive; and their merit will be acknowledged by all observers of human nature, and experienced judges of character. The remarks of Gall and Spurzheim on the conformity between the manifestations of the mind and the development of the brain, have been received with more or less credit by able and fair-minded inquirers; while some, who are ready to approve or condemn without troubling themselves with a previous strict examination, have either blindly adopted or wantonly ridiculed the doctrine. Many have abandoned the study altogether, either because they saw that it required more time and effort than they were able to bestow upon it, or because they were disgusted with the blind zeal of some, and feared the sarcasm or supercilious compassion of others. Still the fear of being classed among the 'second rate' men in science, will not prevent the true student of nature from thoroughly examining a theory which pretends to be derived from no other source, and has a right to be tried by no other standard, than a careful observation of facts which are in the reach of every inquirer.

Whether the system, in consequence of repeated observation, be generally approved or rejected, it may be presumed that the consequences of its triumph, or its defeat, will hardly verify all the predictions of its friends, or its enemies. If Gall's and Spurzheim's theory of the conformity between the brain and the mind should be found substantially true, it will occupy the highest place among the different branches of physiology, and will present a new and most important evidence of the providential adaptation of matter to mind. It will also open a new way of studying human nature and individual character. Still its results will never amount to more than probable conjectures, and will consequently not supersede, or render less important, the common mode of ascertaining that which is in man, by the light of experience and history,—particularly by observing the operations of our own minds, by means of which we are enabled to understand and estimate the actions and professions of others. With regard to moral philosophy, the works of Gall and Spurzheim will convince all of the great importance of the study of nature, and particularly of physiology, in order to arrive at sound views of morality. But the influence of the peculiar doctrines of Phrenology upon ethics will hardly be so great as its authors anticipated. Though the works of Spurzheim abound in noble and salutary views and precepts, yet the great subject which lies at the foundation of moral philosophy, the moral free-agency and responsibility of man, cannot be determined by the physiology of the brain, however true to nature.

On the other hand, if a deeper study of nature should lead

to a general rejection of Phrenology, still all those important facts and principles which, though advanced by phrenologists, are independent of their peculiar doctrines, will endure; and among them Dr Spurzheim's principles of education will ever hold a distinguished place. The merits of Gall and Spurzheim as anatomists, and observers of man, will not be forgotten; nay they will probably be more freely acknowledged since death has removed both the master and his more eminent disciple, from the field of strife, and thus put a solemn veto upon all personal and party excitement which has hitherto intermingled with the discussions about Phrenology.

The speculative and practical inferences which Dr Spurzheim has drawn from his view of the innate powers of man, would require more time to discuss than the present occasion allows. I shall confine myself, in this summary account, to the general tendency and the ultimate object of his teaching; together with such practical inferences and moral precepts as were illustrated by his own conduct.

There was one thing which he thought most needful for us and for all men to learn and study; and another, which of all things he deemed the most important to accomplish or to strive after. If we sum up all that he taught us of the harmony and variety of our physical organization, of the temperaments, the animal, intellectual, and moral faculties, was not all this instruction given for the single object to teach us, or rather induce us to study, the *nature of man*? And if we think over all he taught of education, of natural morality and religion, we find that the practical end of all his inquiries was the *improvement and happiness of man*. Whatever be the merit of some of his positions, it is certain that the great final object of his life and his labours was no other than to promote the knowledge of human nature, and the improvement and happiness of mankind.

Universal benevolence, entire self-devotion of each individual to the whole family of man, was the burthen of his life and of his philosophy. Thus he says, concerning the relative excellence of different virtues, "That which interests the whole human kind is eminently superior to all the rest. True it is, indeed, that this is generally lost sight of altogether. In the appreciation of the virtues, the scale of their worth is commonly reversed. Most men think first of themselves, then of their families, then of their country, and seldom expend a thought upon humanity at large. There are even few who recognise the happiness of the species as the aim of man's existence, and the subordination of all else to this. Yet nature shows most evidently that she does all for the species; she universally sacrifices individuals to its preservation. Moreover, desire of self-preservation inheres in all animals, love of family and of country in a smaller number, but

love of the entire species is a distinguishing character of man in his best state."

Being asked what peculiar effect he thought his system had had on his mind, he said, that without it he would have been a misanthrope; that the knowledge of human nature had taught him to love, respect, and pity his fellow-beings. Those who have attended his lectures will never forget how his countenance was lighted up with joy whenever he spoke of a trait of kindness evinced by any being, whether he was looking up at the noble head of Oberlin, or pointing at the skull of a little dog that had been remarkable for his kindly disposition; and how the light of his countenance suddenly changed into darkness, and his voice almost failed him, when with averted looks and hand he pointed at the portrait of the man who murdered his own mother.

In going out to Cambridge to lecture, he occasionally forgot what he owed to himself in the care of his health; but he never forgot the horse that carried him out there; his first care was to see it warm and safe under shelter. He expressed both pity and indignation when he saw horses forced to draw a load that was beyond their strength.

If he saw a child whose head or conversation indicated extraordinary power of intellect, he would not rest until he had found the parents and warned them against the danger of exciting the mental faculties, and urged upon them the importance of attending chiefly to the physical and moral education of their child.

In his visits to our schools he always dealt with great satisfaction on the method of those instructors who made love the guiding principle of education; and he strongly disapproved of authority and ambition being made to take the place of a sense of duty and enlightened benevolence.

He was always anxious, perhaps over anxious, not to give trouble to any one. His considerate and tender regard for the feelings of others, made him peculiarly alive not to only the present, but even the future sufferings to which their individual character and sensibility might expose them. To a young friend, whom Dr Spurzheim found enthusiastically devoted to the cause of education, he said, "My friend, let me give you an advice. You are full of enthusiasm. I too, when I was young, was a great enthusiast; so that I could not comprehend how any person could question or treat with indifference what I believed important and true. Learn from my experience how to preserve your enthusiasm. Do not let it go abroad, otherwise you will diminish the influence of what you hold sacred and dear, because people will set you down as an enthusiast. So when you go to lecture, or in society, be a calm and reasoning

man; but when you return home to your study, there set your enthusiasm free, and let it be to you a mighty impulse to strong and high exertion."

To the end of his life he showed himself grateful for every kind service; and his own sufferings seemed to remind him more strongly of those of others. "Poor human nature," he exclaimed, a few days before his death, "how I pity them." His sympathy was equally hearty, whether it was called forth by the sorrows or the joys of others. Still his interest in the sufferings seemed more keen and lively than his feeling for the joys of others; and sometimes when surrounded by domestic happiness, a shade of sadness would pass over his delighted countenance, as if the sight of happiness reminded him of what he had lost.

The benevolence of Dr Spurzheim was not a matter of favour that covets favour in return, but an enlarged sense of justice, a heartfelt recognition of what was due to every being, every creature of God. This sense of justice is remarkably displayed in his work on education. It is not confined merely to an impartial treatment of children; but he aimed at doing justice to the individual talents and character of each child. He wished that all should be equally instructed in the rudiments of learning; but that each individual should be educated with especial care for that profession or occupation for which nature herself had endowed him. He urged the importance of doing justice to the animal nature of the child by a judicious physical education; and above all, to cultivate the moral nature, as being of far greater importance than the intellectual as well as the animal properties. He found fault with many of our establishments of instruction, partly on account of the want of a sound physical education, and exclusive attention to the cultivation of the intellect, and partly because the general standing and character of a scholar was judged of by a partial standard, be it his memory of words and places, or his attainments in mathematics or foreign languages. This enlarged and enlightened sense of justice was manifest, not only in laying down general principles, but in his every-day conduct and manners. He knew that men are much more inclined to be kind than just; and he always chose for himself, in preference, the performance of that duty which required the greater effort and self-denial. It is certainly not going too far if we say that his anxious desire to fulfil his engagements in Boston and in Cambridge, was the chief cause of his death. Though oppressed by indisposition, and contrary to the entreaties of his medical friends, he continued to lecture; and once in his last sickness, he started up with the intention to dress himself to go to Cambridge.

All who have attended his course remember the unwearied kindness with which he was wont to hear and answer any ques-

tion that was put to him at the close of his lecture by any one of his hearers, even when he was quite exhausted. It sometimes happened that while he was attending to the inquiries of some person unknown to himself, and not distinguished in society, he was addressed by another, a great and distinguished man. But he never attended to the second inquirer until he had satisfied the first, as though he were the great and distinguished man.

He never would allow any one who was truly desirous of studying his system, to be excluded from his lectures by poverty; and was always glad in such a case to give tickets. He intrusted several of his friends with a number of tickets for such persons as they knew to be desirous of studying Phrenology, and too poor to attend his lectures; and he added the special request that their names might not be mentioned to him, lest their feelings should be hurt by the favour he had bestowed. At one time, just before he began his course in Boston, he presented a ticket to one of his friends, who would not accept it, because he thought Dr Spurzheim should have the full benefit of his lectures; but he advised Dr Spurzheim to give a ticket for the first lecture to a gentleman then in Boston, who belonged to another town, which Dr Spurzheim proposed to visit. Dr Spurzheim objected that this gift might seem to be a means of anticipating a favourable reception for himself in that place.

Another distinguishing trait of Dr Spurzheim's mind and character was his sole regard for truth, from whatever sources it might be derived, and to whatever results it might lead. In one of his works he proposes the question, "What should be the aim of every description of study?" He answers, "The establishment of truth and the attainment of perfection;" and he quotes the saying of Confucius, "Truth is the law of heaven, and perfection is the beginning and end of all things." Some of us may remember the words with which he began one of his lectures: "I do not want you to believe what I propose to you; I only want you to hear what I have to say; and then go into the world and see and judge for yourselves whether it be true. If you do not find it true to nature, have done with Phrenology; but if it be true, you cannot learn it one minute too soon." At another time he said, "Error may be useful to a few, but truth is beneficial to all; and I prefer the good of the many to the advantage of the few."

As his own views, whether true or erroneous, were the results of a long and faithful study of nature, he also desired his hearers to adopt them on the authority of no other teacher. He heartily disliked what he called "sheep-converts." He wished that his science should be studied as a part of physiology; and anxiously endeavoured to prevent its becoming an

instrument of quackery and soothsaying in the hands of the ignorant and presumptuous. He therefore constantly refused the requests of those who wished him to point out their own characters, or those of others; and earnestly advised his too ardent disciples to learn and reflect, before they set out to teach and practise.

All the writings and the lectures of Dr Spurzheim were marked by the decidedly religious tendency of his mind. One chief distinction between his and Gall's doctrine, upon which he laid great stress, was this, that Gall admitted an organ and innate propensity for theft, and one for murder, whilst Spurzheim expressed his conviction that the good Creator could not have given an organ for evil; that all powers were intended for good, though by abuse they might become instruments of mischief. Whatever particular form of faith he may have preferred, he firmly believed in the essential truths of natural and revealed religion. He adopted Christianity as a divine system, chiefly on the ground of its great internal evidence, its perfect adaptation to human nature, and the spirit of truth and divine philanthropy which gives life to all its precepts. All morality, he thought, was contained in these two precepts, Thou shalt love the Lord thy God, and thy neighbour as thyself. All prayers, he thought, were comprised in this one—"Father, thy will be done."

The great aim of all his inquiries into human nature was, to search out the will of God in the creation of man. Obedience to his laws he considered as the highest wisdom and most expansive freedom. In speaking of theories of men's invention, he remarked, "We say a great deal, and we think we do a great deal; we would be wise above what is given, and work upon the works of God; but it is all nothing.—Thy will be done!—The Father is always overlooked. We look to him perhaps amid great trials and on great occasions; but not in smaller things. We say, 'they are too little.' It is this in which we err. Can anything that concerns his children be too little for a *Father*?"

Religion, he thought, must be the result of the freest and most exalted use of our reason. To those who would exclude reason from the dominion of religion, he said, "Reason is the noble gift by which the Creator has distinguished man from all other animated things. God, who is all wisdom and all reason, could never create man in his own likeness, as it is said he did, and then forbid the employment of the very faculties which must form a principal feature in the resemblance."

I cannot refrain here from quoting a passage from a manuscript to which, on any other occasion than this, I should not feel authorised to recur. It is a letter from an aged lady, now

residing in Paris, an old and faithful friend of Dr Spurzheim, which he received a few days before his death. What she writes in confidence to her absent friend, will best show the opinion of those who stood nearest to him, concerning his religious character.

Speaking of the poor emigrants who came over in the same vessel, she says, "That you, my dear friend, have rendered yourself on board the vessel so useful by your talent as a physician, ought to reconcile you to the medical science. Many of these poor men would perhaps have perished without your aid; and the fact that all were saved, is for you no small blessing." She then goes on expressing her compassion for the situation of the poor emigrants, and only wishes that their souls might have been ministered to by pious and enlightened preachers of the Gospel, as their bodies were by his watchful care. "You, my friend, who are so well acquainted with Holy Writ, must confess, that by not receiving the Divine Word, many men have been made wretched."

While Dr Spurzheim resided in Boston, he spent his time chiefly in preparing and delivering his lectures, and in visiting our public institutions, our hospitals, prisons, house of industry, churches and schools. He was also present at the public exhibitions of our university, and showed a hearty interest in every effort at improvement, in individuals and in the community. His heart was with us in every attempt at improving our laws, at keeping up the purity of morals in the community, reforming the vicious, raising the condition of the poor, and particularly in the education of the young, in which he was desirous of aiding us by the results of his own observation and reflection. His modesty and his habits of patient investigation prevented him from judging hastily of what he noticed in this country; he preferred waiving his decision until farther observation and experience should enable him to form more correct notions. Still he was always willing frankly to express his own opinion of what he had observed, whenever he thought that the light in which he viewed it might be of some use to others. Whenever he expressed an opinion on the characters of men, he always showed an uncommon power of discerning not only the striking points, but even the nicer combinations of different moral and intellectual qualities.

He was pleased to find that our wealthy men generally had made their fortunes by their own industry, and that the laws of the land prevented the accumulation of wealth in the same families. The free institutions of our country gave him great satisfaction, and he frequently spoke of the advantages of a residence in the United States for bringing up children, presenting as it did the encouraging prospect of repose and freedom from political tumult, at least during the present generation. But

he said, unless self-esteem and the love of distinction were checked, and unless in the place of ambition, conscientiousness and feelings of respect and veneration were called forth and cultivated in the young, we should end in fighting.

The great exertions which Dr Spurzheim made during his residence in Boston, proved at last too powerful even for his strong and vigorous constitution, which seemed more energetic in proportion to his labours, while it was actually sinking under them. Besides his course on the anatomy of the brain which he delivered at the Medical School, he lectured every day, alternately, at the Boston Athenæum, and at Cambridge. The great physical and mental effort during the delivery of his lectures, was obvious from the large drops that rolled down his face, forming a striking contrast with the easy, calm, systematic, persuasive and sportive character of his delivery. But these efforts brought on an exhaustion of his system, which was rendered dangerous by his frequent rides at night, when returning home from his lectures. At one of his last lectures in Boston (the beautiful lecture on charity and mutual forbearance), while he was diffusing light and warmth among his hearers, he was seen suddenly shivering. From that time his illness increased; he grew more feverish; but he continued to lecture, contrary to the entreaties of his friends, saying that he would not disappoint his hearers, and that the exertion would help him to throw off his indisposition. From the beginning of his course the number of his hearers had been continually increasing with every lecture; at last he exchanged his lecture-room at the Athenæum for the large hall in the Temple. He had finished his course of lectures in this city with the exception of one; and in order to prevent any uncertainty with regard to the place where he was to give his concluding lecture, and desirous of consulting the wishes of his hearers, before he left the hall, he inquired of them, "In what place shall we meet next time?"—He knew not that there was no human voice that could rightly answer this question.

He returned from this lecture to his lodgings, not to leave them again. All that medical aid and the devoted services of friendship could do for him, was faithfully performed. He was constantly attended by a number of our most eminent physicians, and by friends from Boston and Cambridge, who took care of him day and night. His faith in the medical aid of nature was stronger than in that of men, and he refused repeatedly to use the remedies proposed. He manifested at times great impatience at little disappointments, which he had not evinced in health; and this state of mind passed almost insensibly into delirium, particularly in the night. But as long as he was master of his faculties he gratefully acknowledged the kind assiduity of his friends, and though he occasionally showed

irritability when his wishes were not strictly complied with; he never murmured at his sickness, but awaited its issue with entire submission.

When his sickness began to grow more dangerous, he said to one of his best friends, "I must die." The other said, "I hope not;" and he replied, "Oh yes, I must die; I wish to live as long as I can for the good of the science; but I am not afraid of death." Two letters which he received a short time before his death, from some of his intimate friends in Paris, so entirely overcame his feelings, that he could read only a part, and then laid them down, weeping.

The delirium which had been continually increasing during the first part of his illness, gradually gave way to a stupor settling upon him towards the close, from which he however occasionally revived; particularly once, a short time before death, when a friend of his addressed him in his mother tongue.

On his deathbed, the same day on which he died, I saw him with his hands folded upon his breast, while deep tranquillity was resting upon his uplifted countenance, as if saying within himself, "Father, thy will be done." He died without a groan or a misgiving.

Such was the life, death, and character of Gaspar Spurzheim. He died in the fifty-sixth year of his life, on the 10th of this month, at eleven o'clock in the evening. He died, as his pious friend has said, supported by the tenderest care of earthly friends, in the arms of his heavenly Father. He died far from his native land, in the midst of strangers—strangers who are now weeping over him as a brother that has left them, and whose face they shall see no more, until they join him in their Father's house.

Among the friends who, on the morning after Dr Spurzheim's death, met at his lodgings, there were some artists earnestly engaged in copying the outlines of his face. If they were anxious to rescue from the hand of death and to save from oblivion at least some traces of that noble and benign countenance, should we not cherish the living image, the impress of himself, which he has left in our own grateful recollection? It is the recollection of a man without rank, or wealth, or power; not a native of this country, in whose merits patriotic pride could find a cause of self-admiration; but a foreigner, who came to this country not in order to fight its battles or to open some new source of wealth, but solely to aid us in achieving our intellectual and moral independence. Whatever be the merit of the system he taught, though it were nothing more than a warning against seeking truth in the same path which he struck out and pursued, yet he has done all that can make a man a helper and an example to his fellow-man; he has descended deep, and worked hard and long in the mines where he hoped to find the

hidden treasure, and where we saw his light, and followed after it until it vanished.

His death, then, is a source of deep sorrow to all; while those who were intimate with him have each a special share in the common sorrow. There are not a few who, on looking back upon the short time that this man walked amongst us, and upon the power of thought and affection which he called forth, will view his labours amongst us as a series of moral miracles, the age of which, God be thanked, has not yet passed. Then let us cherish the remembrance of the lively and intense interest with which we once thronged around the living, and the just and sacred sorrow which now unites us around the dead. Let us prove ourselves the true followers of him whose life was a pilgrimage after truth, and who died in its service. Let us be his followers indeed; not blindly adopting his doctrines, on his authority—for he himself would disown such disciples. Let us not resemble the crusaders of old, fighting for the sepulchre, instead of striving after the spirit of Him who was risen; but let us take up the fallen standard from the hands of the dead, and follow the leader in our own breast. So let us work together, and worship, though it be with a veil upon our minds, until He who knows the end from the beginning, shall say, "It is finished," and the veil of the inner temple be rent in twain; and He himself shall show us when and where we shall meet again.

ODE, FOR THE FUNERAL OF DR SPURZHEIM, NOVEMBER 17. 1832;

BY REV. JOHN PIERPONT.

BREAKERS, there is bending o'er thee
Many an eye with sorrow wet;
All our stricken hearts deplore thee:
Who, that knew thee, can forget?
Who forget what thou hast spoken?
Who, thine eye—thy noble frame?
But, that golden bowl is broken,
In the greatness of thy fame.

Autumn's leaves shall fall and wither
On the spot where thou shalt rest;
'Tis in love we bear thee thither,
To thy mourning Mother's breast.
For the stores of science brought us,
For the charm thy goodness gave,
To the lessons thou hast taught us,
Can we give thee but a grave?

Nature's priest, how pure and fervent
Was thy worship at her shrine!
Friend of man,—of God the servant,
Advocate of truths divine,—
Taught and charmed as by no other,
We have been, and hoped to be;
But while writing round thee, Brother,
To thy light—'tis dark with thee!

Dark with thee!—no; thy Creator,
All whose creatures and whose laws
Thou didst love,—shall give thee greater
Light than earth's, as earth withdraws.
To thy God thy godlike spirit
Back we give, in filial trust:
Thy cold clay—we grieve to bear it
To its chamber—but we must.

A LAST FAREWELL TO THE STRANGER-FRIEND.

Thou didst come a stranger here,
O'er the tossing ocean's foam;
Now we shed the heart-felt tear,
For the friend that has gone home.

What thou knewest of the mind
Thou to teach us here didst come;
What it is thy soul shall find,
In its blessed native home.

All thy manhood, all thy youth,
Lonesome pilgrim, thou didst roam
Seeking for immortal truth;
Thou hast found her now, at home.

We are still, where thou hast been,
Far from that celestial dome;
We who took the stranger in,
We are strangers—thou, at home.

ARTICLE IV.

ON THE NATURAL PROVISION FOR THE SECURITY OF THE BRAIN; WITH AN ANSWER TO SIR CHARLES BELL'S OBJECTIONS TO PHRENOLOGY.

THE Creator has displayed admirable skill in protecting the vital organs of the human body against injury from external violence; and in proportion to the importance of the part, is the care bestowed upon its defence. The bloodvessels, for instance, which are among the most essential parts of the animal frame, cannot be injured without serious mischief, and any considerable violence applied to them is attended with a fatal result. "On this account, the greatest possible care has been taken to protect them, by placing them in situations in which external force can scarcely reach them. Their great trunks are uniformly situated in the cavities of the body, or are imbedded deep in the substance of the limbs: they pursue their course in the neighbourhood of the bones, and under their shelter; often in grooves excavated in the bones on purpose to receive and secure them. Whenever they approach the surface, they divide into small branches, and this division goes on diminishing the calibre of the vessels, until, when actually at the surface, they are exceedingly minute. A wound in an artery being much more dangerous than a wound in a vein, on account of the greater impetus with which the blood is propelled through the former, the artery always lies deeper than the vein, and is more imbedded in soft and elastic substances, and more concealed in channels formed in the bones, or protected by stout parapets thrown up on each side of it."* Ample provision has, in like manner, been made for the security of so principal an organ as that on which depends the manifestation of the mind. "The brain," says Rae, in his quaint but instructive work on natural theology,† "is the principle of all sense and motion, the foundation of the animal spirits, the chief seat and palace-royal of the soul; upon whose security depends whatever privilege belongs to us as sensitive or rational creatures. This, I say, being the prime and immediate organ of the soul, from the right constitution whereof proceeds the quickness of apprehension, acuteness of wit, solidity of judgment, method and order of invention, strength and power of memory,—which if once weakened and disordered, there follows nothing but confusion and disturbance in our apprehensions, thoughts, and judgments,—is environed

* *Animal Physiology*, in *Library of Useful Knowledge*, p. 72.

† *The Wisdom of God manifested in the Works of the Creation*. By John Rae. London, 1697.

about with such a potent defence, that it must be a mighty force indeed that is able to injure it:—1. A skull so hard, thick, and tough, that it is almost as easy to split a helmet of iron, as to make a fracture in it. 2. This covered with skin and hair, which serve to keep it warm, being naturally a very cold part, and also to quench and dissipate the force of any stroke that shall be dealt it, and rotund the edge of any weapon. And yet more than all this, there is still a thick and tough membrane, which hangs looser about it, and doth not so closely embrace it (that they call the *dura mater*), and in case the skull happens to be broken, doth often preserve it from injury and diminution: And, lastly, a thin and fine membrane, strait and closely adhering, to keep it from quashing and shaking." In addition to what is here mentioned by Rae, it may be observed that the arched form of the skull imparts to it great strength; and that its two tables, connected by the soft and spongy *diploë*, are, by a well-known law in mechanics, more capable of resisting pressure, than if the same quantity of matter had composed one dense and solid plate. The outer table, moreover, is exceedingly tough, so that the injurious effects which would otherwise have ensued from vibration are avoided. Its parts are firmly dovetailed into each other. The inner table is hard and brittle, and well fitted to resist the entrance of a pointed instrument. The edges of its parts merely lie in contact; as, from its hardness and brittleness, dovetailing would here be useless. Finally, the brain, like most of the other organs, is double, so that its functions can to some extent be performed notwithstanding injury sustained by one of the hemispheres.

The utility of these precautions is obvious. To use the words of Sir Everard Home *, " sudden pressure of any kind upon the cerebrum takes away all sensibility. After the operation for the trepan, before the skull in that part is ossified, pressure upon the brain with the finger produces insensibility." So necessary is a hard unyielding covering to this most important organ!

In connexion with this subject, it may be proper to advert briefly to some remarks directed against Phrenology by Sir Charles Bell, in the first volume of his work on the Anatomy and Physiology of the Human Body.

After admitting that the bones of the skull are " necessarily adapted to the form of the brain previously existing," he asks, But " has not the skull those forms which best resist violence from without?" " Is the brain, while it is yet exposed, and has no bony covering, formed with a relation to the case which is destined to cover it, or not? Look to the whole skeleton, and

* Phil. Trans. 1814, part 1. p. 476.

we shall find the answer: observe how the bones are formed in their just proportions to bear the weight, and to move in certain directions, long before they can be exposed to pressure or put to use; how they are strengthened with spines wherever the force is destined to be applied; how curiously fashioned at their extremities, to permit motion in the direction proper to the joint, and consistent with the movement of the whole limb. These provisions are made while the bones of the extremities are soft and transparent cartilages, and have not yet been put to their proper offices; and shall the skull, which is intended to protect the noblest organ, be merely an accidental cast of the brain: and can it be supposed that its forms bear no relation to its proper office? This cannot be admitted;—it must be granted that the skull bears relation to external circumstances; and if this be so, must not the brain be formed with relation to the skull, and to such forms of the skull as are capable of protecting it? It follows, therefore, that, although the skull be in close contact with the brain, and formed over it, yet if the external shape be obviously that which is best calculated to resist injury from without, we must conclude that the brain conforms to what is necessary in the shape of the skull; and although first formed, that it is bound up in that manner which shall best secure its protection by bone.”—(Pp. 189, 190, 5th edit.)

Few, we believe, will call in question the soundness of Sir Charles Bell's opinion, that the brain originally and prospectively receives a form more or less approaching to the spherical, so as to mould the skull into a shape well adapted for security and strength. Phrenologists have never pretended that there exist heads which do not present an arched appearance; nor do they deny that the brain has that general configuration before its bony case is developed. But how does it happen that “those forms which best resist violence from without” are so utterly devoid of uniformity, that it is as impossible to find two skulls possessing exactly the same shape and aspect, as to discover two faces between the features of which there is a minute and perfect resemblance? Why is it, for example, that in some heads, such as that of Sir Walter Scott, the distance from the ear to the summit is strikingly great in proportion to the other dimensions, while in many other individuals the skull, though neither short nor narrow, hardly rises above the level of the eyes? And why is the lateral measurement of some heads greater than the longitudinal, while in others the length is twofold greater than the breadth? Finally, Why is the apparent standard of the perfect shape in one
 another? Till
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 argument must be considered as

equally weak and unphilosophical. Even in foetal brains difference of shape is very perceptible.

If any farther proof be necessary to shew the futility of this objection to Phrenology,—for as such it is evidently meant,—it is to be found in those cases where the form of the skull has visibly altered during life, accompanied by a corresponding change in the mental manifestation. Such an alteration frequently takes place in healthy subjects, but it is particularly obvious in cases of insanity. A gentleman with whom we were personally acquainted, and whose case is detailed in the 4th volume of this Journal, p. 495, fell, at the age of eighteen or nineteen, into a state of mental derangement. As the insanity increased, the size of his head was gradually diminished, and his intellectual faculties became obviously more and more feeble towards the end of his life. This diminution was so great, that he observed the circumstance himself, and said that each hat which he purchased required to be smaller than its predecessor. He accounted for the decrease which thus became necessary in the size of his hats, by ascribing it to the sublimation of his brain;—saying that he was becoming purely ethereal, and that the grosser particles of his head were evaporating daily. At his death the small size of the forehead was remarkable, and the frontal sinus, which was found to extend backwards over the orbital plate nearly to the bottom of the socket, was very large and deep.

A yet more striking case is mentioned by Esquirol. In the course of his lecture on 7th February 1819, at which a medical friend was present, from whose notes, taken on the spot, we have derived our information, he spoke as follows:—“To-day we have the dissection of a woman who was admitted into the hospital about four years ago, for a religious melancholy. After some time she believed herself *possédée de Dieu et de Christ*, and became very gay. She then believed me to be God, and under that idea did whatever I ordered. I hoped to cure her by this means, but was mistaken. She relapsed into melancholy, and at last obstinately refused any nourishment, and soon fell into a state of marasmus. Symptoms of scurvy appeared; she became very feeble, and at last became torpid, and died. *At the time of her admission she had a large forehead, so much so that I had a drawing made of it as remarkable. Now, the forehead is small and narrow.*”

Facts like these unanswerably demonstrate, that whenever the form of the brain is altered, and by whatever cause, the skull implicitly conforms itself to the change. In no case, however, does the brain assume any other than a convex shape; and the skull, in consequence, always preserves to a greater or less extent its arched appearance. The reasoning of Sir Charles Bell, therefore, is entirely irrelevant and pointless.

But he does not confine his argument to the *general* form of the skull: "I shall prove further," says he, "that the *lesser* prominences, which are adding strength to it, result from circumstances quite independent of the brain, and ought not therefore to be brought forward as indications of propensities of the mind." And after making some remarks on the eminences of the frontal bone, he proceeds: "Let us now direct our attention to the prominence of the parietal bone," (the situation of the organ of Cautiousness). "If the man were to fall on the side of the head, the injury would be inflicted on the point of the utmost convexity, the lateral projection; and here, where the bone assumes the arched form of strength, we find that it is also increased in thickness. In this instance, as in the forehead, the outward convexity, or the elevation of the surface of the bone into a higher arch, bears no relation to the surface of the brain beneath." (P. 191.)—Now, the fact is, that it *does* bear a very obvious "relation to the surface of the brain beneath." The general statement, indeed, we shall not at present dispute—that the skull is thicker (certainly not more than *slightly* thicker) at the centre of the parietal bones than in most other regions. This, however, though it be, according to Sir Charles, *the truth*, is, on the very same authority, not *the whole truth*. He assumes that the parietal bones of every skull indiscriminately are "increased in thickness;" and if it be true, "the outward convexity bears no relation to the surface of the brain beneath, every skull without exception ought to exhibit "the lateral projection" of which he speaks. But the fact is very much the reverse of this; some heads being distinguished by exceedingly convex and elevated parietal protuberances, and others by perfect flatness, or even depression, at the same parts. Let the reader contrast the two skulls, of which representations are given on page 291. of this number of our Journal, and he will perceive a dissimilarity of form and proportion, which can be accounted for only by great difference in the shape of the brain, independently altogether of the thickness of the skull. The length of one of them is $7\frac{1}{2}$ inches, and of the other $7\frac{1}{4}$; yet the breadth of the shorter of the two at the parietal protuberances exceeds that of the longer by upwards of an inch. In one, moreover, the bone assumes much more of "the arched form of strength" than in the other; and as its thickness is nearly the same in both, we shall find, on looking into the interior of any two such skulls, that the cavities in the centre of the parietal bones are of very different dimensions, and that their depth is very nearly in proportion to the extent of the elevations without. Many skulls, of shapes still more widely different than those to which we have directed attention, might be pointed out in the Museum of the Phrenological Society, or in any assemblage of living subjects. It would be ridiculous to affirm that

each individual skull possesses that configuration which is fitted "best to resist violence from without." Yet this seems to us to be the position maintained by Sir Charles Bell. Though much more might be said to prove its unsoundness, we think that any farther observations on the subject would be superfluous.

Sir Charles proceeds: "It is a strange delusion that would lead some men to believe, that in the outward configuration of the skull, by which I mean the forms which have relation to the organs of sight, smell, and voice, and those spines and prominences which have respect to the strength of the skull, or to the attachments of muscles, they see the indications of particular properties of the mind, or the organs of certain propensities." (P. 192).

This vague and declamatory charge, so far as it is intelligible, admits of an easy answer. If by "the forms which have relation to the organs of sight," (we are not aware that phrenologists make observations on "the forms which have relation to" those of "smell and voice"), he means the configuration—that is, the prominence, width, and general appearance—of the skull, above, within, and at the sides of the orbits,—we would remark, that the forms of these parts, in different individuals, are exceedingly various, and so must "have relation" to something else than "the organs of sight;" that phrenologists have ascertained, by a most extensive series of *observations*, that certain forms of this region of the head are uniformly accompanied by particular intellectual qualities; and that the only philosophical mode in which this can be shewn to be "a strange delusion," is to prove, *by observation*, that the shape of the parts in question is no index whatever of intellectual qualities. Nothing could be more disingenuous and incorrect, than the insinuation that "in those spines and prominences which have respect to the strength of the skull, or to the attachments of muscles," phrenologists believe that "they see the indications of particular properties of the mind, or the organs of certain propensities." We defy Sir Charles to point out a syllable in the writings of Gall, Spurzheim, or Combe, that gives the slightest countenance to such an averment. On the contrary, these authors are careful to warn their readers against the identical practice he ascribes to them. It is preposterous to assert that phrenologists believe protuberances of bone to be "the organs of certain propensities." Sir Charles knows well their belief to be, that in the *brain* alone those organs are situated. Sincerely as we respect his talents, we cannot refrain from thinking that he has allowed prejudice and personal considerations to obscure equally his judgment and his candour, in commenting on what he styles a "pregnant error," "which,

though blown out to the extent of a splendid folio, is only a more monstrous misconception."

We shall conclude these cursory remarks by making known to our readers the theory of a learned professor of anatomy in Edinburgh, as to the cause of the variety which exists in the form of the heads of different individuals. It was delivered not long ago *ex cathedra*, and has been in substance reported to us by a gentleman who heard the lecture, and on whose accuracy we place the utmost confidence. "As the brains of performers on the violin," said the professor, "are more fully developed on one side than on the other, in consequence of the habitual inclination of the head inseparable from that employment, so it is probable that the projection of forehead which we find in studious and intellectual men, is caused by bending the head forward in the act of perusing books." This is truly a glorious specimen of antiphrenological wisdom and acumen; and makes plain the reason why every tailor, shoemaker, and watchmaker,—every breaker of stones by the wayside,—and every confirmed reader of the merest trash,—presents a splendid development of the intellectual organs! It shews also, very clearly, that men of inquiring minds have not, by nature, prominent foreheads; that fondness for reading is the *cause*, not the *effect*, of a large frontal lobe of the brain; and that, to render the most stupid dunce a man of profound understanding, we have only to make him contemplate the ground at his feet for a few weeks, or to force him to relinquish the erect attitude by which man is distinguished, and walk for a season upon all fours! Dulness, in fine, will no longer exist upon earth: it must speedily disappear before this incomparable method of improving the human mind!

ARTICLE V.

ON THE POWER, WISDOM, AND GOODNESS OF GOD, AS MANIFESTED IN THE ADAPTATION OF EXTERNAL NATURE TO THE MORAL AND INTELLECTUAL CONSTITUTION OF MAN. By the Rev. THOMAS CHALMERS, D. D., Professor of Divinity in the University of Edinburgh. 2 Vols. London, 1833.

THE late Earl of Bridgewater died in February 1829, and left the sum of L. 8000, which by his will he directed the President of the Royal Society of London to apply in paying any person or persons to be selected by him, "to write, print, and publish one thousand copies of a work 'On the Power, Wisdom, and Goodness of God, as manifested in the creation;' illustrating such work by all reasonable arguments, as for instance,

the variety and formation of God's creatures in the animal, vegetable, and mineral kingdoms; the effect of digestion, and thereby of conversion; the construction of the hand of man, and an infinite variety of other arguments; as also by *discoveries, ancient and modern, in arts, sciences, and the whole extent of literature.*" The President of the Royal Society called in the aid of the Archbishop of Canterbury and of the Bishop of London, and with their advice nominated eight gentlemen to write eight treatises on different branches of this great subject. The present work is one of the treatises produced in consequence of this appointment; and the author receives L. 1000 for it, and the whole profits from the sales.

We cannot conceive a nobler or more useful object than that which the Earl of Bridgewater had in view in making this bequest. The happiness and dignity of human life depend in a very great degree on the notions which we entertain of our own nature, of the purpose of our existence on earth, and of the relationship in which we stand to other created objects and beings.

We request the attention of our readers to the foregoing extract from the Earl of Bridgewater's will, and to the title of the Essay which Dr Chalmers was employed to compose. It was not a religious work, the principles of which were to be drawn from revelation, nor one in which the influence of revelation on human improvement was at all to come into discussion; but an essay having a very distinct object. He was engaged to shew forth "the *adaptation of external nature to the moral and intellectual constitution of Man*;"—in other words, to consider external nature as it exists, and the constitution of the human mind as it exists, and to throw all the light which he could on "the Power, Wisdom, and Goodness of God, as manifested in the adaptation" of the one to the other.

A grand qualification for the due execution of such a task was, that the Essayist should be perfectly free to survey external nature and the constitution of the human mind, in an independent spirit; without bias, trammel, or prejudice; and with an honest desire to discover in both, and in their reciprocal adaptation, all the excellent qualities, and every proof "of the Power, Wisdom, and Goodness of God" which they might fairly manifest: also, that he should lie under no temptation to sacrifice to previous opinions, any of the inferences which might legitimately present themselves from his inquiries.

The object of the Earl of Bridgewater appears to have been to ascertain what the character of external nature and the capacities of the human mind really are, and what is the adaptation of the latter to the external world; questions of vast importance in themselves, but which can be solved only by direct, bold, and unbiassed appeals to Nature herself. After Nature has been

observed carefully and honestly, her constitution and adaptations faithfully recorded, and legitimate inferences drawn, it will be highly instructive to compare these inferences with our interpretations of Scripture, and to discover how far the one harmonizes with the other; but the essayist ought not to commence by interpreting nature according to his preconceived scriptural opinions; because this would be betraying the trust committed to him by the Bridgewater trustees, who required him simply to report nature's own pure and direct testimony, unmixed with any other impressions. If, on subsequently comparing the views thus ascertained with the established interpretations of Scripture, he should find them to differ, it would then become a subject of enquiry, which of the two he had read aright—nature or revelation; for when we interpret both correctly, they will undoubtedly coincide.

To do justice to such a subject, the boldest and most vigorous intellect, the finest moral sentiments, and the most extensive stores of knowledge, would be required. Of Dr Chalmers's natural qualifications for such a task we entertain a very favourable opinion; but as we would not select for our champion a warrior whose arms were pinioned, nor stake our property on the fleetness of a horse whose legs were tied, neither would we have chosen for an advocate of the excellences of nature a professor of divinity, a leading article of whose doctrine is the deep seated, and, in this world, irremediable corruption of all the faculties of man*. As, however, Dr Chalmers did not consider

* Every clergyman of the Church of Scotland, on entering the ministry, subscribes to the following views of "the power, wisdom, and goodness of God," as manifested in creation. "Our first parents (says the Confession of Faith, chap. vi.) being seduced by the subtlety and temptation of Satan; sinned in eating the forbidden fruit. This their sin, God was pleased, according to his wise and holy counsel, to permit, having purposed to order it to his own glory. By this sin they fell from their original righteousness and communion with God, and so became dead in sin, and wholly defiled in all the faculties and parts of soul and body. They being the root of all mankind, the guilt of this sin was imputed, and the same death in sin and corrupted nature conveyed, to all their posterity, descending from them by ordinary generation. From this original corruption, whereby we are utterly indisposed, disabled, and made opposite to all good, and wholly inclined to all evil, do proceed all actual transgressions. This corruption of nature, during this life, doth remain in those that are regenerated: And although it be through Christ pardoned and mortified, yet both itself and all the motions thereof are truly and properly sin."—"The ability of believers to do good works is not at all of themselves, but wholly from the Spirit of Christ. And that they may be enabled thereunto, besides the graces they have already received, there is required an actual influence of the same Holy Spirit, to work in them to will and to do of his good pleasure."—"Works done by unregenerate men, although for the matter of them, they are things which God commands, and of good use both to themselves and others, yet because they proceed not from a heart purified by the Spirit, and are not done in a right manner, according to the word, nor to the glory of God, they are therefore sinful, and cannot please God."

himself precluded by his professional articles of belief from undertaking the duty, it is far from our intention to blame him for doing so. The only legitimate inquiry of the critic is, how has he executed his task? We shall first present the reader with a brief analysis of his views, and then notice some omissions which appear to us to be important.

In chapter 1st, Dr Chalmers treats of the Supremacy of Conscience. In his observations on this subject there is nothing new. Bishop Butler long ago taught, "that one of our principles of action, conscience or reflection, compared with the rest, as they all stand together in the nature of man, plainly bears upon it marks of authority over all the rest, and claims the absolute direction of them all, to allow or forbid their gratification." The same doctrine is expounded at large by Combe, in his Constitution of Man, published in 1828, § 4, entitled, "The faculties of man compared with each other, or the supremacy of the moral sentiments and intellect."

The second chapter is "on the inherent pleasure of the Virtuous, and misery of the Vicious, Affections;" and consists of ingenious and often beautiful statements and illustrations of a doctrine repeated by every moralist from Plato downwards to the present day.

Chapter 3. treats of "the Power and Operation of Habit;" a subject so hackneyed, that even Dr Chalmers's brilliant imagination has been unable to add a new idea to the previous stock.

The 4th chapter is "on the General Adaptation of External Nature to the Moral Constitution of Man," and in it we expected something appropriate to the object of the essay, as indicated in its title, but we were grievously disappointed. The author informs us, indeed, that "the wisdom of God admits of glorious vindication against any such charge (that of maladjustment) in the physical department of our nature, where the objective and subjective have been made so marvellously to harmonize with each other; there being, in the material creation, sights of infinitely varied loveliness, and sounds of as varied melody, and many thousand tastes and odours of exquisite gratification, and distinctions innumerable of touch and feeling, to meet the whole compass and diversity of the human senses,—multiplying without end, both the notice that we receive from external things, and the enjoyments that we derive from them." There is, however, in this chapter neither opening up nor following out of the glorious prospect of "adaptation" here presented: Dr Chalmers leaves it, and proceeds to remark, that, "as little in the moral department of our nature is any of its faculties, and more especially the great and master faculty of all, Conscience, left to languish from the want of occupation. The whole of life, in

fact, is crowded with opportunities for its employment." He illustrates this last proposition under the following head: "The influence brought to bear on each individual possessor of conscience from without, and by his fellow men." "We cannot," says he, "frequent the companionships of human life, without observing the constant circulation and reciprocal play of the moral judgments among men,—with whom there is not a more favourite or familiar exercise than that of discussing the conduct and pronouncing on the deserts of each other." He draws illustrations also from the effects of universal virtue or universal vice on the well-being of human society. This chapter concludes with the following most just, but to us most unexpected, observations. "In the grievous defect of our national institutions, and the wretched abandonment of a people left to themselves, and who are permitted to live recklessly and at random as they list, we see enough to account both for the profligacy of our crowded cities, and for the sad demoralization of our neglected provinces. But, on the other hand, we feel assured, that in an efficient system of wise and well principled instruction, there are capabilities within our reach for a great and glorious revival. We might not know the reason why, in the moral world, so many ages of darkness and depravity should have been permitted to pass by, any more than we know the reason why, in the natural world, the trees of a forest, instead of starting all at once into the full efflorescence and stateliness of their manhood, have to make their slow and laborious advancement to maturity, cradled in storms, and alternately drooping or expanding with the vicissitudes of the seasons. But though unable to scan all the cycles either of the moral or natural economy, yet may we recognise such influences at work, as when multiplied and developed to the uttermost, are abundantly capable of regenerating the world. One of the likeliest of these influences is the power of education, to the perfecting of which so many minds are earnestly directed at this moment, and for the general acceptance of which in society, we have a guarantee, in the strongest affections and fondest wishes of the fathers and mothers of families." (Vol. i. p. 186.)

Chapter 5. treats of "the Special and Subordinate Adaptations of External Nature to the Moral Constitution of Man." Here we meet with the announcement that, "notwithstanding the blight which has so obviously passed over the moral world, and defaced many of its original lineaments, while it has left the materialism of creation, the loveliness of its scenes and landscapes, in a great measure untouched—still we possess very much the same materials for a natural theology, in reasoning on the element of virtue, as in reasoning on the element of beauty." (P. 191.) He observes that, as the Creator has given man "the appetite

of hunger," to insure that he shall take food, so He has given him a variety of instinctive mental tendencies, "for wisely devising or regularly acting with a view to distant consequences, and amid the complicated relations of human society." He adverts to two of these—Anger, and "shame between the sexes;" the former of which he shews to be an instinct common to us with the brutes. These are the only two emotions discussed in this chapter, which terminates thus: "There are many other special affections in our nature, the principle of which will fall to be noticed in succeeding chapters; and the interests to which they are respectively subservient, form a natural ground of division in our treatment of them. Certain of these affections stand related to the civil, and certain of them to the economic, wellbeing of society; and each of these subserviencies will form the subject of a separate argument." (P. 217.)

Chapter 6. is "on those Special Affections which conduce to the Civil and Political Wellbeing of Society." The first of these is "natural affection;" the next "paternal, and brotherly and filial affections." He denounces "certain transcendental speculatists, who would cut asunder all the special affinities of our nature, in order that men, set at large from the ties and the duties of the domestic relationship, might be at liberty to prosecute a more magnificent and godlike career of virtue." This is an eloquent reproof to Mr Owen and his followers. He notices the "principles, whether elementary or complex, by which property is originated, and by which property is upholden." "In very early childhood, there are germinated both a sense of property and a respect for the property of others, and that long before the children have been made the subjects for any artificial training on the thing in question, or at all capable of any anticipation, or even wish, respecting the public and collective wellbeing of the country at large." The law defends "from violation that existent order of things which itself had established, or rather, which itself had ratified."

Dr Chalmers shews, that an equitable regard to others is quite compatible with an equitable regard to ourselves, or that the individual and social affections of our nature are not necessarily inconsistent with each other. He sums up his doctrine concerning property as follows: "The conception of property is aboriginal; and the office of justice is not to put it into any man's head, but to arbitrate among the rival feelings of cupidity." "The use of justice is not to give the first notion of property to those who were destitute of it, but to limit and restrain the notion with those among whom it is apt to exist in a state of overflow." (P. 275.) This chapter concludes by the statement "of one special adaptation, highly important in itself, and which forms an instance of adaptation in the pure and limited sense."

the term; namely, "We advert to the actual fertility of the land; and to the circumstances purely physical by which the degree or measure of that fertility is determined." These circumstances are the waste of vegetable mould, by being blown away as dust or washed down in rivers, and the perpetual repair of this waste by the disintegration of the hardest rocks in the uplands of the territory, where dust and debris are carried down to fertilize the low regions deprived of their former stock of mould. "The strength of the possessory feelings on the one hand; giving rise to possessory rights recognised and acquiesced in by all men; these rights investing a single individual with the ownership of lands, that yield on the other hand a surplus producé, over which he has the uncontrolled disposal, make up together such a constitution of the moral, combined with such a constitution of the material, system, as demonstrates that the gradation of wealth in human society, has its deep and its lasting foundation in the nature of things." (P. 281.)

In the second volume Dr Chalmers discusses Tithes, and concludes that, by "far the best method of adjusting the state of the law to those principles of ownership which are anterior to law, and which all its authority is unable to quench, would be a commutation into land." "The next very flagrant example of a mischievous collision between the legal and the possessory, is the English system of poor laws." These he condemns and reprobates. Under this head he discusses also the question of utility, or the greatest happiness principle. "God hath given us the sense of what is right: and He hath besides so ordained the system of things, that what is right is generally that which is most useful; yet, in many instances, it is not the perceived usefulness which makes us recognise it to be right. We agree, too, with Bishop Butler, in not venturing to assume that God's sole end in creation was the production of the greatest happiness."

He next adverts to the arrangement by which the "greatest economic good is rendered to the community, by each man being left to consult and to labour for his own particular good; or, in other words, a more prosperous result is obtained, by the spontaneous play and busy competition of many thousand wills, each bent on the prosecution of its own selfishness, than by the anxious superintendence of a government, vainly attempting to medicate the fancied imperfections of nature, or to improve on the arrangements of her previous and better mechanism."—"When good is effected by a combination of unconscious agents, incapable of all aim, we ascribe the combination to an intellect that devised and gave it birth. When good is effected by a combination of conscious agents capable of aim, but that an aim wholly different with each from the compound and general-re-

sult of their united operations, this bespeaks a higher will and a higher wisdom than any by which the individuals, taken separately, are actuated. When we look at each striving to better his own condition, we see nothing in this but the selfishness of man. When we look at the effect of this universal principle, in cheapening and multiplying to the uttermost all the articles of human enjoyment, and establishing a thousand reciprocities of mutual interest in the world, we see in this the benevolence and comprehensive wisdom of God." (Vol. ii. p. 34.) This is eloquently expounded, and philosophically correct. The author adds: "If any thing can demonstrate the hand of a righteous Deity, in the nature and workings of what may well be termed a mechanism, the very peculiar mechanism of trade, it is the healthful influence given to all its movements, wherever there is a reigning principle of sobriety and virtue in the land, so as to ensure an inseparable connection between the moral worth and the economic comfort of a people."—"But this is only one specimen out of the many, the particular instance of a quality that is universal, and which may be detected in almost all the phenomena and principles of the science; for throughout, political economy is but one grand exemplification of the alliance, which a God of righteousness hath established, between prudence and moral principle on the one hand, and physical comfort on the other." (P. 47.)

Chap. 8. is "On the Relation in which the Special Affections of our Nature stand to Virtue, and on the Demonstration given forth by it, both to the Character of Man and the Character of God." This is an excellent chapter, and is summed up in one sentence. "Man is not an utilitarian either in his propensities or in his principles. When doing what he likes, it is not always, it is not generally, because of its perceived usefulness, that he so likes it. But his inclinations, these properties of his nature, have been so adapted both to the material world and to human society, that a great accompanying or great resulting usefulness is the effect of that particular constitution which God hath given to him. And when doing what he feels that he ought, it is far from always because of its perceived usefulness, that he so feels. But God hath so formed our mental constitution, and hath so adapted the whole economy of external things to the stable and everlasting principles of virtue, that in effect and historical fulfilment, the greatest virtue and the greatest happiness are at one. But the union of these two does not constitute their unity. Virtue is not right because it is useful; but God hath made it useful because it is right. He both loves virtue and wills the happiness of his creatures; this benevolence of will being itself not the whole but one of the brightest moralities in the character of the Godhead. He will-

the happiness of man, but wills his virtue more; and accordingly hath so constructed both the system of humanity and the system of external nature, that, only through the medium of virtue, can any substantial or lasting happiness be realized. The utilitarians have confounded these two elements, because of the inseparable yet contingent alliance which a God of virtue hath established between them." (P. 65.)

Chapter 9. treats of the "Miscellaneous Evidences of Virtuous and Benevolent Design in the adaptation of External Nature to the Moral Constitution of Man." Under this head the following subjects are discussed: "The Power of Speech;" "Taste;" "Temperance." Chap. 10. is "On the Capacities of the World for making a Virtuous Species happy; and the argument deducible from this, both for the Character of God and the Immortality of Man." Dr Chalmers discusses the system of Theism, which resolves all the Divine attributes into Benevolence. "With benevolence alone we cannot even extenuate, and much less extricate ourselves from, the puzzling difficulty of those physical sufferings to which the sentient creation, as far as our acquaintance extends with it, is universally liable." "It is under the pressure of these difficulties that refuge is taken in the imagination of a future state, where it is assumed that all the disorders of the present scene are to be repaired, and full compensation made for the sufferings of our earthly existence." "But if the excess of enjoyment over suffering in the life that now is, be a matter of far too doubtful calculation on which to rest a confident inference in favour of the divine benevolence, then let this benevolence have no other prop to lean upon, and in its turn, it is far too doubtful a premise on which to infer a coming immortality." "Many of our slender and sentimental theists, who will admit of no other moral attribute for the Divinity, than the paternal attribute of kind affection for the creatures who have sprung from Him, do, in fact, assume the thing to be proved, and reason in a circle." "In the one argument, the doctrine of immortality is required to prove the benevolence of God; in the other, this benevolence is required to prove the immortality. Each is used as an assumption for the establishment of the other; and this nullifies the reasoning for both." (Pp. 103-5.) "In attempting to form our estimate of the divine character from the existing phenomena, the fair proceeding would be—not to found it on the actual miseries which abound in the world, people's
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should be physically happy? What, we should ask, is the real tendency of nature's laws—whether to minister enjoyment to the good or the evil? It were a very strong, almost an unequivocal testimony to the righteousness of Him who framed the system of things and all its adaptations, if, while it secured a general harmony between the virtue of mankind and their happiness or peace, it as constantly impeded either the prosperity or the heart's ease of the profligate and the lawless. Now of this we might be informed by an actual survey of human life. We can justly imagine the consequences upon human society, were perfect uprightness and sympathy and goodwill to obtain universally; were every man to look to his fellow with a brother's eye; were a universal courteousness to reign in our streets and our houses and our market-places, and this to be the spontaneous emanation of a universal cordiality; were each man's interest and reputation as safe in the custody of another, as he now strives to make them by a jealous guardianship of his own; were, on the one hand, a prompt and eager benevolence on the part of the rich, ever on the watch to meet, nay to overpass, all the wants of humanity, and, on the other hand, an honest moderation and independence on the part of the poor, to be a full defence for their superiors against the encroachments of deceit and rapacity; were liberality to walk diffusively abroad among men, and love to settle pure and unruffled in the bosom of families; were that moral sunshine to arise in every heart, which purity and innocence and kind affection are ever sure to kindle there; and even when some visitation from without was in painful dissonance with the harmony within, were a thousand sweets ready to be poured into the cup of tribulation from the feeling and the friendship of all the good who were around us—on this single transition from vice to virtue among men, does there not hinge the alternative between a pandemonium and a paradise? If the moral elements were in place and operation amongst us, should we still continue to fester and be unhappy from the want of the physical? or, is it not rather true, that all nature smiles in beauty, or wantons in bounteousness for our enjoyment—were but the disease of our spirits medicated, were there but moral soundness in the heart of man?

“And what must be the character of the Being who formed such a world, where the moral and the physical economies are so adjusted to each other, that virtue, if universal, would bring ten thousand blessings and beatitudes in its train, and turn our earth into an elysium; whereas nothing so distempers the human spirit, and so multiplies distress in society, as the vice and the violence and the varieties of moral turpitude wherewith it is infested. Would a God who loved iniquity and who hated righteousness have created such a world? Would He have so

attuned the organism of the human spirit, that the consciousness of worth should be felt through all its recesses, like the oil of gladness? Or would He have so constructed the mechanism of human society, that it should never work prosperously for the general good of the species, but by means of truth and philanthropy and uprightness? Would the friend and patron of falsehood have let such a world out of his hands? Or would an untruly holy being have so fashioned the heart of man, that, wayward and irresolute as he is, he never feels so ennobled, as by the high resolve that would spurn every base allurement of sensuality away from him; and never breathes so ethentially, as when he maintains that chastity of spirit, which would recoil even from one unhallowed imagination; and never rises to such a sense of grandeur and godlike elevation, as when principle hath taken the direction, and is vested with full ascendancy over the restrained and regulated passions? What other inference can be drawn from such sequences as these, but that our moral Architect loves the virtue he thus follows up with the delights of a high and generous complacency; and execrates the vice he thus follows up with disgust and degradation? If we look but to misery unconnected and alone, we may well doubt the benevolence of the Deity. But should it not modify the conclusion, to have ascertained that, in proportion as virtue made entrance upon the world, misery would retire from it? There is nothing to spoil Him of this perfection, in a misery so originated; but, leaving this perfection untouched, it attaches to Him another; and we infer, that He is not merely benevolent; but benevolent and holy. After that the moral cause has been discovered for the unhappiness of man, we feel Him to be a God of benevolence still; that He wills the happiness of his creatures, but with this reservation, that the only sound and sincere happiness He awards to them, is happiness through the medium of virtue; that still He is willing to be the dispenser of joy substantial and unfading, but of no such joy apart from moral excellence; that He loves the gratification of His children, but he loves their righteousness more; that dear to Him is the happiness of all His offspring, but dearer still their worth; and that therefore He, the moral governor, will so conduct the affairs of His empire, as that virtue and happiness, or that vice and misery, shall be associated." (Pp. 113-17.)

In Part 2d, Dr Chalmers treats of "The Adaptation of External Nature to the Intellectual Constitution of Man," and apparently forgetting the fall, and led away by the generous fervour of his intellect and moral feelings, and by the sublimity of his subject, he presents his reader with many admirable and instructive illustrations of the divine attributes. His topics are—"Association;" "Experience;" "The Immutability of Na-

ture ;" "Rhythmo-Mathematical Science;" the "Telescope ;" "Mathematics ;" "Gradations of Rank."—"By a wise ordination of Nature," says he, "the possessors of rank and fortune, simply as such, have a certain ascendant power over their fellows ; and, by the same ordination, the possessors of learning have an ascendancy also ; and it would mightily conduce to the strength and stability of the commonwealth, if these influences were conjoined, or, in other words, if the scale of wealth and the scale of intelligence, in as far as that was dependent on literary culture, could be made to harmonize." (P. 168.)

"It is thus that a vain and frivolous aristocracy, averse to severe intellectual discipline, and beset with the narrow prejudices of an order, let themselves down from that high vantage-ground on which fortune hath placed them ; where, by a right use of the capabilities belonging to the state in which they were born, they might have kept their firm footing to the latest generations. Did all truth lie at the surface of observation, and was it alike accessible to all men, they could not with such an adaptation of external nature to man's intellectual constitution, have realized the peculiar advantage on which we are now insisting. But it is because there is so much of important and applicable truth, which lies deep and hidden under the surface, and which can only be appropriated by men who combine unbounded leisure with the habit or determination of strenuous mental effort ; it is only because of such an adaptation, that they who are gifted with property are, as a class, gifted with the means, if they would use it, of a great intellectual superiority over the rest of the species. There is a strong natural veneration for wealth, and also a strong natural veneration for wisdom. It is by the union of the two that the horrors of revolutionary violence might for ever be averted from the land. Did our high-born children of affluence, for every ten among them, the mere loungers of effeminacy and fashion, or the mere lovers of sport and sensuality and splendour—did they, for every ten of such, furnish but one enamoured of higher gymnastics, the gymnastics of the mind ; and who accomplished himself for the work and warfare of the senate, by his deep and comprehensive views in all the proper sciences of a statesman, the science of government, and politics, and commerce, and economics, and history, and human nature,—by a few gigantic men among them, thus girded for the services of patriotism, a nation might be saved, because arrested on that headlong descent, which, at the impulse of the popular will, it might else have made, from one measure of fair but treacherous promise, from one ruinous plausibility to another. The thing most to be dreaded, is that hasty and superficial legislation, into which a government may be hurried by the successive onsets of public impatience, and under the impulse of a

popular and prevailing cry. Now the thing most needed, as a counteractive to this evil, is a thoroughly intellectual Parliament, where shall predominate that masculine sense which has been trained for act and application by masculine studies; and where the silly watchword of theory shall not be employed as heretofore, to overbear the lessons of soundly generalized truth; because, instead of being discerned at a glance, they are fetched from the depths of philosophic observation, or shone upon by lights from afar, in the accumulated experience of ages. We have infinitely more to apprehend from the demagogues than from the doctrinaires of our present crisis; and it will require a far profounder attention to the principles of every question than many deem to be necessary, or than almost any are found to bestow, to save us from the crudities of a blindfold legislation." (Pp. 165-8.)

The last instance of adaptation adverted to, is "one of mind to mind," which depends on a previous adaptation in each mind of the mental faculties to one another. "Certain it is, that variety in the proportion of their faculties, is one chief cause of the difference between the minds of men. And whatever the one faculty may be in any individual, which predominates greatly beyond the average of the rest, that faculty is selected as the characteristic by which to distinguish him; and thus he may be designed as a man of judgment or information, or fancy, or wit, or oratory. It is this variety in their respective gifts which originates so beautiful a dependence and reciprocity of mutual services among men; and more especially, when any united movement or united counsel is requisite, that calls forth the co-operation of numbers. No man combines all the ingredients of mental power, and no man is wanting in all of them; so that, while none is wholly independent of others, each possesses some share of importance in the Commonwealth. The defects, even of the highest minds, may thus need to be supplemented, by the counterpart excellencies of minds greatly inferior to their own. And, in this way, the pride of exclusive superiority is mitigated; and the respect which is due to our common humanity is more largely diffused throughout society, and shared more equally among all the members of it. Nature hath so distributed her gifts among her children, as to promote a mutual helpfulness, and what perhaps is still more precious, a mutual humility among men.

"In almost all the instances of mental superiority, it will be found, that it is a superiority above the average level of the species, in but one thing, or that arises from the predominance of one faculty above all the rest." (Pp. 177-8.)

The remaining subjects are, "The connexion between the Intellect and the Emotions;" "The connexion between the Intel-

lect and the Will;" and "on the Defects and Uses of Natural Theology." "The problem which Natural Theology cannot resolve, the precise difficulty which it is wholly unable to meet or to overcome, is the restoration of sinners to acceptance and favour with a God of justice. All the resources and expedients of natural theology are incompetent for this solution; it being, in fact, the great desideratum which it cannot satisfy. Still it performs an important part in making us sensible of the desideratum. It makes known to us our sin, but it cannot make known to us salvation. Let us not overlook the importance of that which it does, in its utter helplessness as to that which it does not. It puts the question, though it cannot answer the question; and nowhere so much as at this turning point, are both the uses and the defects of natural theology so conspicuously blended." (P. 289.)

"It is not that natural religion is the premises, and Christianity the conclusion; but it is that natural religion creates an appetite which it cannot quell; and he who is urged thereby, seeks for a rest and a satisfaction which he can only obtain in the fulness of the Gospel. Natural theology has been called the basis of Christianity. It would accord better with our own views of the place which it occupies, and of the high purpose which it undoubtedly serves, if it were called the basis of Christianization." (P. 291.)

"There is nothing either in history or nature, which countenances such an imagination of the Deity, as that, in the relentings of mere tenderness, He would stoop to any weak or unworthy compromise with guilt. The actual sufferings of life speak loudly and experimentally against the supposition; and when one looks to the disease and the agony of spirit, and above all, the hideous and unsparing death, with its painful struggles and gloomy forebodings, which are spread universally over the face of the earth; we cannot but imagine of the God who presides over such an economy, that he is not a being who will falter from the imposition of any severity, which might serve the objects of a high administration. Else all steadfastness of purpose and steadfastness of principle were fallen from. God would stand forth to the eye of His own creatures, a spectacle of outraged dignity. And He, of whom we image, that He dwells in an unviolable sanctuary, the august Monarch of heaven and earth, with a law by subjects dishonoured, by the Sovereign unavenged, would possess but the semblance and the mockery of a throne." (P. 293.)

This outline of Dr Chalmers's arguments, will enable our readers to judge of the work for themselves.

There are two views of the constitution of the world and of human nature, widely different from each other, and which, if le-

genuinely followed out, would lead to distinct practical results. The one is, that the world contains the elements of improvement within itself, which time will evolve and bring to maturity; it having been constituted by the Creator on the principle of a progressive system, like the acorn in reference to the oak. This hypothesis ascribes to the power and wisdom of the Divine Being the whole phenomena which nature, animate and inanimate, exhibits; because, in conferring on each part the specific qualities and constitution which belong to it, and in placing it in the circumstances in which it is found, He is assumed to have designed, from the first, the whole results which these qualities, constitution, and circumstances, are calculated in time to produce. There is no countenance given to atheism by this system. On the contrary, it affords the richest and most comprehensive field imaginable, for tracing the evidence of Divine power, wisdom and goodness in creation.

The other hypothesis is, that the world was perfect at the first, but fell into derangement, continues in disorder, and does not contain within itself the elements of its own rectification.

If the former view be sound, the first object of man, as an intelligent being in quest of happiness, must be to study the elements of external nature and their capabilities; the elementary qualities of his own nature, and their applications; and the relationship between these. His second object will be to discover and carry into effect the conditions, physical, moral, and intellectual, which, in virtue of this constitution, require to be realized before the fullest enjoyment of which he is capable, can be attained.

According to the second view of creation, nothing of good can be expected from the evolution of nature's elements, these being all essentially disordered; and human improvement and enjoyment must be derived chiefly from spiritual influences. If 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: 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; in short, according to the latter hypothesis, sciences, philosophy, and all arrangements of the physical, moral, and intellectual elements of nature, are subordinate in their effects on human happiness on earth, to religious truth.

The question occurs, What support do science, and particularly modern discoveries, give to one or other of these views?

The subject of Geology is announced as allotted by the Bridgewater Trustees to Professor Buckland, and this may properly be considered as an apology for Dr Chalmers in omitting

all reference to it. As, however, we conceive geology to be a fertile field of modern discovery, for gathering knowledge of the adaptations of physical and human nature to each other, we shall briefly advert to some of the leading facts which it discloses.

The physical world appears to have existed for innumerable ages anterior to the Mosaic epoch of the creation of man. It underwent numerous and extensive changes in its temperature, and in the combination and arrangement of its elements; the leading characteristic of which was, that they were all apparently steps in an advancing series, or improvements on the previous condition of the globe. Each state of the physical world was accompanied by a corresponding condition of vegetable and animal life, admirably adapted to it. In the rudest aspect of the globe, shell-fish and other beings having strong protecting coverings, but possessed only of the lowest sensibility and intelligence, existed; while ferns, sea plants, and similar productions, were all that the vegetable kingdom afforded. In the next stage of the world's progress, enormous cold-blooded animals, gigantic lizards, and uncouth reptiles, flourished along with aquatic plants of prodigious size. In the third stage, large and vigorous quadrupeds, possessing bones, muscles, arteries, brains and nerves, and resembling, in their general structure, the lower creatures now alive, were the inhabitants of the globe; and at the same time, palms of the largest dimensions, and whole forests of hard wood trees, existed. Not only did individuals of these tribes of animals and vegetables die, and were succeeded by other individuals of the same species; but at each of those great revolutions of the globe, whole families of them seem to have been extinguished, and new creations seem to have supplied fresh inhabitants for the earth. The bones and shells of these extinct animals remain imbedded in clay, lime, coal, or stone, to attest not only their own existence and qualities, but the circumstances in which they lived and died.

The facts disclosed by geology, then, appear to us to establish four propositions: First, That the order of creation from the first record of it traceable by man, was one of gradual development and progressive improvement; secondly, That the death of individuals, living and sentient beings, and the transmission of existence to other individuals of the same species, as also the destruction of whole classes of living beings, and the substitution of new and higher orders accommodated to an advanced condition of the physical globe, were parts of that order; thirdly, That similar phenomena occurred in the vegetable kingdom; and fourthly, That this constitution of nature had existed long before man appeared on earth, and was in full activity at the time of his creation.

Man, therefore, such as he now exists, appears to be a creature framed in harmony with the state of nature which prevailed immediately before, and at the time when he was introduced; and also with its present condition. The same general laws, physical and organic, which prevailed in the æge of the gigantic, warm-blooded, and now extinct quadrupeds before man appeared, hold away at the present hour. During countless æges the world had undergone a gradual series of improvements, and man, such as we now see him, was a more perfect being and a higher intelligence, than any that had preceded him and left traces of their existence. The epoch of his introduction, therefore, supposing him to have been then the exact being that he is now, was one of great advantage in an improving series of changes.

The next modern science which throws light on the adaptation of the external world to the moral and intellectual constitution of man, but which also Dr Chalmers has omitted to notice, is Physiology. The former apology may be pleaded for him—that this subject was given to Dr Kidd; but we consider it allowable for us to notice the evidence which Physiology affords of man's actual constitution having been formed with reference to a condition of things similar to that which now exists. The author of the Treatise on Animal Physiology, in the Library of Useful Knowledge, observes, that “The last character by which the living body is distinguished, is that of terminating its existence by the process of death. The vital energies by which the circle of actions and reactions necessary to life is sustained, at length decline, and finally become exhausted. Inorganic bodies preserve their existence unalterably and for ever, unless some mechanical force or some chemical agent separate their particles or alter their composition. But, in every living body, its vital motions inevitably cease, sooner or later, from the operation of causes that are internal and inherent. Thus, to terminate its existence by death, is as distinctive of a living being, as to derive its origin from a pre-existing germ.” (P. 7, § 5.) If this view be sound, it is a proof that human nature, such as we now see it, is constituted in direct relation to such a condition of the external world as existed immediately before, and at the period of man's creation.

The third modern science, (which, however, is only a branch of the second,) which Dr Chalmers has passed over in silence, is Phrenology. No reader of his work could discover that such a science existed, or had ever been heard of, when he wrote. He may once more refer to Dr Kidd's Treatise as the proper quarter for discussion; and to do Dr Kidd justice, it is right to notice, that he states its general principles, and admits their truth; but by denying all its details, he escapes from its applications. It is by such unphilosophical means that the greatest discovery

of the age, and one bearing in the most direct and forcible manner on the subject in hand, is pushed aside by these two distinguished authors, as if it were a dream of fancy, and altogether unworthy of rational consideration. They will one day be asked why they did so, seeing they were instructed by the Earl of Bridgewater "to illustrate the subject by all reasonable arguments, as also by discoveries, ancient and modern, in arts, sciences; and the whole extent of literature." We leave them to give an answer to the question in their own time and manner, and proceed to shew the application of Phrenology to the great questions which fell under their consideration.

The first inquiry that ought naturally to have presented itself to Dr Chalmers, was, "What is the constitution of the human mind;" because, before we can successfully trace the adaptation of two objects to each, we require to know what they are respectively in themselves. He perceived this to be the case, and makes a clumsy apology for not going deeply or minutely into the constitution of the mind. In point of fact, he assigns to it no definite or intelligible constitution whatever. Every reader of his "adaptations" is left very much at liberty to form a theory of the moral and intellectual faculties of man to suit his own fancy; and one consequence of this will be, that the most opposite opinions of the work will be entertained by different readers, according as they imagine a constitution of mind which will, or will not, harmonize with the author's views. Phrenology professes to afford a more complete index to that constitution than all other sciences taken together. Its fundamental principle is, that a particular mental power is connected with a particular part of the brain, and that, *ceteris paribus*, the faculty is strong or weak as the part is large or small. If this be a fact, it is one of paramount importance in tracing the "power, wisdom, and goodness" of the Deity, as manifested in the adaptation of the human mind to external nature; because it affords a certain means of discovering what the primitive faculties of human nature are; what are their species of action; and to what extent the manifestations with which we are familiar, are uses or abuses of them. It brings to light also the material conditions on which the varieties of moral and intellectual character among men depend. Now, the object of our author being to trace the adaptation of the human mind to external nature, we leave the reader to judge of the difference of his qualification for executing this task successfully, when he is scientifically informed, and in possession of real evidence, on these points, and when he is profoundly ignorant of them all.

He has dedicated a large portion of his first volume to the subject of the Supremacy of Conscience; and under this term he obviously includes all the moral feelings or distinct and in-

dependent sentiments of Conscientiousness, Benevolence, and Veneration. Nevertheless, it is a fact that in some individuals all of these sentiments are naturally vigorous; in others, one of them is strong, and two are weak; in others, two are vigorous, and one is deficient: while in others all the three are very feeble; and these differences depend on different degrees of development of certain portions of the brain which are easily discernible.

In Combe's System of Phrenology, third edition, p. 572, the following statements occur:

"If the animal organs (situated in the base and back part of the brain) are large, and the organs of the moral sentiments and intellect in general (situated in the forehead and coronal or upper region of the brain) are small, the individual will be naturally prone to animal indulgence in the highest degree, and disposed to seek gratification in the directest way, and in the lowest pursuits.

"If, on the other hand, the organs of the moral sentiments and intellect greatly predominate, the individual will be naturally prone to moral and intellectual pursuits; such persons are 'a law unto themselves.'

"In illustration of this rule, the skull of a Carib, and the head of Pope Alexander VI., who was a monster of wickedness in human form, may be contrasted with the skull of Raphael and the head of Melancthon the Reformer.

Carib.



Pope Alexander VI.



Raphael.



Melancthon.



Where all the organs appear in nearly equal proportions to each other, the individual, if left to himself, will exhibit opposite phases of character, according as the animal propensities

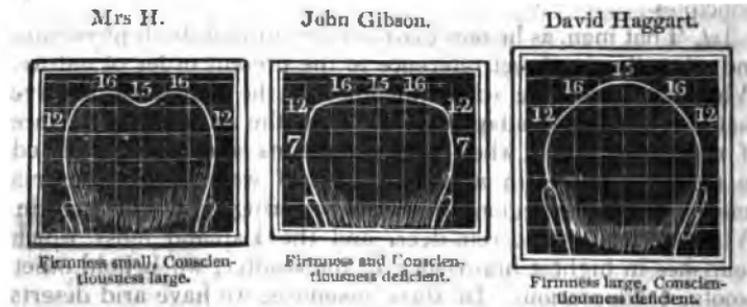
or moral sentiments; predominate for the time. He will pass his life in alternate sinning and repenting. If external influence is brought to operate upon him, his conduct will be greatly modified by it; if placed, for instance, under severe discipline and moral restraint, these will cast the balance, for the time, in favour of the higher sentiments; if exposed to the solicitation of profligate associates, the animal propensities will obtain triumphant sway. Maxwell, who was executed for housebreaking and theft, is an example of this combination. In his head the three orders of organs are well developed, but the region of the Sentiments, lying above the asterisks, is deficient in size, in proportion to the basilar and occipital regions manifesting the Propensities. While subjected to the discipline of the army, he preserved a fair reputation; but when he fell into want, his propensities assumed the ascendancy, he joined a company of thieves, adopted their practices, and was executed."



The most common observation is sufficient to shew that such varieties of dispositions exist; and if they do exist, and are connected with particular forms of brain, how can the "adaptations" of human nature be successfully exhibited by an author who takes no account of them; who boldly assumes, in opposition to fact, that all men possess "conscience," and are alive to its supremacy; and who considers the improvement of the organs on which the power of manifesting these faculties depends a matter of such utter indifference as to be appropriated to no other in absolute silence?

In the System of Phrenology, p. 291, the author, after giving a summary of the doctrines maintained by different writers on the subject of a sense of justice, proceeds: "I have introduced this sketch of conflicting theories, to convey some idea of the boon which Phrenology would confer upon moral science, if it could fix, on a firm basis, this single point in the philosophy of mind,—That a power or faculty exists, the object of which is to produce the sentiment of justice or the feeling of moral duty and obligation, independently of selfishness, hope of reward, fear of punishment, or any extrinsic motive; a faculty, in short, the natural language of which is "Fiat justitia, ruat cælum." Phrenology does this by a demonstration, founded on numerous observations; that those persons who have the organ of Conscientiousness large, experience powerfully the sentiment of justice, while those who have that part small, are little alive to this emotion. This evidence is the same in kind as that adduced in support of the conclusions of physical science."

This statement is illustrated by the following figures :



In Mrs H., Firmness 15 is small, and Conscientiousness 16 large; in David Haggart, Firmness 15 is large, and Conscientiousness 16 deficient; and in John Gibson both of these organs are deficient, which is indicated by the head rising very little above 12 Cautiousness.

Mr Combe adds: "The difference of development of this organ in different nations and individuals, and its combinations with other organs, enable us to account for the differences in the notions of justice entertained at different times, and by different people. The sentiment of Truth is found by the English Judges to be so low in the Africans, the Hindoos, and in the aboriginal Americans, that the natives of these countries are not received as witnesses in the Colonial Courts; and it is a curious fact, that a defect in the organ of Conscientiousness is a reigning feature in the skulls of these nations in possession of the Phrenological Society. The notions of justice of that individual are most fit to be assumed as a standard, in whom this organ is decidedly large, in combination with a large endowment of the other moral sentiments and reflection; just as we hold the person possessed of the greatest organ of Tune, in combination with the organs of the moral sentiments and reflection, to be the best judge of musical compositions. It is obvious, also, that laws, or positive commands, ordering and forbidding certain actions, become necessary as rules, to those who do not possess a sufficient endowment of this sentiment from nature to regulate their conduct. Those who are favourably gifted, are, in the language of St Paul, 'a law unto themselves.'"

All these alleged facts are disregarded by both Dr Kidd and Dr Chalmers, and indeed it would require several numbers of this Journal to develop fully other highly important truths in regard to the constitution of the human mind, brought to light by Phrenology, which they have omitted to notice.

In Mr Combe's work on the Constitution of Man, he applies the lights afforded by physical science, Physiology and Phrenology, to the elucidation of the adaptation of the human con-

stitution to external nature, and brings into view the following principles :

1st, That man, as he now exists, is constituted, both physically and ~~morally~~, in direct reference to the present order of nature. When we survey the spreading hoof of the camel, we perceive that it is admirably adapted to walk on the loose sandy surface of the desert; and when we examine its stomach, calculated to receive and retain a large supply of water, we discover a similar relation to regions having few springs and without rain. When we look at the rein-deer, and the Lapland moss, which flourishes in highest luxuriance in mid-winter, we behold other proofs of adaptation. In these instances, we have arid deserts and trackless wastes of snow, which appear to us very imperfect exhibitions of Divine power and wisdom; but although we cannot give a reason why such regions should exist, we discover at once a wise and beneficent adaptation of the constitution of the animals to the countries which they are destined to inhabit.

In like manner, we cannot by natural science account for the existence of death and imperfection in the constitution of man, and of external nature; but we perceive an admirable adaptation of the human constitution and that of external objects to each other. If we have death as an evil on the one hand, we have connubial and parental joys, and many other important advantages, as its direct consequences, on the other; not only so, but we have a faculty of Destructiveness, apparently bestowed for the purpose of putting the mind into harmony with the constant extinction of animal life that proceeds around it: a faculty which exhibits the highest wisdom and benevolence in the Creator, if man has been intended to live in a world in whose arrangements death was a part; but which would have been a most inappropriate gift if extinction of life had been an occurrence which he was never to witness. These and numerous similar illustrations are brought forward in the work on the Constitution of Man now referred to.

2dly, Mr Combe states a doctrine which appears to him to afford a more perfect key to the theory of the moral administration of the world than any that had been previously given, viz. The independent existence and operation of the physical, organic, and moral laws of creation. An illustration of the independent action of the physical laws, may be thus stated. A man of the most fervent piety, purest morality, and highest intelligence, whose whole life has been dedicated to the service of God and the benefit of his fellow creatures, may, on a frosty evening, when bent on some message of charity, slip a foot on a steep street, fall, fracture his skull, and die:—or, in the blazing energy of his moral zeal, he may put forth such ardent and long sustained mental exertions, as will derange the healthy action of

his stomach or his brain; and he will then pine away, suffer much pain, and perhaps finally expire, to the astonishment of many, who cannot comprehend how so good a man could meet a fate so severe:—or perhaps, he may see his children, after giving proofs of the most precocious talents, combined with the finest moral dispositions, carried off in painful succession by convulsions, by water in the head, or by consumptive decay; while his own heart will sink within him. Incidents similar to these are of daily occurrence in the drama of human life, and Mr Combe's explanation of them is, that man, as a physical being, is subjected to physical laws: these operate independently of his moral condition, and must be observed, otherwise his very existence on earth is brought to a close. By virtue of these laws, a ship floats as long as its timbers are staunch, and sinks when they admit the water, no matter whether the crew be saints or savages, preachers or marauders. The mountain stream, if properly directed, will turn a mill-wheel, whether the miller be Catholic, Protestant, Rowite, Calvinist, or Unitarian. Gravitation is the cause of these phenomena; it is a physical energy which acts according to a particular law; and the human body, as a material substance, is subject to it. It was owing to the operation of this law that the good man fell, when unsupported, and died. To understand the ways of Providence aright, the object and utility of the law, in its proper and direct application, ought to be regarded; and it should not be surveyed only in its inflictive operation on those who neglect to obey it. In virtue of its operation, all objects are retained safe and steady on the surface of the earth,—the ocean is chained to its bed,—the stately mansion stands erect and resists the wintry tempest. In consequence of its independent agency, ships do not sink, nor houses fall, although their inmates transgress the moral law. The wicked are thereby allowed opportunity for repentance; while the good, who are inseparably blended with them in the great enterprizes of life, are saved from all the dangers to which they would inevitably be exposed, if the physical laws were dependent on, and varied with, the moral conduct of individuals of the human race. But in consequence also of the independent action of this law, a good man who slips a foot, is a mere mass of gravitating matter; his virtue does not arrest his fall; but his body, being unsupported, comes to the ground, and he may in consequence be killed.

Again: Human life in this world depends on the healthy action of the brain, stomach, lungs, bloodvessels, and other vital organs. These organs are subjected to definite laws, which also are independent in their operation. The leading danger to these organs are—that they may be injured by disease, and also by abuse of their own functions; but

that from whatever causes they are impaired, suffering, and ultimately extinction of life, are the inseparable consequences of too extensive and long continued a departure from their healthy state. One condition required by the organic laws for the preservation of health and life is, that man shall exercise his body; and not overwork his mind; and the penalty for disobedience is, that by neglect of exercise, and too great mental activity, the stomach and brain become disordered, and life is first rendered miserable and then extinguished. Now, as this law has its foundation in the organic constitution of the stomach, brain, nerves, and bloodvessels, and as it is independent in its operation, it is of no consequence to the result, whether the exhaustion arise from excessive exertions in governing a nation, as happened in the instance of Mr Canning, or in writing books, as in the case of Sir Walter Scott, or in pursuing mechanical discoveries, or in composing sermons or ministering to the poor. If the mind be over-wrought, the brain and stomach will suffer, no matter in what pursuit the excessive exertion has been made. The object of this law is obviously to force mankind to regulate their habits and to bestow due attention on their organic system, that, by limiting, economising, and timing exertion and relaxation, they may both enjoy life and discharge its duties. By this means order and consistency of action are impressed on human nature. When the good man, therefore, who, in ignorance of these laws, has infringed them all, dies in the midst of his holy and beneficent exertions, he is the victim of his own inattention to a divine institution, and there is no cause for wonderment or doubt of the Divine goodness. The result is intended to teach us who survive a lesson of the deepest importance, viz. to regulate our lives in conformity with our bodily and mental constitution. To have suspended the organic laws in favour of virtuous design, and allowed men, when beneficently engaged, to maintain interminable moral or intellectual exertion, would have been to derange the whole order and economy of life; to offer a premium for the extinction of affection—the season for the gratification of which is that of relaxation from severer duties;—and to put an end to all the innocent but subordinate enjoyments which gild our domestic hours, and render life a scene of pleasing gratification.

Moreover: As Providence has formed man a mortal being, and given him the power of transmitting existence to other beings, He has ordained also that the condition and qualities of parents should exercise a powerful influence over the constitutions of their children. When, therefore, an amiable but enlightened philosopher or divine deranges his own organs by disobeying the organic laws, and a child is produced to him, and it lives a few years, shows flashes of fine moral and intellectual qualities (the

unregulated activity of which in the father impaired his health, and was the cause of his transmitting to his child a feeble frame), and then dies;—the “Power, wisdom, and goodness of God” in the administration of the world are still conspicuously discernible. If the parent had obeyed the organic laws, he would have been happy himself, and given high health to his offspring.

Mr Combe's doctrine is, that before man can be happy in this world he must exercise all his faculties within their legitimate sphere; and, secondly, that he must obey *all* the natural laws which have relation to his constitution. He accounts for the past miseries of mankind by their ignorance of their own constitution and of external nature; of the laws impressed upon both; of their reciprocal relations; and of the necessity of obeying *all* the laws, as the condition of that full degree of enjoyment of which human nature is fairly susceptible.

The importance of these views scarcely requires illustration. If the separate existence and independent action of the natural laws be the true theory of the Divine government of the world, a rich field for investigation is opened up to the intellect, in tracing each law itself, its sphere of action, and its objects; and then comparing it with the constitution of the human mind and body. How glorious may we expect the divine power, wisdom and goodness to appear, when we obtain a clue to the real order of the moral government of the world; and how blind was the author before us to his own fame in neglecting such a field! Further, the whole practical measures to be adopted for the amelioration of the condition of mankind will be modified according as we adopt the views of the old school of philosophy, or those unfolded in the “Constitution of Man.” According to the former, little or nothing is to be expected from the development of the natural principles of the human mind;—according to the latter, it is a pre-requisite to all substantial improvement, that these natural qualities be developed and applied. According to the former, the evils and disorders of this life are preparations and trials to fit us for a better;—according to the latter, they are punishments for ignorance and immorality, and it is not reasonable to expect that compensation should be given hereafter for suffering originating in neglect of our prescribed duties. Supposing, for instance, Malthus's doctrine to be correct, that enormous evils arise to mankind from over-population in proportion to the means of subsistence, it is not allowable to assume that men who, under the preponderating activity of Amativeness over the moral and intellectual powers, multiply the species before they have made physical, moral, and intellectual arrangements sufficient to provide for the happiness of their children, should be compensated by future bliss for the sufferings they entail on themselves by such conduct; or that

the victims of commercial bankruptcy produced by an inordinate pursuit of gain should be rewarded hereafter for the pangs which their disappointed avarice and ambition have sustained on earth. We are far from accusing Dr. Chalmers of countenancing these principles; but we know that they are practically and extensively adopted by a great number of sincere but ill-informed individuals. According to the phrenological view, man can become acceptable to his Creator only in proportion as he fulfils all the divine laws, physical, moral, intellectual, and religious; and he is not entitled to ascribe any of his evils to the divine institutions until he shall have exhausted his own resources in attempting to remove them.

The Scriptures will be differently interpreted, and different views of Christianity will be entertained, according as one or the other of these philosophical theories is adopted. According to the one view, the value of Christianity consists in its spiritual influence supplying the deficiencies of nature; in regenerating, and in many instances counteracting it; according to the other, Christianity is the revelation of a great system of moral and religious truth, directly and designedly calculated to cultivate, call forth, and bring to maturity the elementary qualities of human nature, such as they existed previously to its introduction, and now exist. According to the one system, all natural arrangements are subordinate in their effects to spiritual influences; while, according to the other, fulfilment of the natural conditions essential, by the ordination of Providence, for virtue and happiness must precede the enjoyment of the full effects of divine truth.

The advocates of the latter view refer to the history of the world in support of it. Christianity and human nature, unaided by science and knowledge of the natural laws, were left to themselves from the period of Constantine's establishment of the Christian religion till the invention of printing; and such was the sway of the animal propensities, the bluntness of moral feeling, and the blindness of intellectual perception, that this purest and best of all religions was perverted, obscured, and rendered very nearly inoperative on the happiness of mankind. No sooner, however, was the art of printing—a merely human invention—discovered, than the mind began to throw off its errors; and exactly in proportion to the knowledge of external nature and of the human constitution, to the diffusion of that knowledge by the press among the great body of the people, and to the amelioration of the institutions of society, have the practical effects of Christianity been conspicuous and important. According to this view, nature and Christianity are not opposing powers, but friends and allies; Christianity languishes and is perverted while the natural faculties are inactive and unenlightened; it

flourishes and becomes practical when they are stimulated and filled with knowledge. It then becomes itself a valuable stimulus to improvement. By presenting the highest views, hopes, and prospects, it adds fresh vigour to all the natural powers after they are fairly awakened.

Our views of the mind and its relations to external objects, may be set forth in a simple illustration. The mind like the soil, has received from the Creator certain qualities which fit it for production; but, like the earth, it requires to be cultivated to render these fully effective. Education in arts, sciences, and general knowledge, does for the mind what ploughing, harrowing, and draining accomplish for the grounds. As there are many varieties of soil differing in fertility, so there are many varieties of mind, differing in native energy of propensity, sentiment, and intellectual power. - In agriculture, to the soil and cultivation must be added manure, to render the crop most abundant in quantity and most perfect in quality. In like manner, a pure, generous, just, and noble system of morals and religion, requires to be supplied to a mind of fine natural endowments and high cultivation, in order to produce the perfection of the human character, so far as perfection is attainable on earth. If manure is added to a soil destitute of natural fertility, or not cultivated to receive it, its influence is either entirely lost, or greatly diminished; and so it is in regard to mind. Before Phrenology was discovered, there were no sufficient means of discovering the qualities of the mind itself; and these being unknown, the cultivation could not be administered with due adaptation to its nature and wants. Owing to the mind being a riddle, and its cultivation imperfect, the application of the fertilizing influence of morals and religion, has hitherto been purely empirical. Moral and religious doctrines are largely promulgated; but fail to a great extent in producing corresponding effects. The failure is a compound result: it may arise from a weak or viciously constituted mind; from a well constituted mind ill cultivated; or from the doctrines being ill adapted to the particular mind to which they have been addressed. It is impossible to shew forth the power, wisdom and goodness of the Creator, until this labyrinth shall be unravelled. Dr Chalmers does not attempt its disentanglement; and it appears to us that no human means, except Phrenology, afford the least prospect of success to the undertaking.

In these observations, we confine ourselves exclusively to man's condition on earth. The effect of religious belief on his happiness in a future state belongs exclusively to the department of theology.

ARTICLE VI.

THE DUMFRIES TIMES AND PHRENOLOGY.*

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR.—THE following excerpt from a recent number of the Dumfries Times may have escaped your eye, or you may deem it unworthy of notice; but in my humble opinion, it will bear comparison with the best of your registered proofs, that “none are so blind as those who will not see:” consequently it is “too good to be lost,” and is worthy of being preserved in the Journal. It cannot be of use to either yourself or your readers; further than by exciting mirthfulness; and all our organs ought to be exercised, for, as Esop tells us,—

“The bow’s too stiff that yields not to the string;
And those, too often stretch’d, will lose their spring.”

“BUMPS.

[“The Correspondent who sends us the following lively remarks, and from whom, and from his venerable friend, we shall be most happy to hear as often as suits their leisure, says—‘They are the production of an octogenarian, and on that account, a curiosity. But the views are to me at least in a great measure original, and the remarks humorous and acute. Skeleton as it, evidently is, it is too good to be lost.’ We perfectly agree with our correspondent that the remarks are too good to be lost, nor shall they be lost if we can help it.—E. D. T.]

“The study of Phrenology ought to be put down,—*first*, as useless, seeing that the propensities of young people must be far more unequivocally discovered by their actions, long before they could be put upon that suitable mode of education which their bumps are supposed to point out.

“*Second*, as giving rise to much impertinence; for it would require vision sharp as that of the lynx, and feeling nice as that of the antennæ of an insect, to discover the three dozen indicative bumps placed in a forehead as smooth as a turnip; that; moreover, considering the general size of head, and relative proportion of the bumps, together with the allowed effects of education both direct and circumstantial, most followers of Phrenology, were it true, would be mere sciolists; hence, also; the most unjustifiable insinuations would be made against character and disposition, and the covert attempts at inspection, and the sly handling of heads, would banish all confidence in social intercourse.

“*Third*, as most dangerous. Were juries to be swayed by their phrenological prejudices against a criminal, they may acquit a man with a good head and a bad heart, or hang a man for no other reason than the malformation of his head.

* This article was in types for our last Number, but was unavoidably postponed.—Ed.

“ But the pretensions of Phrenology to be ranked among the sciences are false and unfounded. *First*, because its origin is suspicious. It is sensation which furnishes materials for reflection and thought; and when reflecting, our thought associates itself with the ideas of what we have seen, heard, &c., whose organs are situated in the head; hence in common *parlance*, thought is referred to the head, and hence indications are looked for in the skull, but the passions affect the heart; and by parity of reasoning, *kardiology* has just as good a title to be studied as *kranioscopy*, *kraniology*, or, as it is more generally called, *phrenology*, and the *stethoscopè* ought therefore to be employed as well as the *callipers*.

“ *Second*, because it is contrary to the analogy of nature, where one thing is always placed over against another in mutual adaptation. Men were evidently forward to mutual co-operation, and this would never be effected without the medium of language; now how is language (plainly arbitrary, else all languages would be the same,) to be understood? It is not evidently by physiognomy? Had it been intended that we should interpret it by kranioscopy, the child would have been led to consult, by means of sight or feeling, the nurse's bumps instead of physiognomy; now he feels as little disposition to examine her head as to draw nourishment from her toe.

“ *Third*, because national character changes with political institutions; but were character to differ according to bumps, the phrenologist behoves to shew that the bumps of the modern Greek or Italian had changed correspondingly with character from those of the ancient Greek or Romans.”

I shall tag a few annotations to the “lively, humorous, and acute remarks” of the skeleton seriatim, which if you let go as bouncing little crackers at its tail, then, *tant mieux pour ma vanité*; and if you do not, why then, *tant pis pour mon amour propre*. I do not wonder that the Octogenarian should find difficulty in renouncing the long-established doctrine of all-sufficient and indispensable experience, for I also, who am hard at his heels in point of age, found considerable difficulty in getting over the bar; but what shall we say of the liberal, not to say radical, talented E. D. T. in the prime of life?

First, This acute observer may well be excused for asserting that the propensities of children can be observed only by their actions, since he looks not beyond their foreheads; but what then? is astronomy to be put down because light precedes the sun? *Second*, The forehead may be rough as a rasp, or smooth as burnished brass, without affecting phrenological deduction. And although every phrenologist must be a sciolist, every sciolist does not become a phrenologist, even when, as in the present case, he can with the eye of a “lynx, and the antennæ of an

insect," detect "three dozen of bumps in a forehead as smooth as a turnip." But the followers of Lavater would be as likely to "banish social intercourse by sly insinuations," when studying language from the countenance, as those of Gall when scanning cerebral developments. *Third*, When such a *lunatic nature* as a person with a good head and a bad heart, or *vice versa*, shall be brought before a jury, he should not only be acquitted, but also preserved as a curiosity. But the fact is, that phrenologists will be the last persons in the world to pass sentence of death upon any one, good or bad.

SECOND SERIES.—*First*, In disorders of the thorax, ossifications, &c., "the study of kardiology and application of the stethoscope," may, for what I know, be advisable; but what, in "common parlance," are called passions and affections of the heart, are thought to be communicated to the mind through the medium of the brain: in Scripture, heart, mind, soul, spirit, are synonymous. *Second*, Had it been necessary that children, before they can speak or walk, should be acquainted with the characters and capabilities of their nurses, they would no doubt begin by "fingering" and looking about for indicative bumps. *Third*, The organs, and consequently the character, may, in the course of ages, be changed by political institutions; but political institutions may be, and are, frequently and rapidly changed by phrenological organs.

But the Octogenarian is quite out-done by the anonymous Editor of a new edition of President Edwards upon the freedom of the will. He says, "We must concede the fact of a diversity in the mental conformation of different animals; the dog has more mind than instrument; his power of reason goes beyond the range of his application."—Yours, &c.

15th March 1833.

MISALOGUS.

ARTICLE VII.

ESSAYS ON MALARIA AND TEMPERAMENT. By CHARLES CALDWELL, M. D., Professor of the Institutes of Medicine and Clinical Practice in Transylvania University. Lexington, 1831. 12mo, Pp. 300.

DR CALDWELL is already well known to British phrenologists for the indefatigable zeal and talent with which he has for many years advocated the cause of truth and science. It is not long since we had occasion to print his excellent essay on Prison Discipline, and we have now to notice shortly the views on temperament presented to us in the volume of which the title is prefixed.

The essay on Malaria, forming the first part of the work, gained the prize offered by the Medical and Surgical Faculty of Maryland, at their annual convention at Baltimore in 1830; and from the success with which it clears away mere fancies and suppositions, establishes facts, and deduces practical principles from them, it is certain that the award was judiciously made. The subject, however, being foreign to our pages, we must confine ourselves to the second Essay, the matter of which has a direct relation to Phrenology.

From the earliest ages, great differences of constitution have been observed to exist among mankind, and many theories have been invented to explain them. The most prevalent has been that which divides the temperaments, as they are called, into the Lymphatic, the Sanguine, the Bilious or Melancholic, and the Nervous; according to the supposed predominance of the phlegm, the blood, the bile, or the nervous system. It is unnecessary to repeat the objections which have been urged against assigning certain qualities of body and mind to each of these temperaments, as the classification is not pretended by any one to be satisfactory. For our present purpose it is sufficient to refer to the analytic notices of Dr Thomas's French work, contained in the 15th and 16th Numbers of this Journal, in which an attempt is made to trace the true principles on which differences of bodily constitution depend, and on which consequently a philosophical classification of temperaments ought to be founded.

We mentioned at that time that Dr Thomas endeavoured to prove by a constant reference to observation, that the predominant constitution of the body is to be ascribed to difference of size and vigour in certain ruling organs, viz. those contained in the three great cavities—the head, the chest, and the abdomen. When the brain and nervous system contained in the first are most largely developed, there will be a corresponding superiority in the functions belonging to them, and the individual will be characterised by greater sensibility, and unusual mental power. When the lungs and heart are most vigorous, as indicated by a very large chest, there will be a corresponding predominance of the powers which form and move the blood, and consequently a high degree of vitality and bodily activity combined with strength and endurance, but with less sensibility or mental power. Lastly, when the abdominal system predominates, nutrition will be very vigorous,—the body full, but oppressed and slow,—the mind and sensibility dull,—and the muscular power not great.

Various combinations of these three great varieties, will, of course, form mixed constitutions, each distinguished by its own combination of qualities, as fully explained in the articles refer-

We hailed Dr Thomas's work as a great advance made in the philosophy of temperament, but expressed an opinion that much remained to be done to remove all the obscurity which still clouded this important subject. We now find from Dr Caldwell's book, that he, in ignorance of Dr Thomas's conclusions, had arrived at and taught nearly the same views prior to the publication of the French work, his only knowledge of which, at the time he wrote, was gathered from our own Journal. This gives us satisfaction, in one sense, as it affords an additional presumption of the essential accuracy of the basis on which both have built. Still, however, difficulties occur which shew, that although predominance *in size* of the various groups of organs is the *principal* condition, there must still be some other peculiarity, either of quality or of structure, sufficient to exert a notable influence.

In the majority of cases, accordingly, we find the relative proportions of the head, chest, and abdomen, an accurate index of the constitution both in man and animals; but in a few instances this does not happen, and some cause interferes with the operation of the general rule, so far as to render the cases *apparently* at variance with it. These, however, ought only to excite us to farther and more careful observation: the laws of nature are constant, and we may depend upon the ultimate discovery of some circumstance to account for the *apparent* contrariety. We have remarked cases for example, in which the great size of the head, judged of alone, would have led us to expect a higher degree of the nervous or encephalic temperament,—and others in which its smaller size, had we regarded size alone, augured less nervous predominance,—than actually existed. But an explanation of this anomaly seems to us not difficult of attainment, if we discriminate properly between the two principles involved in it.

The one principle is, that greater size of organ always gives greater power of function, *supposing all other conditions to be equal*. This law is universal and unalterable; and hence, where other conditions or circumstances—such as health, activity, and *quality* of structure—are equal, size is a certain and infallible measure of power; and consequently, the indications afforded by it are as positive as any one could desire to obtain. But it is also a known fact, that brains or lungs of equal size may and do differ in *quality* of structure, in consequence of which, one may be more active and influential in its sympathies than another its equal in size; and if we compare two differing in this respect, *as if they were the same*, our conclusions will necessarily fail.

In the majority of human beings, the *quality* of the bodily

organs varies within such narrow limits, that greater or less size affords an accurate indication of their relative force and influence. But in a few individuals, at the extreme points of the scale, the difference of *quality* is so great as to modify the effects of mere size; and then, the latter alone is not a sufficient indication. Here, we apprehend, lies the defect of both Dr Thomas's and Dr Caldwell's expositions. They unnecessarily confine themselves too exclusively to the one principle of size, when in reality, although it is by much the most important, there are other conditions which cannot be overlooked without falling into occasional inaccuracies.

That the difference of *quality* here insisted on is a fact in nature too influential to be overlooked, and not a mere ingenious supposition, may be easily established by observation. How very remarkable, for example, are the shades of coarseness or fineness in the skin and hair! How very easily does every cook recognise the difference in the muscular system, in the greater or less coarseness of beef! How readily, too, does the anatomist generally discriminate female from male bones, by the greater fineness of their texture! And how very coarse is the fabric of the skull and skeleton in savage tribes, compared with their appearance in civilized man! So very striking are the differences of quality in the skulls in the Phrenological Museum, that when noticing Blumenbach's plates, in the 23d number of this Journal (Vol. VI. p. 282), Dr Combe expressed his conviction, that, in most instances, a pretty accurate notion of the *quality* of the bodily organization, that of the brain included, might be obtained from the inspection of the skull alone, and many circumstances concur to shew that such is really the case; and that where one texture is remarkable for any particular quality, all the rest will be in harmony with it,—great fineness and delicacy of structure in one part being rarely, if ever, accompanied with coarseness of other organs.

It may indeed be said, that the *quality* of the organization referred to, in reality constitutes temperament. In the present imperfect state of our knowledge, it would be mere loss of time to stickle about words, provided we can come to a clear understanding of facts. We shall therefore leave every one to apply the term as he likes best, and only beg the attention of the reader to the main fact insisted on by Drs Thomas and Caldwell, that *where the conditions are otherwise nearly alike*, the particular temperament of different individuals may be accurately distinguished by determining the predominance of the three great groups of organs; and that by using this standard, much more accurate results in practice may be obtained.

We recom

the subject to our

readers ; and have only to remark, in conclusion, that although our means of discovering the activity of the brain are not yet so certain as those by which its *size* is determined, *natural language* or pathognomy, taken in connexion with the temperament, furnishes an index of cerebral activity, which the experienced phrenologist will very seldom find to deceive him.

In parting with Dr Caldwell, we beg to express the pleasure and advantage we uniformly derive from his nervous and powerful writings. We shall take an early opportunity of noticing several other vigorous productions of his pen which have lately reached us.

ARTICLE VIII.

ALLEGED BLUNDERS OF DR SPURZHEIM.

It was recently reported to us, that one of the medical professors in the University of Edinburgh had stated in a lecture, that although phrenologists might, in many instances, have successfully inferred natural dispositions from the shape of the head, he knew cases in which their failure had been complete ; and that hence their science could not be regarded as supported by facts. Anxious to learn the details of cases so interesting and unusual, we requested a friend of the professor to ascertain from him, *1st*, the names of the blundering phrenologists ; *2dly*, the names of the individuals whose heads were manipulated ; and, *3dly*, the particular nature of the phrenological misinterpretations. Our friend accordingly interrogated the professor, and speedily sent us the astounding intimation, that the adverse cases were two which have already been trumpeted for several years, to-wit, *first*, the case where Dr Spurzheim failed to discover the idiocy of a boy with a diseased brain, whom Mr John Wood, of the Edinburgh Sessional School, presented to him among other boys with *sound* brains, and passed off as one of the regular pupils ; and, *secondly*, the case mentioned in " a little anecdote " in the 77th Number of the Quarterly Review, which bears, that Dr Spurzheim, on visiting the studio of a celebrated sculptor in London, mistook the head of Lord Pomfret for that of " some extraordinary and well known character." Such are the *facts* which are destined to sap the foundations of Phrenology, and which form the ground-work of those vague and exaggerated reports which are constantly thrown, with an air of triumph, into the teeth of its defenders ! To these two cases we willingly allow all the force which, when taken in conjunction with comments published in this Journal,

vol. v. p. 274, and vol. vi. p. 316, they may be found to possess *. A third case of the same nature, which used to be spoken of by Sir Walter Scott, was communicated to Mt Combe several years ago, by a common friend of both, who heard Sir Walter mention it in conversation. The notes with which he favoured Mr Combe were immediately transmitted to Dr Spurzheim, that his version of the story might be obtained; and in now publishing both accounts, we leave the reader to form his own judgment on the matter.

Notes.

"A gentleman observed, that Dr Spurzheim did not now confine himself to the heads of men, but pretended to discover from the heads of horses their good and bad qualities; which idea the gentleman seemed to hold very cheap; and upon another gentleman expressing his entire belief in the facts, as the result of long and careful observation by a strong-minded superior man, he was addressed by Sir Walter Scott with—'I am sorry to destroy any faith of yours; but I must tell you a fact subversive of it entirely.' He then said, 'Some years ago, I met Dr Spurzheim, having with me two young ladies, one of whom was my daughter, and the other a person of strong musical genius, but remarkable for nothing else. When Dr Spurzheim was asked his phrenological opinion of these young ladies, he at first declined giving any, under the plea of ignorance of the English language. I then said, that French was familiar to me; but of that language also he professed his ignorance. I then said I could understand him in German. However, at last he agreed to English, luckily for me; and having discovered that one of the girls was my daughter, he fixed on the musical girl as the one; and conceiving, I suppose, she might inherit from me, said the organ of Poetry was very large in her.'"

Answer of Dr Spurzheim.

GLASGOW, HUTTON'S HOTEL,

12th April 1828.

"MY DEAR SIR,

"I am much astonished at that part of your letter of the 11th last, which concerns Sir Walter Scott's relation of his meeting me some years ago, and his conversation with a gentleman.—As far as I remember, I had the honour of seeing Sir Walter Scott with two ladies in London in the year 1815; but I apprehend that his genius of inventing historical details has too much amplified the particulars of our interview, and that his eminent talent of embellishing historical facts has misled his recollection. I remember perfectly, that I was asked to give my opinion of the two ladies who were with Sir Walter Scott; but agreeably

* Of the second case, Dr Spurzheim says, "The whole story, in reference to me, is an unfounded assertion." It bears on its face the clearest marks of falsehood.

to common sense, even if I disliked to gratify curiosity, how could I plead ignorance of English to such a degree that I could not say whether some organs were large or small; since, at that time, I had given several Courses of lectures on the structure and functions of the brain, in English, and I had published in that language a large volume entitled "the Physiognomical System." Such an excuse should have been still more silly with respect to French, because I had lived and lectured in Paris during five years. According to fashion, I was certainly introduced to Sir Walter Scott. Farther, I was present whilst his cast was taken in plaster, and we breakfasted together at the same table. It is probable that we exchanged at least some convivial phrases before I was asked to give my opinion of the two ladies. Hence I think we spoke English from the beginning of our interview and all along, instead of my agreeing to do so "at last," and of behaving in so childish a manner as Sir Walter Scott is pleased to tell it. Thus, the first part of the embellished story might be omitted altogether. The second part too loses its effect, by being brought to its reality. First, you know that I do neither speak of an organ of Poetry nor of an organ of Music. On the other hand, I doubt whether I could fix on the musical lady as Sir Walter Scott's daughter, and for that reason find in her head the organ of Poetry large; because I never thought that the talent of poetry is the most conspicuous amongst the mental powers of Sir Walter Scott: hence I certainly did not think that the lady with a large organ of Ideality, was therefore his daughter. Moreover, in admitting that I found in this lady the organ of Ideality larger than the organs of those faculties necessary to be a musical genius, it is not yet ascertained who of us, Sir Walter Scott or myself, is in the right or wrong. Many persons who sing prettily, or play some variations in a manner which amuses the common ear, may consider themselves and be considered by others as musical geniuses; whilst the connoisseur declares their musical talent very middling. At all events, to give consistency to his story, let Sir Walter Scott show that the lady whom he considered as a musical genius, delighted the public since our meeting by her musical compositions, as he has done by composing tales and novels.

"After all, I leave it to philosophical heads to decide, what they think of the manner in which Sir Walter Scott draws inferences concerning Phrenology:—whether that science cannot be true, because, supposing the fact to be certain, I once was wrong in my phrenological judgment; and whether no quality of horses can be distinguished by the external shape of their heads, because—granting again the assertion—I erred in not finding the organs of the powers necessary to a musical genius proportionate to the talent which Sir Walter Scott thought to ob-

serve. All farther commentary on this pretty story seems to be superfluous; and I remain, my Dear Sir, yours most sincerely,

"GÉORGE COMBE, Esq.

"G. SPURZHEIM."

We take this opportunity to remark, that while the errors of skilful and experienced phrenologists are wonderfully few, much injury may—and we believe is—done to the cause, by ignorant pretenders, who, having learned the position of the cerebral organs and acquired a superficial knowledge of the elements of the science, boldly and inconsiderately predicate characters from heads presented to their notice. From the blunders of quacks, no argument against any science can be fairly deduced. To constitute an intelligent and trustworthy practical phrenologist, a long course of study and observation, as well as a natural capability of profiting by these, is indispensably requisite. He must have an intimate acquaintance with the cerebral development of numerous individuals, and ample opportunity of observing the dispositions and talents connected with each;—he must be able to recognise with facility the degrees of development of the various organs, and also the temperament of the subject before him;—he must know accurately the functions of each organ, both individually and in combination with others;—his stock of general information must be respectable, that he may understand the nature of the sciences and occupations to the pursuit of which the different faculties prompt;—and he must render himself familiar with human nature in its various phases, by mixing extensively with men of different ranks and employments, and by a careful study of biography. Finally, such a degree of reflective power as gives perception of motives is necessary to the observer; for it is a fact, revealed by Phrenology, that persons in whom the reflective faculties are weak, do not clearly perceive causation either in morals or in physics. Such persons see actions only as occurrences, and are blind to the motives which produce them. They are the loudest scoffers at Phrenology, and are excusable in every respect for being so.

ARTICLE IX.

JOURNAL DE LA SOCIÉTÉ PHRENOLOGIQUE DE PARIS,
Nos. III. & IV. January and May 1833.

We are always glad to see this Journal, and regretted our inability to insert a notice of its contents in our last publication.

The first article in the January number, is an interesting account by M. Dumoutier, of a young man named Benoit, exc-

cuted at Paris in August 1832, for parricide, homicide, and theft. The development of the brain, and its pathological appearances on dissection, are carefully mentioned by the author; but, unfortunately, he omits all the details of the crimes, and thus rouses rather than gratifies our curiosity.

M. Dumoutier divides criminals into three classes: *First*, Those whose brains are imperfectly developed, and whose mental constitution is characterized either by idiocy or by low brutality;—*Secondly*, Those who have some moral feeling and intelligence, along with active propensities, and who have been led astray by the force of external temptation and bad education;—and, *lastly*, Those whose dispositions and perceptions have been injured and depraved by disease, suffering, or bad treatment, and whose brains present indications of irregular growth and morbid activity. To this last class, most great, ferocious, and extraordinary criminals, and, among the rest, Benoit, belong.

The organs predominantly large in Benoit, were Amativeness, Philoprogenitiveness, Combativeness, Destructiveness, Secretiveness, Acquisitiveness, Cautiousness, Love of Approbation, Firmness, and Hope. Those possessed in an average degree were Self-esteem, Adhesiveness, Veneration, Conscientiousness, Ideality, and Veneration. The intellectual organs were the least developed. M. Dumoutier estimates the convolutions of Destructiveness, Acquisitiveness, Secretiveness, and Cautiousness, as nearly double the ordinary size.

In addition to these natural elements of active depravity, the head of Benoit appeared marked by several extensive cicatrices, the remains of former injuries. One of these was situated immediately above the ear, over Destructiveness; another about six lines in advance of it; and two others in other parts. One of these was produced at ten years of age by a fracture of the skull, caused by a fall from a stair; and another, in the temple, at nineteen, by a fall from a horse, from which he recovered only imperfectly, many months afterwards. On opening the skull, small spots, containing yellow purulent matter, were found over several convolutions, and at the base of the brain.—One of these, at the outside of the left middle lobe, measured eight lines in length, by four in breadth. Under one place, where it had been necessary to remove a piece of the bone during life, the convolutions were wasted, depressed, and marked by inflammation of long standing.

It is justly inferred from these facts, that Benoit was in a state of disease, and not a fit object of punishment. His natural tendencies towards vice, debauchery, and violence, were unquestionably aggravated by the injuries of the head, and the morbid action of the brain to which these had given rise. But although the diseased alterations were apparent enough after death, the

symptoms indicating them during life were regarded by his judges as insufficient, and he was accordingly executed.

An outline of Benoit's history and crimes would have added very much to the value of M. Dumoutier's paper; and its meaning would have been clearer had the author indicated the position of the wounds by a reference to the organs over which they were situated; instead of merely describing it in general terms.

The next article, by Dr Sarlandière, on the means of discovering the organs situated at the base of the brain, is worthy of perusal, although perhaps too theoretical. He thinks the organs over the eye ought so to affect the bony socket, as to give it a different form and appearance, according to the development of each of the organs. Form, for example, ought to widen the distance between the eyes, and push the latter towards the temples; while Number, on the other hand, ought to push the eye inward towards the nose, and diminish the width between the one eye and the other; and so on. We agree with the author in thinking, that the appearance of the bone varies with the development of the part beneath, and that all the indications thus afforded ought to be carefully ascertained. But we are of opinion that the way to succeed is to observe *what is*, and not to fancy what *ought to be*. Dr Spurzheim, who, according to the author, has not sufficiently adverted to these differences, nevertheless states as a fact, in regard to Form, what Sarlandière gives merely as an inference; and, if he has not said that a large organ of Number pushes the eye towards the nose, and diminishes the distance between the eyes, it is because observation proves this not to be the case. The width between the eyes depends, not on the development of the organ of Number; but on the size of the organs there situated, chiefly on that of Form; and even if we are to be guided by what ought to be, is there any good reason why Number should push the other organs inwards towards the nose, when it has ample space, and no resistance opposed to it in growing *outwards* in the region of the temple?

We pass over Dr Sarlandière's notions of an organ of Hatred or Aversion, and of Amativeness being situated in the posterior lobes of the brain, and not in the cerebellum; these, like the others above alluded to, being unsupported by facts sufficient to give them any probability. It is a very unsafe and unphilosophical proceeding to decide what *ought to be*, when we are so ignorant about *what is*.

The third article, containing a long analysis of the second volume of this Journal, is followed by a "Discourse pronounced at the Public Annual Meeting of 22d August 1831, by M. Harel, the Treasurer," on the subject of Robert St Clair, a robber and murderer of rather a singular character. St Clair's head presented the enormous development of the propensities

which is remarked in all the criminals of the same stamp. The organs of Veneration and Conscientiousness were unusually depressed. Destructiveness was very prominent, but Acquisitiveness still more so, and it appears that murder was resorted to as the means of obtaining money. In 1808, St Clair was condemned to hard labour for robbery and violence; and in 1816, to hard labour for life, on account of another robbery. On the latter occasion, after he and his accomplice had murdered a young man and his wife, and carried off 8000 francs in money, besides the gold watches, and even the clothes of the victims, they mutilated the finger of the wife to take from it the marriage-ring.

It is to be regretted that we have not a cast of St Clair's head. He is described as having been "audaciously perverse." In effecting his escape from confinement at Rochefort, he had the boldness to take a leap of forty feet, after which he presented himself at the prefect's office with false papers; and, although suspected, succeeded, by pure impudence, in getting them signed. At St Denis, the gens-d'arme sent in search of him came into the inn where he was, and being again suspected, he was carried before the police, where he produced his papers, and the description given of him not being very precise, he was once more successful in obtaining his liberty.

St Clair's Amativeness was extremely developed; and it appears that immediately after the murder, he betook himself to his haunts of debauchery as if nothing had happened. He himself laughed heartily when told that the cerebellum indicated, by its great size, the strength of this feeling. Secretiveness was both very much developed and very active. He not only long defied all the efforts of the police to find him out, but escaped from the galleys when under the strictest surveillance, and travelled over the greater part of France with false passports; and, lastly, even when immured in an isolated dungeon, and loaded with chains, he still contrived to form a plan of escape, which was nearly successful.

From this account it is evident that St Clair must have differed from the majority of murderers, in being a man of intellect as well as of low and brutal passions; and therefore a fuller statement of his cerebral development would have been instructive. The size of the intellectual organs is not even alluded to. We think also that our Parisian brethren should give more of the history of their cases, and not suppose that their readers are as well acquainted with the facts as themselves. The deeds of such men as Benoit and St Clair may be familiar to the Parisians, but they are unknown to readers at a distance, and one half of the interest is thus lost from the meagreness of the narrative. It would be desirable also to have a note of the dimensions of each head of which a description is given.

Necrological notices of Messrs Fontaneilles, Legallois, Desmarest, and Uccelli, all of them members of the Phrenological Society of Paris, follow next, from the pen of M. Casimir Broussais. A translation of the notice of Uccelli's death was published in our last Number.

The May number of the French Journal opens with a critical examination, by Dr Sarlandière, of the classification and names of the mental faculties adopted by Gall and Spurzheim; which contains some good remarks. It is followed by an excellent analysis of our own Journal; next to which appears a review by M. Bouillaud, of Dr Vimont's admirable work on Human and Comparative Phrenology. As we propose to take an early opportunity of doing justice to the valuable labours of Dr Vimont, we shall defer till then a few remarks which occur to us on Dr Bouillaud's review.

The Number terminates with a "Phrenological Bulletin," extracted from the *National* of 3d May, giving an account of M. Dumoutier being summoned by the public authorities to give his opinion on a skull, supposed to be that of a woman murdered some years ago in the Rue Vaugirard. In the presence of the Procureur du Roi and the other authorities, Dumoutier pronounced the skull to be that of a woman of a hasty and violent temper and avaricious dispositions, and mentioned other characteristics, which were found to harmonize exactly with the known qualities of the woman whose skull it was supposed to be; thus establishing the identity of the victim in a way which the Procureur du Roi said would, two centuries ago, have sent Dumoutier to the stake. We have again occasion to lament the meagreness of detail arising from supposing the reader to be familiar with the facts. M. Dumoutier, we observe, has given a very successful course of lectures to the Society.

We perceive a statement that Mr George Combe had lectured on Phrenology at the Royal Institution, London. This is one of the slight inaccuracies occasionally fallen into in the analyses of our Journal given by our Parisian friends. The lectures alluded to were delivered in Edinburgh, and were unconnected with any public institution.

In taking leave of our contemporary, we would suggest the propriety of the price being diminished. At present, the French Journal, with half the quantity of matter, costs three francs or half a crown, the same as our own; although French books are on an average twice as cheap as English. We do not know what the circulation of the French Journal is; but we feel assured that were it cheaper, its sale would be greatly increased, and much more good done to the science.

ARTICLE X.

PHRENOLOGY IN AMERICA.

WE are indebted to a friend in Albany for a parcel of American Magazines and Newspapers, containing articles on the subject of Phrenology, and shewing at once the progress the science is making in the new world, the extent of knowledge already acquired by many of its disciples, and the zeal and talent with which it is cultivated. Among those sent we find the May number of the *American Monthly Review*, published at Boston, and two numbers (for April and May) of the *Parthenon or Academian's Magazine*, published at Union College, Schenectady. The first contains a very favourable review of Combe "on the Constitution of Man," and the two last open with leading articles on Phrenology, the one being an exposition of its doctrines, and the other an admirably written digest, said to be from the pen of Dr. Hunn, of its applications to education. Dr Hunn does not pretend to offer any *new* views, but he shews so much judgment and soundness of moral perception in selecting and advocating what is practically important, and so little tendency to be led away by mere speculation, that we anticipate much benefit to the cause from his future labours. The articles in the New York and Albany newspapers are also interesting, and shew that the sensation caused by Dr Spurzheim's sudden death was not confined to Boston.

We have received a "Prospectus for publishing a quarterly periodical, to be entitled ANNALS OF PHRENOLOGY; to consist of articles from the Edinburgh, Paris, and London Phrenological Journals, and of such original papers as may be selected and approved by the Boston Phrenological Society." Each number is to contain 128 octavo pages, with such engravings as the subject introduced may require; and the first will be put to press as soon as sufficient patronage is secured. The Prospectus is issued by Messrs Marsh, Capen, and Lyon, of Boston, and the object of the publication is thus stated:—"Since the visit of Dr Spurzheim to this country, the science of Phrenology has assumed an interesting aspect, and intelligent men of every class have become engaged in the investigation of it. This Journal is proposed with a view to facilitate free and general inquiry into the truths and objects of Phrenology,—to ascertain its bearings upon the physical, moral, and intellectual condition of man." It has our best wishes, and will, we doubt not, meet with due encouragement. The conductors have an abundant supply of materials before them, and their only difficulty will be to select judiciously what is most valuable.

Dr Samuel Jackson, lecturer on Therapeutics and *Materia Medica* in the Medical Institute of Philadelphia, takes occasion in his late work, entitled, "The Principles of Medicine, founded on the Structure and Functions of the Animal Organism," to state his opinions regarding Phrenology. In the truth of the general and fundamental doctrines of the science, as expounded by Gall and Spurzheim, he expresses his unqualified belief. He admits, *inter alia*, that the brain is the general organ of the intellect—that the intellect has a plurality of faculties, each with an appropriate cerebral organ—that, other things being equal, the strength of the faculty is in proportion to the size of its organ—that some organs are frequently much more developed than others—and that the organs of the intellectual and moral faculties occupy the anterior and superior compartments of the brain. After admitting all this, however, he is so inconsistent as to question the details by which these very principles were, originally established.—*1st*, He conceives that the passions have their origin and seat, in part, in the belly; *2dly*, He says that "some circumstances," which induced Gall "to assign to the cerebellum the instinct of propagation," "are far from possessing conclusiveness;" *3dly*, He maintains that, "in these views (those of the plurality of the organs and functions of the brain) Gall cannot be regarded as absolutely original. Many writers have clearly announced similar opinions;" and, *4thly*, He is of opinion that "the possibility of recognising on the exterior of the cranium the seats of particular organs, or intellectual and moral faculties," is "a proposition probably more curious than useful." A writer in an American Medical Journal has criticised these and other parts of Dr Jackson's work with a degree of vigour and ability, which at once indicates the review to be from the hand of that staunchest and best informed of all the transatlantic defenders of the phrenological faith—Professor Caldwell of Lexington. His answers to the objections which we have mentioned, occupy thirteen octavo pages, and are exceedingly powerful. We can only allude to them:—

1st, If the *passions*, as Dr Jackson imagines, have their origin and seat, in part, in the abdominal viscera, because they are strengthened and rendered more intense by abdominal irritation, we must, to be consistent, maintain, that the *intellectual* powers also have their seat, in part, in the bowels; since they are highly vivified by wine, alcohol, or opium, acting upon the stomach. Gastric excitement is the cause of both classes of phenomena. That excitement produces, by sympathy, an augmented cerebral excitement; and increased activity of the feelings or intellect is the result.

2dly, "Does Dr Jackson know," asks the reviewer, "what

those 'circumstances' are of which he speaks so positively and so slightly? More especially, has he ever thoroughly examined them?" The reviewer then gives an ample detail of the "circumstances" by which Gall's conclusions regarding the function of the cerebellum are supported. These form a body of evidence than which it is difficult to imagine any thing more conclusive; and we regret that their nature excludes them from our Journal, intended as it is for the perusal of general as well as professional readers. Some medical journal ought to take up the subject.—Dr Jackson's reference to the experiments of Flourens, leads the reviewer to denounce as altogether unphilosophical, the practice of turning *physiology* into *pathology*, and health into disease of exquisite acuteness, by the mutilation of living animals. The experimenters on the cerebellum, says he, "*mutilated and destroyed* the nervous matter, to learn its healthy and *natural mode of acting*!! No wonder if they did not discover the truth they sought for. It would have been wonderful if they had." "We fully concur with Charles Bell," he adds, "that it is doubtful whether the *contradictory* practice of cultivating *physiology*, by the cutting up of living bodies, and thus throwing them into a *pathological* state, has not propagated more error than truth. As evidence in favour of this view of the subject, it is well known, that *it is a rare occurrence for any two of these experiments to agree in their results.*"

Sdly, With regard to the "similar opinions," clearly announced by "many distinguished writers," "this, says the reviewer, is true; and Gall has himself not only acknowledged it, but has named the individuals, to whom Dr Jackson refers as having made the annunciation*. But it is no less true, that the 'opinions' of those individuals, 'distinguished' as they were; scarcely deserve so reputable a name. They were but *notions* or *hypotheses*, unsustained by any thing that deserved to be called evidence."

"As to *originality*; to what discoverer does it belong, in the true sense of the term—especially if *primitiveness* of conception or supposition be included in it? To none now living, or known to history. The existence of a western continent had been *imagined* long before Columbus *discovered* it. Faint notions of the circulation of the blood had been entertained ages anterior to the time of Harvey. Newton was not the first to talk about a principle or power of gravity; and the identity of electricity and lightning had been a subject of conjecture and discussion many years before Franklin established the fact. Gall, then, is as much of an original discoverer as either of those illustrious

* Gall's work, in fact, is the source from which certain antiphrenologists derived many of the facts and arguments which they have published as objections to his doctrines.—Ed.

oracles in science. This our author himself virtually acknowledges, when he says that he (Gall) 'sustained his views by reasons so conclusive and forcible, by facts and observations so numerous and undeniable, that he embodied them into a *beautiful and consistent system.*'"

Ahly, The following is a portion of the reviewer's remarks on the 'proposition probably more curious than useful.'

"Why does Dr Jackson deny or doubt the 'possibility of recognising, on the exterior of the cranium, the seats of the particular organs' within? Because he cannot do it himself. And why can he not do it? Because he has never thoroughly tried. He has neither studied the science nor practised the art. No wonder, therefore, that he is deficient in both. It would be wonderful were the case otherwise. Nor has he any ground to question the efficiency of others in the art, merely on account of his own inefficiency. This is to place the skilful and the unskilful on the same footing,—to compare himself, who has never pursued the art or the science at all, with Dr Spurzheim, who pursued them for more than thirty years, and with Mr Combe and Mr Deville, who have followed them ten or twelve! As well might he compare himself in operative surgery with Cooper or Dupuytren; or in war, with Wellington or Napoleon! In a word, he must either admit the truth of Craniology, or charge with mendacity a number of the most distinguished and honourable men of the day. Men of this description have reported, in confirmation of it, innumerable facts which fell under their own observation. Such are some of the evils which result from our making our own competencies a standard by which to measure the competencies of others. Or the doctor may have witnessed the blunders of some craniological *pretenders*, and thence inferred the fallacy of the art. Is this fair?"

NOTICES.

EDINBURGH.—We mentioned in last number that a junior Phrenological Society had been established in Edinburgh. Its title, as finally adopted, is "The Edinburgh Ethical Society, for the Study and Practical Application of Phrenology." It has met in Clyde Street Hall, every Monday evening during the summer, and much spirit has been displayed in its proceedings. The number of members is now between forty and fifty, and there has been no lack of well written essays, followed by animated discussions. The members are mostly young gentlemen pursuing their studies, or engaged in professional or mercantile business. A small but well selected library of phrenological works has been formed, and the books are much in request. As it is in the rising generation chiefly that we look for the fruits of Phrenology, these facts are to us extremely gratifying. The meetings will be resumed on Monday the 4th of November. We understand that Dr R. Harrison Black was the projector of this society, and the individual by whose exertions it was instituted. The following gentlemen have been elected honorary members, and are requested to accept of this notice as sufficient intimation of their election:—Dr Otto, Copenhagen; Dr Elliotson, London; Dr Vimont, and M.

Bouillaud, Paris; Messrs George Combe and James Simpson, and Drs Andrew Combe and R. Harrison Black, Edinburgh.

The article *CRANIOSCOPY*, by Dr Roget, in the Supplement to the *Encyclopædia Britannica*, has been omitted in the new edition of the *Encyclopædia*, now in the course of publication. This, though it does not indicate any favourable opinion of the conductors towards Phrenology, certainly shews that they consider Dr Roget's arguments unsound and inconclusive, and therefore unworthy of being reprinted; for it cannot be said that Phrenology has now become defunct, and that a refutation is no longer necessary.—Dr Roget, as the reader may recollect, was answered in the second number of this Journal.

Dr E. Milligan of this city, who has long and indefatigably kept up a skirmishing warfare against the phrenologists, and who, as he himself is thoroughly convinced, has repeatedly overthrown them by dint of an algebraic formula and otherwise, makes a fresh attack in the first volume of "The Transactions of the Provincial Medical and Surgical Association," just published. The frontal sinus and non-parallelism of the tables of the skull, are the weapons he employs—weapons so extensively used by "small authors" during the last fifteen years, and so frequently in contact with the tough and unyielding armour of the phrenologists, that they are now altogether blunt and pointless. He also borrows from Sir Charles Bell the argument commented on in the present number of this Journal. We quote from the *Lancet* of 6th July (No. 514, p. 463,) the following critique on Dr Milligan's essay:—"We are rather surprised," says our contemporary, "that the paper was allowed a place in the volume. It contains flashes of a temper which should have excluded it from association with the papers of gentlemen who hold widely different views. Dr Barlow, the author of the preceding essay, is a zealous phrenologist. Yet no consideration as to the company in which Dr Milligan was on the eve of appearing, hinders him from calling Phrenology a 'superstition,' and speaking of it with terms of high contempt, nor from designating the phrenologists 'a sect with whom it is impossible to be serious without becoming ridiculous.' Dr Milligan proves the truth of this latter assertion. He is at once very serious, and truly ridiculous. Was ever such nonsense penned, for instance, as is comprised in the following lines?—'The elegant ideas of Blumenbach on the *nisus formativus*, and of Hunter on the diffused matter of life, brought reasonable men to see that the formation of all such parts (the projections on the surfaces of bones) is comprehended in the original design of the author of the animal microcosm, and for the evolution of which, certain springs or forces have been impressed from the beginning upon the embryotic mass, which act as truly in response to their time and object, as the compound forces which exhibit and preserve the harmonious movements of the heavenly bodies, and of the developments of which, in fine, the muscles are not the cause, but the humble, though frequently the modifying, instruments.'"

DUBLIN.—Our accounts of the state and progress of Phrenology in Dublin are very favourable. The Dublin Phrenological Society concluded its summer session on 23d July; on which occasion Dr Harrison, one of the Professors of Anatomy and Physiology to the Royal College of Surgeons, gave an eloquent and powerful discourse on the peculiarities of the cerebral developments and characters of different nations. Some excellent discourses have been given also by Mr Evanson and other gentlemen of talent. All the recent meetings have been crowded to excess. The number of members continues to increase: among others, the Solicitor-General has lately joined. The Provost of Trinity College, and several of the Fellows, attended Mr Evanson's discourses on two successive nights, and are, we understand, well disposed towards Phrenology.—We solicit a detailed account of the Society's proceedings.

LONDON.—A twopenny weekly publication, entitled "The Phrenologist," and edited by Mr Louis Henry Ehn, was commenced at London in February last. Its contents are partly original, but chiefly compiled from the standard works on Phrenology. We have seen the first six numbers, which give us a

favourable opinion of the Editor's knowledge. Though it may be doubted whether detached fragments are well calculated to give the ignorant a just notion of Phrenology, we are always happy to see publications whose object is to diffuse information on this important subject.

DUNDEE—The Members of the Mechanics' Phrenological Society of this town continue to prosecute the study of our science with much zeal and assiduity. A considerable time ago they hired a room for their own use, where a phrenological library was established, to which, for the last eighteen months, readers have been admitted at the small charge of sixpence a quarter. The number of readers has seldom been less than sixty; at present it is much greater, in consequence, probably, of the interest excited by public lectures, which have been occasionally given by individual members. One of these—"On the Application of the Principles of Phrenology in the Formation of Marriages,"—from the pen of Mr Smart, the Secretary of the Society, has been sent to us for publication. It is clearly and forcibly written, and shall, if possible, appear, either entire or condensed, in next number.

GERMANY—A translation of the third edition of Combe's *System of Phrenology* has recently appeared at Leipsic.

It is cheering to have it our power to report, that, while some contemporary scientific journals experience no small difficulty in getting their pages filled, articles and communications, on subjects connected with Phrenology, have continued to crowd upon us so rapidly during the last twelve months, that, after completing this number, we find ourselves in possession of matter more than sufficient to occupy another. Our surplus materials remaining on hand after each publication, have for a considerable time been regularly on the increase.—Do these facts indicate any thing like the approach of decrease either to our Journal or to the science which it advocates and expounds? When this Journal started, the anti-phrenologists confidently predicted its sudden and premature death: nevertheless we venture to say, that neither it nor Phrenology was ever in a more vigorous condition than at the present moment. In what has now been stated, our correspondents will perceive the reason why several months occasionally elapse before their communications appear.—Several articles, which have been many months in our possession, are still postponed for want of room. Among these is a review of Dr Epps's *Life of Dr Walker*, which shall certainly be printed in next Number.

The American editions of Dr Spurzheim's "Phrenology," "Philosophical Principles," "Manual of Phrenology," and "Sketch of the Natural Laws of Man," (Boston, 1832), have now reached us. The first two have been greatly enlarged, and allusions to the works of the Scotch Phrenologists are much more frequent than in former editions. The function of the organ Inhabiteness or Concentrativeness is discussed by Dr Spurzheim at great length; but we think he has still been unable to form a just conception of the nature of the faculty ascribed to it in this country. This topic, among others, shall be more fully adverted to hereafter.—We understand that Mr Combe's *System and Elements* are about to be reprinted at Boston.

Our best acknowledgments are due to the Editor of the *Medico-Chirurgical Review*, for the high commendation bestowed on our labours, in the last number of his *Review*, and for his unsolicited attention in so frequently extracting from our pages. To the Editor of the *Lancet*, also, as well as to the conductors of several widely circulated Scotch newspapers, we have to express our gratitude for their equally unsolicited attention.

We thank our Taunton correspondent, H. C., for his communication. He will find some discussion on the subject of it in Article XXI. of the 5th number of this Journal, and in Article IV. of the present. His views are not sufficiently mature and definite, and we think he runs too much into the field of mere speculation.

Inquiries have been instituted in the west regarding the subject of Mr J. L. Levison's letter.

EDINBURGH, 1st September 1833.

THE
PHRENOLOGICAL JOURNAL.

No. XXXVIII.

ARTICLE I.

THE LIFE OF JOHN WALKER, M. D. late Director of the Royal Jennerian and London Institutions, &c. &c. By JOHN EPPS, M. D. Director of those Institutions, &c. Second Edition. London: Whittaker, Treacher & Co., 1832. 8vo, pp. 342.

To the reflecting phrenologist, a well executed biographical work is full of interest and instruction. He sees detailed in its pages the manifestations of an individual mind as they appear in the diversified circumstances of actual life; and, by perusing a faithful account of these, obtains a greater addition to his knowledge of human nature than if he had perseveringly waded through the metaphysical productions of a whole century. In fact, without the study of biography, as well as minute and extensive personal observation of character, it is altogether impossible to become a sound practical phrenologist. "Of abstract life," as is well observed by Dr Epps, "of abstract intellectual and moral power, and of abstract religious feeling, little or no knowledge is possessed. The mind of man is so constituted as to associate every principle, of which, in its separate state, it has no defined notion, with the being or thing through which that principle is active. Does any one wish to teach what morality is, he seeks out the good and the virtuous. Does any one desire to instruct wherein religion consists, he selects the man who walks humbly with God. Instruction, it is well known, is imparted better by example than by precept. One reason why God himself condescended to put on the human nature was, that we might follow the example set in his humanity. Biography stands in the same relation to instruction. It presents principles embodied in their forms; it gives a tangibility to thought and to feeling; excites emulation by showing what man once did or has

done; adds to the list of beneficial examples; snatches from oblivion the meliorating influence of past goodness; and, finally, tends to pour forth one more current to the augmentation of that immense mass of moral breezes that are continually exerting their gracious influence in purifying the earth."

In no biographical work have we seen Phrenology so successfully made use of as in this Life of Dr Walker, which is, in fact, almost the only production of the kind where the science has been applied. Dr Epps is an acute and well-informed phrenologist, and has given, in the work before us, a much more definite and intelligible account of the character of Dr Walker than any writer ignorant of Phrenology could have done. The subject of the memoir, too, is much to our liking; for, though not without imperfection, Dr Walker's mind was noble, vigorous, and independent, and he is fortunate in possessing a biographer able to understand and appreciate his moral and intellectual worth. It is delightful to contemplate the actions and ideas of such a man. "The warlike, the dazzling, the bold, were the most favoured subjects for the skill of the biographer; but now the taste has happily changed. Men of the present day look at the useful, the good, the virtuous, the morally and intellectually persevering; and it is in accordance," says Dr Epps, "with this advanced condition of the human mind, that the following memoir is presented, the subject of the same being, so far as physical or organic force is concerned, A MAN OF PEACE." (P. 8.)

John Walker was born at Cockermouth in Cumberland, on 31st July 1759. From his father, who was a Baptist, and his mother, an Independent, he received a strict religious education. At school he "exhibited that vagariousness of disposition, which formed a constant feature in his life. At his tasks he was the idlest of boys; at his amusements the most active." "When obliged, however, he could write with considerable expedition his Latin themes, which were so well finished as to obtain for him considerable praise." In his mode of repeating his lesson in Virgil or Ovid, he gave strong indications of a kind of secretive tact by which he was distinguished. Knowing the liability of his master to fall asleep, he learned generally only two or three of the first lines, and a few at the end of the lesson. Before completing the first few, the master always began to nod. "Young Walker had his eye fixed upon the sleeper, keeping up at the same time a humming sound, without articulating a syllable, till the master, giving a greater nod than usual, awoke, when the young rogue repeated the last line of his task and went to his seat." He delighted in muscular motion, and was nimble in the extreme. "Very early he knew how to play the flute and the violin, and became, with some of his companions,

a bell-ringer. He was fond of constructing rabbit-houses and habitations of various kinds." (Pp. 5, 6.)

After leaving school he determined to pursue his father's trade,—that of a smith and ironmonger. Five years were employed in this occupation, and during these he acquired considerable mechanical skill. His peculiar forte consisted in engraving the ornamental part of polished grates and fenders. Being, however, instructed in drawing by an ingenious tradesman from Dublin, he "became indifferent to the forge; and would sometimes pass whole nights in making drawings, writing out receipts for colours, varnishes, &c. The poetic spirit now also began to break forth, and occasionally he experienced the raptures of fancy, when composing songs and sketching head-pieces, or vignettes for them. Aided by the additional instruction he had obtained from his preceptor, Walker made further progress in the art of engraving upon copper, attempting even a little to make figures and to delineate a landscape. The Greek language, too (to which his memory had almost bidden farewell, having, from neglect, nearly forgotten the alphabet), by uncommon exertion, both in the closet and strolling through the fields, carrying a book in his hand, was at length more his than when at school." (P. 9.)

Finding his strength insufficient for the labours of the forge, and that his ornamental works were little in demand, he became dissatisfied with his mode of life, and resolved to go on board a privateer. To effect this object, he went to Dublin, in June 1779, where he placed himself for four years under the guidance of an engraver named Esdale; and his productions soon rose above mediocrity, every facility of improving his taste being afforded him. "Landscape was that in which Walker most excelled. He looked back with pleasure on the few years spent with Esdale, being passed with considerable profit, not only in reference to the improvement in the style of his engraving, but also from the general instruction in the arts that he obtained from his teacher, and from the additional circumstance of having at his command the use of a good library. Thus aided, Walker cultivated and very much improved the powers of his mind; and, influenced by the delight attendant upon the acquisition of knowledge, devoted all his spare time to acquiring an enlarged knowledge of Latin, mathematics, and Greek." (P. 15.)

There seems to have been about him a deficiency of the power of settling at one occupation; for, while thus making the necessary foundation for the establishment of his fame as an artist, he suddenly "laid aside the burine, and betook himself to the tuition of youth." "He had become a Quaker, and, influenced by the views of Quakerism, entertained scruples against the full pursuit of his profession, particularly the exhibition of the hu-

man figure unclothed, or less covered with drapery than is required by decency from the living. He disliked the engraving of Scripture pieces also, these engravings being made an almost idolatrous use of in Ireland. Thus Walker's career as an artist was cut short; the devotion to the arts,—a state of mind necessary to their successful prosecution,—being so much deadened. He is now to be viewed as a schoolmaster." (P. 16.)

At the commencement of his new career he was grievously oppressed by poverty; insomuch that, "for a time, the long winter's nights were much lost to him, because he often could not afford even to light up candles; and when he had some little surplus means in his pocket, if happening to step into any of the book auctions, he generally came out pennyless." Notwithstanding the low state of his finances, however, his mind continued active, and he prepared for the press a Geography and a Gazetteer. "These works were published by subscription, and so low was the subscription-price, that Walker was obliged to draw and engrave the principal plates himself. In their completion he showed what are the powers of genius when combined with perseverance. Directly his school was over, which took place at 5 P. M., he, being worn out by the fatigues attendant upon the performance of his duties, went to bed, and rose at midnight, and proceeded (having been able by this time to purchase candles) in the prosecution of his works, which were completed in the year 1788." (Pp. 18, 19.)

By slow degrees he emerged a little from his poverty, and, by diligent perseverance, at length obtained sufficient means to make, in 1792, an attempt to publish, on a large scale, the second edition of his Geography and Gazetteer. The speculation did not prove very successful, and he was obliged, in order to fulfil the unavoidable engagements connected with it, to give up the management of his school to assistants, and to enter upon the arduous task of travelling through England, Wales, and Ireland, with the view of promoting the sale of the works. "This journey was the commencement of a new era in his life. It was effected in the eventful year 1793; and many and curious were the incidents with which the traveller met. He has spent many a night in outhouses, sleeping in barns. He has slept upon the downy pillow, and on the couch of luxurious kindness. He has known what are the cravings of hunger not satisfied; and liberal sympathy has, at other times, abundantly supplied his every want." (P. 24.)

After traversing a great part of England, he returned to Dublin in 1794, and proceeded to make preparations for printing. But so high was the protecting (impost) duty now imposed, that he was obliged to go to London to print. His mind loved change, and he hastened with alacrity to the metropo-

lis. Having always had a desire for anatomical and physiological investigations, he became, while engaged in bringing his work through the press, a student of medicine at Guy's Hospital; and, after no great interval, was able to present to the public a short but ingenious sketch of anatomy, or rather of animal physiology. Engaged in the pursuit of medical literature, and in promoting the sale of his work, he spent nearly three years in London. Still desirous of change, and wishing to increase his store of knowledge, he went to the Continent in 1797; visited Paris, where he became intimate with Thomas Paine; and, after studying at Leyden, gained, in 1799, his degree of Doctor in Medicine at that celebrated University. He then hastened back to Britain, and married a lady who had long been the object of his attachment. Being of opinion that marriage is a merely civil contract, altogether unconnected with religion, he repaired to Glasgow, where he was married in presence of a magistrate.

In the beginning of 1800 Dr Walker returned to England, but there he was not destined long to remain. Dr Marshall, with whom he resided, "had been chosen to become the bearer of the vaccine inoculation to Naples, application having been made by the Neapolitan Government for this great boon. Dr Marshall would not consent to go unless Dr Walker associated himself with him in the mission. The proposal was accepted; the call of duty being one so loud, that all the blandishments of social life, even under its most tender aspect, could not, if exerted, have prevented Dr Walker hearing and obeying." The two physicians accordingly embarked, in the beginning of July 1800, on board his Majesty's ship *Endymion*; and, on the 9th of August, the rock of Gibraltar was seen looming through the hazy mist which hung around its base. "The convoy," says Dr Epps, "was ordered to proceed; the *Endymion* slackened sail. One ship passed after the other, till, at length, the mist melting away, the magnificent prospect of a fine shore, with a train of vessels, their canvass opening to the breeze and shining in the splendour of an autumnal sun, extending from the one to the other of Hercules' pillars, was seen. On this scene the subject of this memoir remarks: 'While they all bore away for the rock of British pride, with a fair wind and a flowing sheet, and British colours on every vessel, in view of a menacing shore, it required a philosophic abstraction from the imposing splendour of the grand and gaudy scene not to fall into the weakness of national partiality, not to feel a patriotic pride.' And it is to be desired that every one arising from the contemplation would feel as Dr Walker wished to feel, when he adds: 'May my heart be made to feel a benevolence, uncircumscribed by political boundaries, an equal good will to every nation and tribe of the human race!'" (P. 43.)

At Gibraltar, Dr Walker and his companion were introduced to the governor, from whom they received very polite attentions. "His own family were vaccinated, and the medical men of the garrison, after hearing Dr Walker's statements, having drawn up their report, those soldiers who had not had the smallpox were vaccinated with the greatest success, and without any inconvenience. The inhabitants too submitted to the practice." Three weeks were spent at Gibraltar. Minorca and Malta were next visited, and there also the benefits of vaccination were communicated to the people. In the latter island, by the exertions of Doctors Marshall and Walker, a vaccine institution was established.

"The smallpox had broken out in the Alexander and other ships lying in the harbour at Malta; and the Admiral, being afraid that the disease might spread through the fleet and destroy many valuable seamen, issued a memorandum, recommending immediate application to Drs Marshall and Walker. The army, too, having landed, General Sir R. Abercromby felt equally anxious regarding the troops under his care. He therefore issued general orders for all the men who had not had the smallpox to be forthwith vaccinated.

"The stay, however, both of the fleet and of the army, being limited, it was agreed that Dr Walker should accompany the expedition to Egypt, while his companion remained at Malta, to vaccinate the garrison there." (P. 48.)

The fleet set sail in the month of December, and soon appeared before Alexandria. There, "while our troops were using the weapons of destruction, Dr Walker was busily employed in saving life. His work of vaccination being completed, he attended the sick of the British navy and of the Turkish army. The word 'weariness,' while engaged in these works of mercy, he seems hardly to have known; being assisted therein by his excellent friend General Sir John Doyle in prosecuting these labours of goodness. The following extract of a letter from that worthy officer speaks volumes. 'The General can never forget the impression made upon him by the extraordinary situation in which he first made an acquaintance with that amiable and benevolent individual (Dr Walker): The day after the action near Alexandria, where the brave Abercrombie fell, the General was riding over the field of battle, attended by two orderly dragoons, to see if there were any wounded, French or English, who had escaped notice the evening before; when, on turning round a wall near the sea-side, he was struck with an appalling sight of more than a *hundred* French soldiers, with their officers, huddled together, desperately wounded by grape and cannon shot from an English brig of war. From being collected in the recess of the wall, they had escaped notice on the

previous day of search, and were exposed to the night air, and with undressed wounds. Here the General saw a man, evidently English, in the garb of a Quaker, actively employed in the heavenly task of giving his humane assistance to those poor sufferers—giving water to some, dressing the wounds of others, and affording consolation to all. Upon inquiry, he found the benevolent individual to be Dr John Walker, who was himself almost exhausted, having been thus nobly employed from day-break without any assistance." Pp. 50, 51.) The services of Dr Walker, we lament to observe, were not appreciated by the British Government. They "did not even refund the money he laid out for providing his suffering patients such necessary refreshments as the commissary's stores could not supply; and after much trouble and correspondence, he and his colleague did not succeed in obtaining a sum equal to one-fourth of their actual expenses.

"It is to be added," continues the author, "in order that mankind may appreciate the zeal of Dr Walker, that he never received any salary from government. He went out without any expectations, except from the benevolence of individuals. He had no government funds at his command; not even when on board his Majesty's vessels. It was by *permission*, not by *command*, that he went with the fleet to its different stations. (P. 54.)

Having finished his public duties, Dr Walker made various excursions to towns in Lower Egypt, during which he, on more than one occasion, rashly exposed himself to danger. The details of these we are compelled by our limits to omit.

"It was in the commencement of the year 1802, that Dr Walker returned home. After a fortnight's repose he repaired to London, determined to exert himself in the cause of vaccination,—one so intimately connected, as he believed, with the happiness of man." The exertions which he made in London at this time were very great; for his powerful and active Benevolence was pained by witnessing the misery induced by the small-pox. "Being aware, however, how little any private individual can effect in resisting the inroads of a disease affecting the community of the whole world (and Dr Walker was a cosmopolite), he formed the plan of a public institution, the first ideas regarding which occurred to him while in Paris.

"The views he suggested were agreeable to those of several great and good men then existing, and, consequently, met with a most ready support. And, though his plans were much modified, still there can be no question that Dr Walker was the first to advocate the necessity of a public institution on an enlarged scale." (Pp. 75, 76.)

After sundry proceedings, the Royal Jennerian Society was

constituted on the 19th of January 1803, and Dr Walker was, by a great majority of votes, appointed to the office of Resident Inoculator at the Central House of the Society in Salisbury Square.

Great numbers flocked to the Society's stations, to have the children protected from the direful effects of the small-pox. Dr Walker was filled with the greatest zeal; and, from the time of his election, abandoned every prospect of other medical practice. In the course of time, however, misunderstandings arose between him and various individuals who were officially connected with the Society; and, as matters at length went on very unpleasantly, he tendered his resignation on the 8th of August 1806.

He was now apparently in a worse situation than ever. He had given up medical practice, and now the principal means of his livelihood, as well as the greatest delights of his existence, were shut out from him. But it was not long before he was befriended by some active, intelligent, and influential men, who wished to secure to the public his farther services in vaccination. On the 25th of August 1806, they formed a new society, "The London Vaccine Institution," at the head of which Dr Walker was placed. Under his superintendence, this society was soon found to flourish; while the Royal Jennerian Institution rapidly fell into decay. The latter continued dormant for several years, till the 4th of August 1813, on which day, at a meeting of some of the members, it was again established, and Dr Walker was appointed Director. From this time till his death, both institutions remained under his superintendence. "The societies went on, year after year, distributing the means of protection, and receiving the grateful thanks of thousands of our own countrymen, and many thousands in the world at large."

The regularity with which Dr Walker visited the numerous vaccine stations was very remarkable. "Sunshine or rain, it mattered not, vaccination was the longing of his soul; and nothing was sufficient to draw him from his course. Even on the days of the annual meeting, he did not neglect the stations, although staying a shorter time than usual at each."

The illness of which he died was not of long continuance. "Having given up the study and the practice of medicine, he became a sceptic regarding the efficacy of remedial means, and consequently, though troubled with cough and severe pain, would not take medicine. He consequently became worse. Notwithstanding, he daily went his rounds, though with great fatigue; his bodily strength becoming less and less every successive day. At length, in the month of June, he became so much worse as to be earnestly recommended by his friends to take rest. He would not. He would visit the stations, and on

the Monday before he died went round in a cabriolet to all the stations, telling the people that he would be with them soon. The old man's countenance brightened at the sight of his several places of doing good. However, he never went after this. His illness increased. His pains augmented. Medicine he would not take, and death claimed him as his own. He died on the 23d of June 1830." (Pp. 130-1.)

Such is an imperfect abstract of the first five chapters of Dr Epps's book. The sixth and seventh are composed of a variety of materials, mostly extracted from the manuscripts left by Dr Walker. These two chapters contain much interesting matter, but to their contents we cannot here advert. We proceed therefore to the seventh, in which a description of the Doctor's character is commenced.

Dr Epps has employed in his work none of the technical language peculiar to Phrenology; nor has he there given any information as to the size and form of Dr Walker's head, or his constitutional temperament. It is merely stated that "his features were long and prominent, especially the nose and chin: His eyes were large, also his eyebrows; his forehead high; his hair dark-brown, which he combed back straight like the patriarchs of old. His bones were large, and were prominently marked from the spare habit of his body." (P. 294). In stature he was about five feet seven inches and a-half. To these few details we are able to add the following facts, not mentioned in the work under review: Dr Walker's temperament was active; the coronal surface was long, and presented that beautiful fulness and angular appearance which generally results from large Ideality and Conscientiousness, with Cautiousness moderate. His Conscientiousness, Firmness, and Self-Esteem were large, and Love of Approbation considerable, though not equal to the other organs just mentioned. This is all that we have been able to learn respecting Dr Walker's cerebral organization.

The propensities, sentiments, and intellectual powers, seem to have been pretty equally balanced in his mind. "Some of the feelings," says Dr Epps, "which man shares with the rest of the animal creation, afford, when exhibited in the human character, regulated by those mental powers peculiarly man's own, a most beautiful and affecting exhibition." "They are inferior, it is true, in their relative importance, yet, without them, man would not be man." "In Dr Walker's life some of these natural feelings shine forth most conspicuously, and form so prominent a feature in the actions of his mind, that this biography would be very imperfect without their narration." (p. 194.)

Dr Walker was strongly ATTACHED TO HIS WIFE. He says of his marriage—"Since the event of my marriage I have tasted

much of the sparkling pleasures of the social circle;" and adds, "it still helps to gild my dullest moments"—"it forms my greatest earthly happiness." (P. 195.)

From this pleasing trait in his character, says the biographer, "it may be interesting to proceed to another, namely THE SYMPATHY HE FELT FOR HELPLESS OBJECTS *." There seems to be in the human being a feeling for every object that cannot help itself. How peculiar is that state of mind when a little helpless child looks up to us for protection; a kind of innate impulse to give help and security urges the man; the same feeling, modified, however, is produced by the sight of helpless old age, and by the appearance of injured irrational beings. A want of feeling under such circumstances indicates an absence of a most humanizing principle; its possession gives a soft tenderness to every act of sympathy, and a winning aspect to every look of humanity. In Dr Walker much of this was to be met with." (P. 198-9.) Dr Epps appears to us to ascribe to Philoprogenitiveness a function more extensive than that which really belongs to it. Benevolence has much to do in producing sympathy for helpless objects; but we are disposed to believe that, when combined with strong Philoprogenitiveness, it takes, in a particular manner, the direction alluded to.

"But it was the SOCIAL FEELING that prevailed almost over every other. The attachment to and of friends gave a joy to every scene of Dr Walker's early life. He seemed almost to revel in the delights of social intercourse. Writing of some occasional visits of his friends to him on board ship, Dr Walker notices, 'these rencontres are like the little gleams of sunshine that alight on the head of the pedestrian in showery weather, when a cloud is blown by.'

"The following remarks on portraits show how deeply the regard for friends was impressed upon his mind. 'Were I to preserve portraits of those I loved, I should abhor the vulgar practice of decorating parlours, or other ordinary apartments, with them. I should not wish to ever stare on them with a vacant mind. I have felt uneasy on seeing such an exhibition of a deceased friend while we sat at table. What could be conceived more harassing than to see him, as it were, looking at us, and he did not speak, and he could not hear, and I knew that his remains were decayed in the silent grave; that those eyes and those features were mingled with their native dust? No; I would like a separate and retired apartment for them, where I might repair, when in a serious mood, out of the hearing of every body, and fasten the door and look at them, and think of the days when we used to converse together; and when I remem-

* Dr Epps seems to use this appellation as synonymous with Philoprogenitiveness.

bered that they were past, and that my friends were removed, I might weep, but I should not fall into distraction or despair, for I would endeavour to seek after the consolation which is afforded by the hopes of immortality.'

"Connected with this love of friends is the love of home, and of the scenes of nativity. In these Dr Walker seems to have felt peculiar delight. When on his Alexandrian expedition he complains that he was afflicted with many of the symptoms of nostalgia (a disease connected with an excessive love of home).

"Having such feelings, Dr Walker could sympathize with those who had similar experiences. He properly appreciated the feelings of a naval commander who survived the daring descent upon the shores of Egypt, who acknowledged that, in the midst of the devastating fire of the French, he thought of his wife and daughter, whom he had left in Lancashire, and remarked, that he felt, 'I have their prayers.'" (Pp. 202-3-4.)

The LOVE OF MONEY had very little apparent effect on Dr Walker. We are informed that, though indefatigable in promoting the propagation of the vaccine matter, yet, in a pecuniary point of view, he neglected the interests of the Vaccine Institution to which he was attached—not using the influence which his elevated situation gave him, to obtain the pecuniary support necessary for the prosperity of the establishment. Remuneration for vaccinating the children of persons by whom he was specially requested to do so he often never obtained, and never, except in one instance, was it known that he asked for it. Having, in this case, met his debtor, he thus addressed him, "Friend, if thou hast sent by thy servant a draft for my services to thy family, he has either robbed me or deceived thee." (P. 209). Dr Epps remarks, however, that this disregard of money "was not the result of not having the *love of accumulation*. Dr Walker was a miser in some points. His disregard of money resulted in that state of mind which prides itself upon despising what most men are so anxious about;"—"in other words, money was *beneath* Dr Walker." (P. 211.) We doubt the soundness of this observation; for, had the *love of accumulation* been strong, there was no probability of a disregard of money being produced by Self-esteem. The statement that "Dr Walker was a miser in some points," is too general to furnish us with the grounds of an opinion. Dr Walker died in poverty, and his Life has been published for the benefit of his widow. We trust that the sale will be extensive, not on this account merely, but also because, independently of every such consideration, the book is one which will be found highly interesting by the philanthropist and student of human nature. Its value, besides, is much enhanced by the account which it contains of the discovery and progress of vaccination, the modes of

performing it, and the phenomena consequent on the operation.

SELF-ESTEEM was perhaps the most energetic of Dr Walker's faculties, and its workings are seen in many of the incidents mentioned in his Life. He had, says Dr Epps, "as every man of great undertaking must have, a considerable portion of that SELF-COMPLACENCY which has been appropriately designated Self-esteem; or, as some name it, Justifiable Pride. This gives the man that independence in himself that enables him, in the view of his fellow men, to consider himself as a man; that makes him remember that he has natural rights, and that no man is superior to another in any other respects than that he is more manlike. This feeling is an essential ingredient in the love of liberty, of which Dr Walker had strong experiences. He says, 'When the hills of Gaul first bore upon my view in the earlier days of the French revolution, I felt exhilaration of spirit in the hope that the people had obtained freedom, and that they would never more be shackled with the oppressive chains which they had broken.' So felt many a noble spirit as well as the subject of our memoir; and so do many generous spirits feel now, in beholding France again rising, like her eagles of old, triumphant in the moral and political heaven of liberty." (Pp. 212-13.)

His large Self-Esteem and Conscientiousness rendered him the determined and implacable enemy of religious persecution. The following are some of his remarks on this subject, made on the failure of an attempt, in 1811, to bring forward a bill requiring such testimonials from the preachers of congregations as would have excluded many of the best of that class of men from their elevated pursuits. They are not less just than severe:— "Oh! I glory in the exposure of persecution, however sanctimonious may be the mask wherewith its gehennic visage is concealed. My soul sickens in thinking of the case of Servetus; and scarcely less so in remembering how the fond hopes of the excellent Boerhaave were bigotedly blighted, though the world became so eminently benefited by his disappointment, while the Erebic councils of Calvin gave him a celebrity in the world greater than the discovery of the circulation yielded to Harvey." (P. 214.) Equally agreeable to his love of liberty, says Dr Epps, was the relief in 1813 to the Unitarians, from certain penal disabilities to which previously they were subject, on account of their belief. He held that it is altogether without the province of the civil power to interfere in matters of religion.

Dr Walker's powerful feeling of self-dignity "gave him the power to maintain all his peculiarities, under the numerous discouraging circumstances into which they threw him. Such a man, thus endowed, could bear to be thrown back upon himself;

he had the elastic energy of self-regard to look upon his own opinion with delight, and could rejoice in its contemplation when others sneered upon it. This enables a man to stand forward alone and unsupported—to disregard the constant rebut—to attack, although repulsed—and to persevere, though tempted. This helped Dr Walker to maintain that manly elevation which he exhibited, as will be noticed, on board the *Fourdroyant*; it enabled him to be consistent. In fact, this feeling [in combination with Firmness, we would add] is the key-stone in the arch of consistency, and gives to its possessor that power of mind, that the heavier the pressure of opposition the more firm does he become." (Pp. 216-17.)

The representative form of government was that preferred by Dr Walker. He always maintained, that without such a government "the subject is a slave, however virtuously the government may be administered." He entertained a strong dislike towards the "heaven-born minister," whom he considered as the author of infinite misery to mankind.

At his vaccine stations, his self-complacency was very observable. "He then experienced the exalted pleasure of perceiving the appreciation of his labours—feeling that confidence was placed in his superior judgment. In fact, at his stations he was the great Dr Walker. He was there, truly speaking, the Director, and any obstacle in the way of his plans did not long remain in an opposing condition." He regularly marshalled the people, who came to the stations, and then issued an order that the children's names, places of habitation, and age, should be mentioned. He was much disturbed by the inaudible way in which the parents frequently muttered these particulars. "He often made the offending woman spell her child's name ten or twelve times over, adding at the conclusion, 'Now, thou wilt learn to speak plain.' Often, from the constant torment of being obliged to ask, over and over again, what the parents said, he became quite angry, and made the offender wait to the last." In vaccinating the children there was often a great struggle. "The *gemitus infantum* had now commenced. The few mothers that had the courage to bring back their children for examination were frightened, and looked towards the door with an anxious desire for escape. Some one, perhaps, attempted to fly, but Dr Walker leaped to the door, and barricaded it with his body, saying, 'Thou foolish woman, if thou wilt not do good to others, I will bless thy little one,' and forthwith drew his lancet." "He finished his operation, and then laying aside the frown of offended authority, and putting on the smile of benevolent delight, addressed the poor mother, 'Thy child is safe: fear not: fare thee well.'" (Pp. 120-122.)

"He, it may readily be conceived, could not be interfered

with, occupied as he was sometimes with the vaccination of perhaps fifty or sixty 'little Londoners' at one station. Towards the conclusion of his life, if any one disturbed him in the regularity of his plans, it vexed him very much. Sometimes a medical man would speak to him about something not at all important, and break the course of his proceedings. 'Canst thou not keep thy peace? I will attend to thee last'—was the result of the disturbance, and the offender had the misery of looking foolish until every one else was supplied.

"The vaccination for the day was often concluded by a lecture, after which the mothers went away, saying, 'What a cross old man!' 'What a strange man!' 'What a curious old fellow!' 'I will not go again—such a cross old stick!' and many similar vulgar remarks. However, the mothers did go again; for there was a lurking something in the 'old Doctor,' as he was called, that enticed them back; and also, then they had the satisfaction of hearing expressed, with the greatest confidence, by the Director, '*Thy child is safe!*'" (Pp. 123-4.)

Another exhibition of Dr Walker's self-complacency is to be found in the constant addresses and letters that he sent to the members of his late Majesty's government, to the nobility, and to the members of the House of Commons. He attended a meeting of the projectors of King's College; and, after stepping on the platform, and pressing the Duke of Wellington's hand, which was courteously extended, attempted to address the meeting; but, having commenced by proposing that "a range of buildings should be erected for the admission of pupils, whether of the Scotch Church, or Dissenters, or Catholics," (p. 127), such a buzz of disapprobation arose that he was obliged to retire.

It is now time to turn our attention to the MORAL FEELINGS of Dr Walker. The endowment of these was very favourable, and their cultivation was not neglected by his parents.

CONSCIENTIOUSNESS had a strong influence on his actions, as is proved by various anecdotes related by his biographer. "No arguments drawn from expediency could make him look over or justify what was unjust. The impressment of seamen is what he could not look upon but with the greatest dissatisfaction. His moral vision was so constructed, that it was not possible for him to see any authority to be sufficient to take a man, a Briton, contrary to his will, to serve in war. He knew that wars are the duellings of kings, and that, if war resulted solely from patriotic feelings, warriors would be sufficiently abundant: in other words, no need of impressment could exist." (P. 229.)

The feeling of BENEVOLENCE also was very active in Dr Walker, especially in the earlier years of his life. He took much interest in the abolition of the rites connected with a suttee. His aspirations for peace were strong. War he considered as

the *ultima ratio regum*. He was an active advocate for the abolition of slavery.

VENERATION was probably fully developed in the head of Dr Walker. "He seems to have cherished a very great respect to sepulchres, and to have considered any violation of their quietness a gross insult." His religious belief was peculiar. As already mentioned, he partially embraced, while at Dublin, the views of the Quakers; from whom, however, he differed so much in opinion, that they never admitted him as a member of their body. As a schoolmaster, he carefully refrained from offering any instruction in points of religious faith. 'The Mahomedan, the Hebrew, the Unitarian, and the Christian of every name might,' he writes, 'have entrusted the education of their sons to me. The scholars were in no danger of receiving any bias from me to the prejudice of the religion of their fathers. To the latter I might have been ready to explain myself. To the offspring I should have considered the broaching of so delicate a subject a breach of the most sacred trust,' (p. 243.) Hence his school was attended by the children of Roman Catholics, Protestants, Episcopalians, Baptists, and Methodists.

Dr Walker entertained the opinion that every man has a light within him, of itself a sufficient moral and spiritual guide. He attributed much to the agency of this internal monitor. "Happily," says he; "as the influence of divine truth is in every heart, it continually represses the fury of fanaticism, so much sanctioned and cherished under every name, Ethnic, Jewish, Christian, and Mahomedan. It lightens our darkness, and enables us generally to look without an evil eye upon our fellows." He delighted in the doctrine of pure Quakerism, that *to every man who cometh into the world there is a manifestation of the Spirit, a divine, an inward, and saving light afforded, whereby to be redeemed*. "So pleasing," says Dr Epps, "was this fundamental doctrine, that he thought it needed only to be generally known to be generally received,—a very common elevation men assign to their own opinions. He says it dissipated at once all the gloom arising from the influence of parental dogmas on his mind." (P. 247.) He was not persuaded of the divine authority of the Scriptures; nor was he able to believe "that Divinity ever became identified with the perishable organization of ever mutable man." (Pp. 244-5.)

Towards his fellow mortals, Dr Walker does not appear to have manifested much respect. In his voyage to the Mediterranean, he persisted in always remaining covered at the mess. The opposition to this became so general, that his friends entreated him to give up his singularities. "The lordly priest, the conceited chaplain of the ship, who acted as president at the table, said to Dr Walker, 'You insult me in the chair.' The

captain expressed his wish to interfere; but Dr Walker requested him not to do so, as he would leave the mess." This he accordingly did; and, in consequence, "not having any regular supply of provisions, not being willing to receive from the mess, and not being able to buy any food, he suffered much in the performance of what he considered duty, from the pains of hunger, insomuch so, that 'a hard and old bit of biscuit, a raw chestnut, or any thing falling in my way that,' he adds, 'I knew would furnish chyle to the system, I have devoured with avidity.' This state continued upwards of a week, and he found that 'the last seven days had given him more room in his clothes than he remembered to have felt since he left England.'" (Pp. 224, 225.) In these circumstances, the activity of Self-esteem and Firmness, as well as of Conscientiousness, is very apparent.

The INTELLECTUAL POWERS of Dr Walker were considerable, but much of their effect seems to have been lost in consequence of great deficiency of the organ of Concentrativeness. We have not been able to ascertain the actual development of that organ in his head; but if it was large, our present view of its function would be not a little shaken. It is much to be regretted that a cast of his head was not preserved; for, as his love of home was powerful, and his mind at the same time vagarious, the case is of great importance in relation to the different views entertained by Dr Spurzheim and Mr Combe as to the function of the organ No. III. The propensity to remain sedentary in one place, as well as the power of keeping the mind steadily directed to one subject of thought, were both weak in Dr Walker,—a circumstance which tends to confirm Mr Combe's doctrine, that both peculiarities have the same origin, and accompany each other. Moreover, Dr Walker, though much inclined to wander from home, seems to have been so strongly attached to it as to have been occasionally visited by symptoms of nostalgia; which fact indicates that an attachment to places, or, to speak more definitely, *affection for them*, has a different source from that of a positive tendency to *remain* in those places. There was, says Dr Epps, a peculiar vagariousness in the intellectual exercises of Dr Walker. "He seems to have found pleasure in taking the thoughts as they rose, and, however good the one possessed before, he would leave it to receive the succeeding one with equal ardour." "His mind was fond of migration; but in its migratory movements there was no regularity save that of untaught and mistaught genius." (P. 276.) "In his Fragments, which, had they been properly written, might have realized to him a comfortable subsistency, there being at the time of publication a very strong thirst for accounts of Egypt, there is such an irregularity of thought, such an unconnectedness in time,

and such a total disregard of succession, that we believe no one who was not obliged would read the work through. In the same page he passes from Cumberland to Aboukir Bay, and from Aboukir Bay to Cumberland. One would think that he was playing an intellectual bo-and-peep with his principal subject, or that he was acting coquetry with his tale. Like a boy on his journey, he runs after every butterfly that crosses his way, and, after pursuing over field and common, ditch and dike, forgets where he was going." (P. 217.) "When coasting about Minorca, some association carries him to Lancashire, and a long tale is given of his Lancashire friends. In fact digression is so common, that at last the main road is so cut with by-paths, that the traveller has a difficulty to know it." (P. 277.)

Dr Epps ascribes this vagariousness of mind "partly to the varied circumstances of his life, directing his powers into different channels, and partly to that liberty of thought in which he gloried" (P. 275); and no allusion is made to Concentrativeness. We differ from Dr Epps on this subject; for, however numerous might have been the channels into which the powers of Dr Walker were directed, he would have been able, but for some inherent defect, to keep his mind continuously fixed on the one subject under consideration at a given time. This he was unable to do; and the incapacity can be accounted for only by supposing a deficiency of the organ of Concentrativeness. That the defect was inherent, and not the result of circumstances, is obvious from the fact mentioned by Dr Epps himself, that, even at school "he exhibited that vagariousness of disposition which formed a constant feature in his life." (P. 5.) We are unable to perceive, moreover, how this peculiarity could be in any degree the consequence of Dr Walker's glory in liberty of thought. The power of keeping the mind intensely fixed upon a single object of thought, is found equally in the narrow-minded bigot, and in the advocate of universal toleration.

It ought to be kept in view, that Firmness was by no means defective with Dr Walker. "If he adopted an idea, or formed any wish," says Dr Epps, "he would sedulously pursue it to its development, or to its realization. He would not know the misery of a defeat." (P. 294.)

His PERCEPTIVE POWERS were considerable. "He took notice of almost every thing. And this notice was not confined to mere superficial observations, but was so lively active as to enable him to commit to paper what he had observed." (P. 277.) His love of ORDER was conspicuous; and, "if any thing was moved out of the place in which he had put it, the calm of his temper, especially for the last few years, was immediately disturbed." (P. 278.) His accuracy is very apparent in his Gazetteer. This work, says Dr Epps, considering the time when it

was published, was a master-piece. "In fact, the completion of the work indicates the persevering energy so prominent in Dr Walker's character. It was a Johnsonian undertaking, and skillfully was it effected." (P. 278.) The numerous manuscripts which he left, and from which in a great measure the materials of his Life have been drawn, were, however, in "chaotic confusion." (P. 6.) He frequently sat up writing during the night.

CONSTRUCTIVENESS, of which we have seen the manifestations in childhood, continued active through life. He was fond of designing edifices, and was constantly contriving plans for the improvement of the streets. He had considerable skill in mathematics.

His REFLECTIVE powers were good: "hence his judgment was clear; his conclusions just; and his reasoning, except in cases where the 'inward monitor,' unwarrantably, that is uninformed by truths, interfered, was conclusive." P. 284.) IDEALITY was large, and so, probably, was WONDER. There is much poetical feeling in such of his fragments as are published by Dr Epps. His rooms were highly ornamented. One of them had fourteen mirrors in it, by which he could behold himself in so many different aspects.

He was not deficient in Wit, to which he could give that severity which imparted to it the character of satire. "When he did attack, he did not spare; and, in the pursuit of the offended, nothing could stop him." (P. 291.) Destructiveness was obviously a large organ in his brain. He conversed fluently in Italian and French. "He made himself, by considerable labour, acquainted with the German, and delighted very much in many of the works of the philosophers of Germany. He considered them men of great erudition and judgment, and was particularly fond of repeating one remark, with which he had met in a German publication; namely, 'The public is a great ungrateful beast,' an observation," continues Dr Epps, "which it is hoped, will, in regard to this work, be negated by the exertions of the public in promoting its diffusion. The Spanish, Dr Walker could make out so as to read letters from abroad. Latin he knew very well. He wrote his Thesis in Latin." (P. 298.)

The propensities of Dr Walker, as formerly mentioned, were powerful as well as the moral sentiments; and, as he advanced in years, they became more active than formerly. This perhaps is a general law of our nature. "It was quite evident to the friends of Dr Walker, that, towards the conclusion of his life, his kinder feelings became more or less dormant,—a dormancy exhibited in the neglect of those little kindnesses which constitute the perpetual sunshine of Benevolence. They were awakened by any sufficiently powerful excitement, and the brilliancy of their activity had a meteoric glare." (P. 335.) "His

pen was frequently used, as has been noticed, in the cause of humanity; but more frequently, particularly at the later period of his life, was it dipped in the venom of gall. His mind seemed gradually to be soured as he approached old age; the natural irritability affected his intellectual operations. Of his friends, some *admired* him, but few *loved* him. Many feared, and some laughed at his eccentricities."

"Such," says the biographer, "was this extraordinary man. He knew human nature well. He did not seem to take any notice, but was always noticing. He scorned being influenced by trifles. The laugh of ignorance he did not regard; and the fnger of contempt he did not observe. He felt pleasure in his own ways; and no displeasure of others could alter him. 'John Walker could,' as his friend Mr Cordell said in a speech to his memory at the City of London Tavern, at the Anniversary meeting for 1831, 'never be forced; but could always be led by a silken cord.' There was in him a stream of benevolence that would have fertilized wherever it flowed, had not its course been too rapid and impetuous. He was the apostle of vaccination. He went out, in truth, without scrip or purse. His life was a continual exertion for the happiness of the human race: and, though he felt a little pride in these exertions, let us forget this in the benefits which, from his labours, society now experiences."

ARTICLE II.

PROPOSED METHOD OF ASCERTAINING THE SOLID CONTENTS OF THE HEAD.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,

LONDON, 29th May 1833.

It appears desirable that phrenologists should have some better method than that at present in use, of computing the solid contents of the head; and as one which seems convenient enough for that purpose has occurred to me, I am induced to send you an account of it for publication in your Journal. It is as follows:

First, take the following dimensions in inches.

Measure the *greatest breadth* of the head, and the *greatest length* (*viz.* from the occipital spine to Individuality, or from Philoprogenitiveness to Individuality, whichever happens to give the *greatest length*.)

Take the *mean* of the two dimensions for a *diameter*.

Measure with a string the length of the curved surface, over the top of the head, from the occipital spine to Individuality, and the same transversely from meatus to meatus.

Take the *mean girt* of these two measurements, which may be called the *mean girt* of the head. Then,

1. Multiply the *diameter* found, by the *mean girt*. The product will represent the *superficies* of the head.
2. Multiply the *superficies* so found, by the *diameter*, and divide the product by 6. The quotient will be the *solidity* in cubic inches.

Suppose, for example, that we have a cast of the following dimensions :

Greatest length	7.875 inches.
Greatest breadth	6.125

14.000 inches.

$14 \div 2 = 7$ inches for mean *diameter*.

Girt from occipital spine to Individuality, 14.5 inches.

Girt from meatus to meatus, 15.

29.5

$29.5 \div 2 = 14.75$ inches for *mean girt*.

Then, by rule,

Mean girt. Diam.

$14.75 \times 7 = 103.25$ square inches of superficies.

And,

$\frac{103.25 \times 7}{6} = 120\frac{1}{2}$ cubic inches, the solid contents of the

head.*

I tried a second cast of rather different shape.

The length was 7.9 inchs. } Mean 7.138.
breadth, 6.375 }

The mean *girt* was 14.8 inches, which $\times 7.138 = 105.6$ square inches; and these $\times 7.138$ again = 754, which $\div 6 = 125.7$ cubic inches for the *solid contents*.

They were found by experiment = 129 cubic inches.

(Error $\frac{129}{3.3} = \frac{1}{32.7}$ th.)

* The actual solid contents of such a cast were tried experimentally, by immersing it, in an inverted position, in a vessel of water up to Individuality and the occipital spine. Then the cubic inches of water actually displaced were computed.

The solid contents of the head were thus found = 120 $\frac{1}{2}$ inches, which is very close indeed upon the results found by the rule.

This rule will enable a phrenologist to obtain a much better *comparative estimate* of the sizes of different heads, than he can by the measurements usually taken; for measuring only *the height, the breadth, and the length* of a solid so irregular as the human head, can give but little idea of its *real solidity*.

I apprehend that in using the rule above given, a compensation should be made according to the *kind of shape* that the head is distinguished by.

That is, heads are of about three classes:—

I. Very full square heads, with large coronal surface.

II. Heads very broad from Destructiveness to Destructiveness, and very long from the occipital spine to Individuality; but shelving off upwards like a pyramid.

III. Medium heads, viz. not particularly massive, and yet not particularly pyramidal.

For class I. The divisor (in the rule) should be a *little less than 6*. Such head will contain rather more than would be found by the computation, using 6 as a divisor.

The reason is, that the rule is founded on a sort of imaginary process, of converting the head into a *sphere* of equal capacity, and then treating it as such in the computation; whereas very full square heads approximate more to a *cube* than to a *sphere*.

For class II. The *divisor 6 should be a little increased*, for the converse reason.

For class III, (of which the casts experimented upon were,) the rule may be used as stated with 6 for divisor.

I must apologise for troubling you with so long an epistle on this subject; but if it be important to the phrenologist to know the actual size or bulk of a head, he certainly stands in need of some better mode of ascertaining it, than he at present possesses.

It is proper to observe, that the mode I suggest furnishes only an approximation to the truth; and that it should be tried and compared with much more extensive experiments than I have had an opportunity of making, before it can be pronounced correct. Yours, &c.

CHARLES STEWART DREWRY.

[We offer our best thanks to Mr Drewry for the foregoing acute and perspicuous communication. The rule proposed seems to us to afford a good method of approximating to a knowledge of the solid contents of the skull by exterior measurement. It is founded on the well known theorem, that the solid contents of a sphere are equal to the curved surface multiplied into one-third of the radius,—a principle which applies not only to an entire sphere, but to any portion of it bounded by surfaces

which coincide with radii. The chief or only obstacle to the general adoption of Mr Drewry's method, is the extent of calculation necessary, which we fear many phrenologists will reckon troublesome.—*EDITOR.*]

ARTICLE III.

CASE IN WHICH NATURAL DISPOSITIONS AND TALENTS WERE INFERRED FROM A CAST OF A HEAD*.

ABOUT twelve months ago, a cast of a head was sent to Mr Combe, by a gentleman residing at a considerable distance from Edinburgh, with a letter expressing “a strong curiosity to know what idea you will form of the party, without any previous hint of his character, and merely by examining his head. I may mention simply,” continues the writer of the letter, “that the head is that of an uneducated person. If you will be so good as write me what you think, I shall return you an answer at length, stating, as fully as I can, what I conceive to be the real character, intellectual and moral, of the individual. Of this man I can speak minutely. He is a very marked character; and, so far as I know Phrenology, his head is a complete index of himself.” No other particulars were furnished.

As the engagements of Mr Combe render it necessary for him to decline compliance with requests of this nature, he put the cast into the hands of two phrenological friends, Messrs Simpson and R. Cox. The latter at first declined to give an opinion, on the ground that he had never made any formal attempt in this department of Phrenology, and did not consider himself qualified to do justice to the science. With the view of gaining experience, however, he afterwards undertook a share of the task. Both phrenologists then separately drew up notes; and, after comparing these, and making such alterations as seemed necessary, transmitted them to the gentleman who had sent the cast. The following are the measurement, development, and phrenological notes:—

* Several cases of this nature have recently appeared in our pages, and various others have lately occurred. Those of which the details are before the public, have not been selected on account of unusually successful results; for, among the attempts recently made by the gentlemen engaged in the case now reported, there is not one which we should not gladly publish, were permission granted by the individuals concerned. Our object in inserting such cases is not to astonish the ignorant or aggrandise phrenologists, but to excite rational individuals to examine for themselves the grounds on which Phrenology claims the rank of an established, useful, and important science. By exhibiting the effects of different combinations of the faculties, also, these cases are calculated to be useful to the student of practical Phrenology.—*EDITOR.*

MEASUREMENT.

From spinal process of occipital bone to Individuality,	8½
Concentrativeness to Comparison,	8
Hole of ear to occipital spine,	4½
Do. to Individuality,	5½
Do. to Firmness,	6½
Destructiveness to Destructiveness,	6
Secretiveness to Secretiveness,	6½
Cautiousness to Cautiousness,	6
Ideality to Ideality,	4½
Constructiveness to Constructiveness,	5½
Philoprogenitiveness to Individuality,	8½

Anterior lobe of the brain, rather large.
 Portion of brain above Cautiousness, moderate.
 Do. above Causality, moderate.

DEVELOPMENT.

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

MR SIMPSON'S NOTES.

Cast of the Head of an Uneducated Man, seemingly under middle life.
General size of head very large. Temperament not discoverable from the cast

INFERENCES.

Mr ——— says he knows this individual well. I fear that, if he has had much to do with him, he knows him *too well*. His enormous head must give him great *power of character*, and I wish I could say that that power is all in the direction of good. Without education, and of course in inferior society, I could not answer for this individual not running headlong into the coarsest vicious indulgences. The *animal* endowment is excessive; and although the *intellectual* is very considerable, the *moral* is sadly deficient. The Amativeness is very great, and it is scarcely to be expected that it has been restrained from

coarse and selfish indulgence. The individual may have married, and may have continued in the state, as well as entered into it, and loved wife and children (the latter passionately); but he would usually be a harsh and tyrannical head of a family. He is loud, domineering, and assuming, and probably abusive and imprecatory. He is deficient in kindness and mildness. His haughty and assuming character will likewise mark him out of doors; and his pride, obstinacy, opinionativeness, touchiness, resentfulness, and violence, must have involved him in many a quarrel and brawl. He must be tremendous when drunk. He has a *prodigious* conceit of himself; and although he is not indifferent to the *praise* of others (which, however, he seldom gets), he snaps his fingers at the opinion of others when *against* him. His character is intensely selfish. There is much *savoir faire*, amounting even to cunning and hypocrisy. He is proud of being thought *deep*, studies the weak side of those with whom he deals, drives a hard and *knowing* bargain, gives truth to the winds, and glories in taking his merchant at disadvantage. He loves money, and grasps it so hard that it is difficult to get it out of his clutches for his just debts. His perceptions of justice are so feeble, that he will consider justice, if directed *against* himself, as injustice, and even injury. His money will all go for his own *animal indulgences*; even to the neglect of his family, when he is pinched. Charity or benevolence never drew sixpence from him. If he can both enjoy sensuality and hoard money, he will do both. He possesses very considerable intellectual powers, which will be directed steadily in the service of his propensities and selfishness. If he has failed to make money in a coarse and plentiful way, it must proceed *from his deficient Conscientiousness affecting his credit*. His intellectual manifestations are coarse and inelegant, but they have considerable vigour. He is shrewd, observing, remembering, and sagacious, with a great power of *concentrative application of mind to his purpose*. He might succeed as a draughtsman or surveyor, but does not seem to have any *mechanical genius* about him. He is probably an indifferent workman with his hands, *except in fighting*. His head is his implement. I should expect to find him unpunctual, disorderly, slovenly, and dirty. He would have figured as a warrior or *marauder* in barbarous times; *force is his engine*, and he possesses great power of character to wield it. He is not insensible to religious impressions, if they were ever pressed home upon him; but his religion will be abject and selfish, and any thing but the practical morality of Christianity.

This individual could not match shades of colour.

P. S.—On reflecting on the foregoing character, it has occurred that, although all that has been said is IN the man's nature,

his *Secretiveness* and *Intellect* directing his own *interest*, may have prevented so broad a manifestation of it as to be *generally* recognised; or by any but those who have seen him long, closely, and intimately.

J. S.

MR COX'S NOTES.

This cast (which is presumed accurate) indicates that the individual possesses a strong endowment of the domestic group of feelings—Amativeness, Philoprogenitiveness, and Adhesiveness. He probably married from love, is sincerely attached to his wife and friends, and has an ardent affection for his children. His dispositions are selfish, and his temper warm and frequently sour. probably he is fond of litigation, if he has the means of entering into it; and so much is he characterized by obstinacy, that when a lawsuit or quarrel has once been commenced, it will require a very powerful inducement to make him yield. He does not want prudence, however, and will watch acutely for favourable opportunities of gratifying his love-of gain, which is strong. His anger is more easily roused than appeased, and his dislike will not be transient. He has considerable propensity for destroying, and is likely to entertain feelings of revenge, especially towards those who wound his pride; for he has an exalted opinion of himself. He will not easily yield to solicitation, when his own desire tends in a contrary direction. He is not wholly indifferent to applause; but this feeling is by no means so powerful as his self-esteem, which is such as to render him proud, domineering, and selfish. When he has undertaken any piece of business, he will be incessant in his attention to it, and will not, without much difficulty, be diverted from his object. Perseverance, indeed, is the strongest of his faculties. He has an acute active mind*, with strong observing powers, and an excellent memory for details. Painting I conceive to be little interesting to him, and his power of discriminating between nice shades of colour cannot be great. His habits are not remarkable for order or punctuality; and his command of language is not extensive. He has no *great* genius for mathematics (though it may be respectable), and still less for arithmetic and algebra. Though capable of learning to draw, he will not rise above mediocrity in this department. He is an excellent keeper of a secret; and the harder he is pressed to divulge it, the more impenetrable will he become. He is courageous, and will face difficulties unappalled; but rashness does not seem to be one of his characteristics. He has no elevated moral views, nor is he remarkable for philanthropy; on the contrary, he is rather cal-

* Although the cast afforded no *precise* information as to the individual's temperament, the features and expression, even in the plaster, were such as to indicate a constitution the reverse of sluggish.

lous to the sufferings of others, and gives little of his money to those who are in want. He is not destitute of religion, but, I should think, is neither superstitious nor fanatical. His musical powers are not remarkable. I am doubtful of his honesty; for, though his Conscientiousness is perhaps not much below an average size, it seems hardly able to control his selfish propensities, especially as it will receive no very powerful aid from Benevolence. He probably loves travelling. On the whole, he has much force and activity of character; but the animal part of his nature will easily disregard the dictates of the moral.

R. C.

A very clear account of the individual was subsequently drawn up and transmitted to Mr Combe, by the gentleman who had sent the cast. It is written with much spirit, and would be read with interest as a vivid delineation of character, independently of its connexion with phrenological development. It is as follows.

Character of the Uneducated Man, deduced from a long and intimate knowledge of the Individual.

I have had many opportunities of knowing well the character of this individual, which I have made a point of studying minutely, both as a matter of curiosity and as an interesting subject of philosophical speculation. Though quite uneducated, his parentage is highly respectable. He is a native of Wales. When very young he went to sea, prompted, I believe, by that restlessness and love of rambling which often induce boys to take this step. At present he is about thirty-two years of age; he stands six feet, and is of a ruddy complexion and strong muscular make. I am not well versed in the doctrine of the temperaments; but if there be such a temperament as the *sanguineo-melancholic*, I should say it is his. Though perfectly illiterate, and ignorant upon almost every subject, there is something about the man which makes it impossible for any body to despise him. Taken individually, all his qualifications are despicable, yet, considered in the aggregate, they are of that character which renders it difficult to view him contemptuously. His temper is decidedly bad: it is not merely quick, but obdurate and sour; and if he once conceives a dislike to any one, it is almost impossible to remove it. He is extremely jealous, pettish, and suspicious, and cannot tolerate quizzery of any description. At the same time, although on some points it is not difficult to play upon him, yet he has such an immense opinion of his own penetration, that he conceives no man could attempt such a step without being instantly detected. Any opinion which he may form he views as infallible, and all the evidence in existence will not make him abandon it. I have no doubt whatever, from

what I have seen and known; that he is tyrannical and domineering. He is also very quarrelsome, so much so that it is disagreeable to walk on the streets with him lest he gets involved in a scrape. He has no idea of accommodating himself to others, but goes doggedly along, pushing aside those who are not exactly disposed to get out of his way. He is a capital pugilist. The science of boxing he has studied indefatigably,—not, as it occurs to me, as an exercise, but to render himself formidable. The consequence is, that he has got into fifty rows; and if, at any time, you meet him, the chances are that his eyes are either in mourning from blows received, or his knuckles injured from the punishment given to his antagonist. His habits are altogether of a low order. He has no fondness for, but rather an aversion to, elegant and virtuous female society; and his associates are mostly prize-fighters, and sporting characters generally. With regard to his amative propensity, every body acquainted with him knows that it is very great; he is, in fact, the slave of that feeling, and never speaks of a woman except in an animal point of view. I think I may safely say that I never knew a person so perfectly indifferent to poetry, painting, fine scenery, and every thing beautiful in the material world. It is certain that the Cowgate, or Wapping, would excite about as much of the sublime in his mind as Glencoe or the Vale of Chamouni. If people in his company begin to speak of such subjects and shew any rapture, he gets gloomy and irritated, pronounces the conversation “d——d stuff,” and, unless it be abandoned, he leaves the room. On the contrary, get upon fighting, and, like the war-horse, his eye instantly lightens up—he becomes the cock of the company, and describes, with intense delight, the many brawls he has been in,—shews how he pounded this man and that man, and exemplifies, in the most graphic manner imaginable, all the different details of a fight. Indeed, his stories on such subjects are master-pieces in their way. They abound in details,—are astonishingly circumstantial; and if he tells the story fifty times, it never varies. I have no doubt whatever that many of his tales and exploits are mere lies; but they are certainly the best put-together lies I ever listened to, and look prodigiously like truth. In fact, their excessive circumstantiality and detail, and the unvarying way in which he tells them, long imposed upon me, and convinced me that, in spite of their improbability, they must be true, till I ascertained from unquestionable evidence that some of them at least were merely ingenious fabrications got up for the purpose of aggrandizing himself.

He is very fond of praise, especially of his person, which he considers faultless. This, indeed, is the only vulnerable point about him, and if the thing is done judiciously, he will swallow a most enormous dose; but if he once supposes they are quiz-

zing him, it will require no small restraint to prevent him from inflicting summary punishment on the quizzier. His great ambition is to be a first-rate boxer, or possess great strength; and so strong is the feeling, that if the choice were given him of being able to write *Paradise Lost*, or beat Jem Ward, there is no doubt he would fix upon the latter. Literature and literary men he views with great contempt. He says, that if he had received a proper education, and possessed the same advantages as other people, he could have written as good works as any man that ever lived. With all this he has no love whatever for reading. Indeed, he confesses—I sincerely believe for the purpose of making his natural genius appear more extraordinary—that he never read a volume in all his life, a fact which I perfectly credit. The only reading he ever indulges in is the account of the prize-fights in Bell's *Life in London*.

One strong feature in his character is a total want of punctuality. When he makes an appointment, it is the merest chance in the world if he keeps it. Indeed, he does not seem to think there is the slightest impropriety in violating such engagements. He is also slovenly in his dress, and is altogether what you would call a careless, reckless sort of being.

So far as I know the man, I should say that his character is greatly deficient in philanthropy. He is disposed to take harsh views of things, and judge people's actions uncharitably. When offended at any one, he is also prone to curse at him and abuse him without mercy. Indeed, the whole texture of his mind is singularly inelegant; and I do not believe, that, under any system of education, it would be possible to have made him, in manners or conversation, a suitable companion for well-bred people.

With regard to his Conscientiousness, I really am at a loss what to say. For the first six years of my acquaintance with him, I considered him the most simple-minded and honest of human beings, and, for any thing I can prove to the contrary, I might consider him so still; but I must say candidly, that some reports got into circulation against him in 1830, any thing but creditable to his honesty. He was accused (with what truth I know not) of having appropriated sums of money which did not belong to him; and under this impression he has got into bad repute with those mercantile gentlemen who have heard of the circumstance. In short, a stigma is attached to him on the above account, which I sincerely hope, and almost believe, is false, but which many persons affirm to be too true. This is all I can say. Be the matter as it may, it has done him great injury, and long prevented him from getting employment.

I have spoken of his want of punctuality. This irregular propensity is manifested in the preference he gives to dining in

chop-houses to doing so in his own house, and in his fondness for late hours. Indeed, he is exceedingly unsystematic, though both shrewd, observant, and sagacious. He seems, in an argument, to be quite incapable to proceeding upon general principles; and although he will never strike his own colours, he invariably mystifies and tires out his opponents.

He is ambitious of being thought formidable in drinking and eating. I have heard him boast before ladies of the quantity of porter he could drink, and beef-steaks he could consume. He is exceedingly pleased when any one compliments him upon his amative powers, and, in short, swallows with avidity whatever tends to exalt him in the scale of manhood. The only intellectual quality which he is vain of having imputed to him is his great *penetration* and his talents for argument. He alleges, that were he better educated, he would be quite invincible at the latter accomplishment.

I think he has some mimicry about him, but it is all of the low kind. I have seen him *take off* some of his acquaintances pretty adroitly. He has also a fondness for vulgar jokes. For instance, I have seen him get hold of some half cracked creature, and try how many pies he could eat—he himself laughing heartily and enjoying the exhibition with great delight. I recollect of him getting a couple of fellows to try which of them would eat most rapidly a quantity of hot porridge, the winner to get five shillings for his performance. On another occasion he promised a carter two shillings if he would drink off half a gallon of small beer.

With regard to his love of money, I am at a loss what to say. Any time that I have seen him spend money, it always occurred to me as if it were done more out of a pure spirit of ostentation than from liberality. Others have frequently made the same remark. I cannot bring myself to say that any particular fondness for the acquisition of wealth on his part ever occurred to me: but on this point I am not competent to speak. Of one thing, however, I am certain, that most of the money he lays out is expended in the bagnio, the chop-house, or among the pugilists. He spends little on clothing, and I believe never purchased a book in his lifetime.

I cannot speak of his religious feelings. I never saw any exhibited, but he has been most unfavourably situated for their manifestation. If he once took it into his head to be religious, he would be such a saint as Louis XI. or Catherine of Medicis.

In short, he is a man who may be persuaded into a thing by flattery, but it is impossible to make him move a step by any other consideration. His obstinacy is very great, and is proof against almost any thing. If he were in a station where he had plenty of scope and little restraint, I think he would be ex-

travely tyrannical and fond of inflicting punishment. I have often heard him express great rage against Colonel Brereton for not sabring the people at Bristol, and swear that if he had had the command on that occasion, he would have slaughtered them by hundreds. This I believe firmly he would not scruple to do in such circumstances. If he took a fancy for a person, and that person did exactly as he wished, I think he would sacrifice life and limb to serve him; but the slightest symptom of the individual acting independently and thinking for himself, would make him cast him off. With regard to his love of children, I should think it considerable. At least children—with the exception of his three brothers to whom he is much attached—are the only people towards whom I ever observed him to take a fancy. His letters are stiff, and indicate a deficient command of language; though in his capacity of a clerk he has had plenty of experience in letter-writing. His arithmetical powers are not great. I should think them below par. That he would be intensely litigious it is impossible to doubt. The expression of his face is sinister and gloomy, and indicates dogged determination and great want of mental flexibility.

REMARKS BY MR SIMPSON ON THE PRECEDING ACCOUNT.

This character is substantially the same as that transmitted to ——. To the postscript of the latter, it gives great value. In spite of six years intimate acquaintance with, and minute study of, this singular person, Mr — did not know an important feature in his character, his deficient Conscientiousness, but had it only from reports. Yet he narrates several traits quite inconsistent with Conscientiousness, although he himself does not appear to observe how they bear.

ARTICLE IV.

ON MORBID MANIFESTATIONS OF THE ORGAN OF LANGUAGE, AS CONNECTED WITH INSANITY. By Mr W. A. F. BROWNE. (Concluded from p. 316.)

SOME lunatics are met with, in whom the symptom of a diseased organ of Language is, that they have forgotten certain classes of words; or rather, while the notions which these have been invented to communicate remain clear and distinct, one word, which in ordinary occasions forms but a part of the sign, is employed in place of a number of others, without the assistance of which the speaker's meaning is only indicated, but not fully or adequately expressed. It is a sort of algebra of language. The words are not

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 has been rendered so
 described is, especially in
 imperfectly investigated;
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and difficult of explanation, the words used are generally abstract terms, corresponding to states of the mind, the ordinary events of life, &c., but not indicating the objects by which he is surrounded, or those presented to his senses. He is perfectly quiet and docile; but, from a kind of oscillation on his seat, the flushing of the face which precedes his replies, and the slowness and measured manner in which they are pronounced, it is anticipated that decided symptoms of general paralysis will very soon appear.

It cannot fail to strike every one, how nearly these states of decay and disease coincide with the infancy of the power of language, as perceived during the education of healthy well-formed children, or more palpably still in that of deaf mutes. This observation is justified by a most interesting series of letters, written by the latter unfortunate class during their tuition, and published by the Dublin National Institution*; and the work of Mons. Itard contains sufficient evidence of its truth. One quotation from the latter will suffice. He states that the phrases employed are without pronouns, conjunctions, or any word which serves to express an abstract idea; but present only a confused union of adjectives, substantives, and some verbs, without any regard to tense,—they being always put in the infinitive; as, “Paris bien beau;” “Alphonse content;” “Voir l’impératrice;” “beaux chevaux blancs six;” “Alphonse pas rester a Paris,” &c. †

Dr Haslam has recorded a variety of this symptom in individuals subjected to long confinement in consequence of insanity. His words are: “Insane people who have been good scholars, lose, in a wonderful degree, the correctness of orthography: when they write, above half the words are frequently misspelt; they are written according to the pronunciation. The subject is repeatedly begun, but they seldom advance beyond a sentence or two; the orthography becomes puzzling, and by endeavouring to adjust the spelling, the subject vanishes ‡.”

Some rare and remarkable cases occur, where a different meaning is attached to words or signs than that which they are intended to convey, or what is warranted by their general acceptation. M. Esquirol has made us acquainted with the case of a young man, a native of the village of DIE, who, knowing that overhanging the hamlet is a rock called U, conjoined the two words, obstinately maintaining that they were one, and that they signified that all the inhabitants were gods. Soon discontented

* Reports of the National Institution for the Education of the Deaf and Dumb, for 1816-19-20, &c.

† *Traité des Maladies de l’Oreille et de l’Audition*; par J. M. G. Itard, vol. ii. p. 413.

‡ *Observations on Madness and Melancholy*, 1809.

with this polytheism, he concentrated the divinity in the person of his father, &c.* A patient who has been confined for twenty years in Charenton, conceives that he is the proprietor of the establishment, and that he defrays the expenses by issuing paper-money—a certain amount of which he presents to M. Esquirol every Saturday. These bills he states, and believes, to be drawn out in the accustomed form, for certain sums payable by a banker in Paris,—instead of which, they are grotesque drawings of what appear to be Pagan deities, accompanied by no writing whatever. The figures depicted bear a close and remarkable likeness to each other. The inability to detect the want of adaptation of the sign to the thing signified, is here very apparent.

It will be expedient to introduce in this place a detailed account of an affection of the brain, or its protecting membranes, which produces results very closely resembling those which have been described. Perhaps the most melancholy discovery which it has fallen to the lot of scientific men to make, is that of a new disease, by which life may be embittered, its duration shortened, and its extinction rendered inevitable. Knowledge, however, even of this melancholy kind, is indispensable and precious; for it not only shows clearly the nature and magnitude of the antagonist force with which it is necessary to contend, but places within attainment the means by which the contest may be protracted, if not brought to a successful conclusion. The reasons, then, why the following sketch has been rendered so extensive, are, that as yet the disease described is, especially in this country, but partially known and imperfectly investigated; and that all efforts to cure or alleviate the sufferings which it entails, have been unavailing. If we regard the primary symptoms of this affection, independent of the alienation with which it is invariably complicated, we shall find them obscure, insidious, and equivocal, even to the watchful eye and anxious ear of affection. The patient walks without difficulty or effort, and with an erect gait, until he encounters some obstacle or inequality of surface, when he stumbles or staggers as if about to fall. He readily recovers his equilibrium, however, and proceeds. So slight are these deviations from the ordinary habits of the individual, and so little observed by his friends, that they are attributed to carelessness, to the rugged path, to intoxication—to everything save that malady whose poison is rapidly paralysing the power of motion, dulling and deadening the senses, and sapping the noblest attributes of intelligence. This embarrassment in the voluntary movements very speedily assumes a more decided aspect. The patient rocks from side to side; inclines for-

* Diction. des Sciences Med. art. FOLIE.

wards; attempts to derive support by extending the arms; fails to raise the feet from the ground; finds an impediment in every pebble and molehill; and often terminates his ill-regulated and grotesque walk, by losing all command over the muscles of the lower extremities, and falling down. Running, as in the analogous case of intoxication, is accomplished with greater facility than walking; and these paralytics are seen hurrying to and fro, not from a predilection to rapid motion, or the disturbance of a maniacal paroxysm, but from inability to preserve their equilibrium at a slower pace. This condition is developed in various degrees, and passes through a number of stages, before progression becomes altogether impossible. This, however, at last occurs: the legs no longer obey the will, but bend under the weight of the body, from which, in a physiological sense, they are essentially separated. The upper extremities participate in this affection,—but, it would seem, at a more advanced period of the disease. In none of these abnormal states have tremors or spasmodic contractions of the muscles occurred, by which the disease could be identified or even assimilated with epilepsy, hysteria, or the shaking palsy; indeed, were the description already submitted not sufficient to establish its nature, the following symptoms would place it beyond a doubt. At the very commencement, the patient experiences a difficulty, scarcely appreciable by an unscientific listener, in expressing himself in the language which he has been accustomed to use; but when he attempts to sing, or employs a foreign tongue, it becomes evident. This inability amounts, at first, merely to a want of clearness and distinctness in the pronunciation of certain words, and may be referred, as in the instance of the first false step, to the negligence or haste of the speaker. But as the disease proceeds, what was but slight embarrassment, such as may be contracted by habits of imitation, or betray but the ill-assured tone of bashfulness or imperfect education, becomes a palpable hesitation, and then a stutter: the final syllables are next lost; and ultimately a succession of unintelligible sounds constitutes the only mode of communication by which the unfortunate being, now almost stripped of the attributes and desires of man, can make known the few wants and wishes that still cling to his fallen nature.

To these symptoms, a great number of manifestations of mental excitement or imbecility are superadded. The monomania of riches or rank, of conspiracies or conquest, of fanaticism or fame, haunt the tottering mind, and urge it on to deeds in lamentable discordance with the humiliating appearance of the sufferer. He is pursued by imaginary colours, by visions and phantoms, by music, or the whisperings or yells of demons. He is held in the embrace of beloved friends. He is tormented on

the engines of the inquisition. Or the senses may no longer be stimulated to perception. The torpor and insensibility are occasionally so great, that actual cauterly may be applied, and the strongest ammonia held to the nose, without exciting the attention, or appearing to inflict pain. A state of violent agitation or restlessness is frequently present. Sleep is disturbed or cannot be obtained. The patient either does not observe, or takes no notice of, the approach of the attendants. He moves constantly about, or remains perfectly stationary. He is lethargic, or frantically tears and destroys every thing around. He speaks slowly, and with an effort,—or with an inconceivable vehemence, running whole sentences into one word, omitting the essential syllables and phrases, and giving utterance to a harangue, the harsh and wild tone of which can be equalled only by its incoherence. It is unnecessary to enlarge further upon the symptoms by which this species of paralysis may be accompanied. These must vary according to the nature and intensity of the alienation by which it has been preceded, the common causes to which both may be traced, and the temperament and constitutional diathesis of each individual. If the mania has been furious—or rather, we should say, that originating in the unhealthy action of Destructiveness, Combativeness, and Self-esteem;—if the system has been exposed to the effects of excess in wine, of insolation, or of injuries of the nervous centre;—the inarticulate words will be shrieked forth at the highest pitch of voice, and as quickly as the almost benumbed organs will permit. Whereas if syphilia, and its companion in the destruction of mental and bodily vigour, mercury, have assisted to usher in that dementia and desponding characteristic of diseased Cautiousness, Conscientiousness, and Veneration, it may, with some degree of certainty, be predicated, that the tongue will refuse its office, or perform it imperfectly, slowly, and as if with reluctance. These observations are introduced as illustrations, and not as actual grounds of diagnosis. This affection, of which the impediment to articulation is unquestionably the most striking and diagnostic mark, is observed exclusively in the institutions for the reception of the insane. There its invasion, progress, and maturation are, to the man of science, more obvious than in the intercourse of ordinary life, where so many motives operate to effect the concealment of disease, or to render inquiry imperfect and abortive. It may indeed be affirmed, that its existence was detected, its symptoms observed, and its history completed, within the walls of Charenton; for, until the appearance of the work of M. Calmeil *, no satisfactory information was possessed on the subject. In the succession of changes which take place, the insanity is on all occasions ob-

* De la Paralyse considérée chez les aliénés. Par L. F. Calmeil. Paris 1826.

served to precede the paralysis. The length of time which may intervene between the two periods of incursion, varies from months to years, and from years to a quarter of a century ; but, at whatever distance separated, these two states constitute but different stages of the same disease. It is of course not affirmed, that the organic change of the brain or its coverings, productive of the insanity, likewise stands in the same relation to the paralysis ; or that all, or even a majority, of the insane are subjected to this additional infirmity. As far, however, as experience at present extends, those previously suffering under alienation, appear to be the only class of individuals liable to be affected in the manner related ; for the shaking palsy cannot even be admitted as an analogous disease. In its symptoms are met with, which establish some points of similarity, but not of identity, or even of nosological relation. In some of the cases of paralysis agitans, a propensity to bend the trunk forward, and to pass from a walking to a running pace, is noticed. In several, a difficulty in speaking, or the total loss of the power of articulation, is likewise insisted upon ; but then the affinity suggested by these signs is destroyed by the presence of tremors and convulsive contractions of the muscles, sometimes so violent as to shake the bed and furniture of the apartment. In both diseases the muscles are beyond the control of the will ; but, in the latter, in place of apathy, debility and insensibility, a high degree of irritability is evident from the convulsive twitching by which the whole body is agitated *. Of sixty-four cases of general paralysis, given in detail by M. Calmiel, sixty exhibited *the impaired exercise of language* in a most marked and deplorable degree. In one its occurrence is not mentioned ; in one it did not exist ; and in two it was impossible to ascertain whether it did or not. It is scarcely possible to conceive facts better established than these, or more satisfactorily proving how inseparably connected the free and full exercise of the power of language is with a healthy condition of the brain, and how much we may be assisted in detecting or distinguishing the diseases of all the mental powers, by attending to the mode in which this individual power is developed and exercised.

But the subject is not exhausted. In the wards at Charenton are a number of lunatics afflicted in the manner described, —the greater part of whom are victims of the abuse of Amative-ness or the effects of syphilis and mercury, and exhibit very appreciable deviations from the healthy manifestations, not merely in the articulation, but in the construction of the few words they may be induced to utter. Many of these miserable creatures do not speak at all ; others still remember a sufficient number of words or parts of words (for the final syllable is sel-

* Parkinson on "Shaking Palsy."

dom pronounced) to demand tobacco, to ask intelligence about the great world, or at least to welcome their physician. But these, as well as others who speak more fluently and copiously, frequently omit essential words, or transpose them in such a manner as to evince a very imperfect knowledge of the relations in which they ought to stand to each other, and of the different meaning which may be conveyed by the change. This cannot be better illustrated than by translating a passage from the "*Médecine Légale*" of Hoffbauer, a work of great excellence and interest. In the lowest degree of imbecility, that in which the *paralysie generale* of Calmiel generally takes place, "the lunatic," he says, "often expresses himself by half pronounced words; returns constantly to the same thing; communicates his ideas by short broken incomplete phrases, like the infant which retains the words, although it cannot put them together. In such sentences, for example, he announces the subject and attribute without connecting them: thus, in stating the idea—'the rose is beautiful,' he will say 'rose beautiful;' or only 'rose,' or 'beautiful,' according as the object or its quality first attracted his attention. He will often invert the natural order of things and say, 'rose beautiful is.' If, on perceiving his error, he attempts to correct, he renders the sentence still more confused *."

Reference has here been made to some of those patients who do not or cannot speak at all: it is only such, however, as are afflicted with paralysis that are placed without the pale of intercourse with their fellow men. The inclination or determination not to speak, is a common manifestation of diseased Secretiveness, Cautiousness, Firmness, and Self-Esteem; but in many other circumstances where no such combination exists, I feel persuaded that it ought frequently to be contemplated more as an idiopathic affection of the organ of Language itself, than as secondary or symptomatic of the condition of the other parts of the brain. A case occurred last November in the hospital of La Pitié, under the care of M. Louis, in which all recollection of language had been destroyed by what appeared to have been an attack of simple apoplexy. The stupor was soon removed, and no paralysis or other symptom save that stated remained to attest the existence of previous disease. The man seemed intelligent and aware of all that passed around. Gradually the brain resumed its influence; he began to speak, and stated that he had been perfectly conscious of all that had taken place since the dissipation of the coma, and that his only want was that of words to express his feelings of gratitude. I am acquainted with a gentleman who for many months could not be tempted by any persuasion or appeal to utter, either among

* "*Médecine Legale*," par J. C. Hoffbauer; traduit de l'Allemand par Chamheyron, p. 59.

strangers, or in the privacy of his own family, or in the confidence of friendship, more than the monosyllable "Yes,"—and that in a drawling prolonged tone, which suggested the idea that his silence proceeded from physical impediment. This conduct was attributed very naturally to insanity, of which he had certainly afforded other proofs: his actions were misconstrued, and it was proposed that he should be placed under restraint. Fortunately a marked abatement of the disease occurred; he spoke more freely, and then stated that his long and apparently perverse or insane silence arose chiefly from inability to conjure up words to signify what was passing in his mind,—that in this effort he lost sight of the idea to be represented,—and that he had never experienced the suicidal feelings which his friends had apprehended, and to correct which they had intended to seclude him. Little doubt can be entertained, that in many such cases, great and irreparable injury and injustice may be committed by restraining or confining individuals as lunatics, who are merely monomaniacs in the power of language. The effects of joy, fear, affection, and love of approbation, in suspending or limiting the exercise of language, are known and have been felt by all; and it may readily be conceived that in a disposition highly susceptible of such impressions, the slightest deviation from health in the organ of Language, will become doubly perceptible; and may lead to misconstruction and consequences of the most melancholy kind.

The last morbid condition of the organ of Language to be adverted to, is that which has been remarked in plague, yellow fever, &c. Dr Gregory mentions that, in the former, "the pain in the head is referred to the temples and eyebrows;" adding, that the "speech falters:"—and Sir Brooke Faulkner, who is one of the highest authorities on the subject, affirms that "the utterance is slow, drawling, and interrupted." In yellow fever the pain is almost localised in the orbit, and a similar state of the utterance has been noted. The same may be occasionally remarked as occurring in the typhus of this country. "The pain over the forehead," says Dr Good, "shoots through the eyes to the bottom of the orbits;"—"the speech is muddled."

In compiling the foregoing pages, I have not attempted to penetrate into the means by which disease is produced. Without more extensive experience, and the aid of pathology, such an undertaking must prove vain and visionary. My sole object has been to present what may be called a synopsis of the morbid manifestations of the organ of Language which had come within the sphere of my own observation and that of others. The utility of such a detail of symptoms as has now been given can scarcely be questioned. For although it would be infinitely

more satisfactory to classify diseases according to the nature of the organic change in which they may originate and consist, than by the resemblance of symptoms; yet, in the absence of all system, an arrangement founded upon affinities which are appreciable by the common observer, cannot be stigmatised as altogether hypothetical. It would, for example, have been more clear and definite to refer the various cases which I have described, to softening, induration, inflammation, congestion, or deficient circulation of the brain,—than to associate them according to a real or fancied similarity of symptoms. But when it is considered that the subject has until now remained uninvestigated, in its relation both to the healthy and to the diseased states of the mind; that in this country, at least, the researches of medical men are circumscribed by prejudice, and by the laws which affect the custody of lunatics; and that hitherto, even amid ample opportunities, no adequate attention has been paid to the pathology of insanity; the impossibility of establishing such a connexion between the disease and its cause will be apparent.

Nor have I ventured to examine the influence which the development, cultivation, or actual condition of the other faculties may possess in modifying the character of the symptoms. But, though cautious in theorizing, I have not failed to form a theory. I am not, however, justified by observation in stating more than that, in cases of partial loss of language, the words remembered appear to be substantives when Individuality is vigorous, abstract terms when Casuality is powerful, and adjectives when the lateral Knowing organs are large and unimpaired. This is stated merely to point out the direction in which my speculations have advanced, and not as explanatory of the phenomena. This much we have ascertained—that the following indications of disease may be presented by the organ of Language:—

1. Rapidity of voluntary utterance.
2. Involuntary utterance.
3. Rapidity of involuntary utterance.
4. Total loss of verbal memory.
5. Partial loss of memory of all words indiscriminately.
6. Partial loss of memory of certain classes of words.
7. Impaired perception of the relation of words to the things signified.
8. Impaired perception of the relations of words to each other.
9. Total loss of perception of these relations.

ARTICLE V.

ON THE CHARACTER AND CEREBRAL DEVELOPMENT OF
THE ESQUIMAUX. (Concluded from p. 308.)

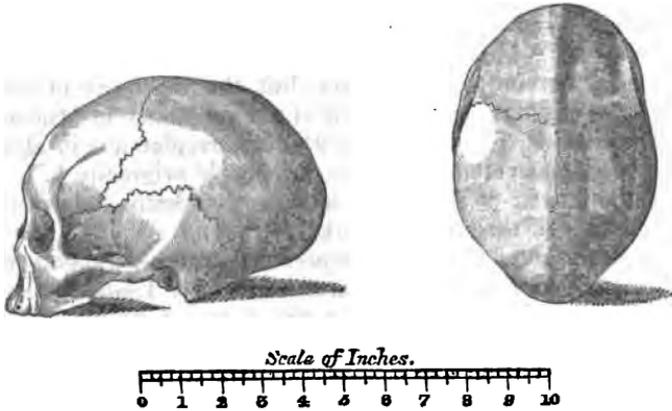
HAVING already compared several of the leading characteristics of the Esquimaux with the configuration of twelve of their skulls in the Phrenological Society's collection, we now proceed with a farther examination of their dispositions and intellectual powers. As the reader ought to keep their prevalent cerebral development in view, it will be useful to prefix the table given in last number. This will obviate the inconvenience of reference.

DEVELOPMENTS.

ORGANS.	No. of Skull or Cast.												Aver.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	
1. Amativeness, . . .	16	17	18	16	20	18	16	18	12	18	18	20	17½
2. Philoprogenitiveness, . . .	20	20	16	17	20	16	19	18	13	20	20	19	18½
3. Concentrativeness, . . .	18	16	13	16	16	15	15	16	12	18	18	16	15½
4. Adhesiveness, . . .	14	14	17	14	14	15	12	16	12	14	14	14	14½
5. Combativeness, . . .	12	16	18	16	18	18	18	19	13	13	15	16	16
6. Destructiveness, . . .	14	14	18	16	16	18	12	18	11	16	16	16	15½
7. Secretiveness, . . .	14	14	18	16	16	17	12	17	12	16	16	16	16½
8. Acquisitiveness, . . .	10	12	14	15	14	16	10	16	12	14	14	12	13½
9. Constructiveness, . . .	10	15	12	14	16	18	14	16	12	15	13	14	14
10. Self esteem, . . .	16	18	16	18	18	18	15	16	14	17	17	14	16½
11. Love of Approbation, . . .	16	16	18	16	14	14	14	18	13	17	14	14	16½
12. Cautiousness, . . .	16	15	16	15	12	15	13	16	14	18	15	14	15
13. Benevolence, . . .	14	14	13	16	12	12	14	13	13	16	15	14	13½
14. Veneration, . . .	16	18	16	14	17	14	16	16	15	14	17	19	16
15. Firmness, . . .	16	15	14	15	14	18	16	18	15	14	16	13	16½
16. Conscientiousness, . . .	10	11	10	11	8	10	8	14	10	10	8	8	9½
17. Hope, . . .	12	10	10	12	9	12	8	12	12	10	9	10	10½
18. Wonder, . . .	10	14	12	12	10	12	8	12	11	12	8	9	10½
19. Ideality, . . .	9	14	11	11	10	12	10	12	11	10	10	9	10½
20. Wit, . . .	9	10	10	10	10	10	12	11	8	9	8	8	10½
21. Imitation, . . .	9	11	12	12	12	12	12	13	11	13	12	11	11½
22. Individuality, . . .	14	16	14	13	12	12	11	14	14	10	12	10	12½
23. Form, . . .	10	12	10	11	10	10	8	11	12	8	8	8	9½
24. Size, . . .	10	13	10	10	8	10	8	12	10	10	10	8	10
25. Weight, . . .	8	10	8	10	8	10	8	12	8	11	10	8	9½
26. Colouring, . . .	6	8	8	10	8	10	8	10	7	8	8	8	8½
27. Locality, . . .	12	12	12	11	10	11	10	12	12	10	12	8	11
28. Number, . . .	6	8	14	10	10	10	8	8	8	6	8	8	8½
29. Order, . . .	6	8	8	9	10	10	8	8	8	8	8	8	8½
30. Eventuality, . . .	10	14	10	10	10	10	12	12	12	8	11	10	10½
31. Time, . . .	8	11	8	10	8	8	10	10	10	8	8	8	9
32. Tune, . . .	8	11	10	9	10	10	10	12	8	8	8	10	9½
34. Comparison, . . .	12	14	10	12	8	10	10	14	8	13	12	12	11½
35. Causality, . . .	8	13	10	12	10	8	12	14	10	9	10	10	10½

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

f It may be proper to reprint also two views of the Esquimaux skull, No. 1.



The CONSTRUCTIVENESS of the Esquimaux—the organ of which seems to be frequently of considerable size, though in some instances rather moderate—finds a sphere of activity in the manufacture of weapons, fishing-boats, clothing, and domestic utensils. The women display more of this faculty than the men, and the neatness of their handiwork has attracted the admiration of most of the voyagers who have seen it. “In all the arts practised by the men,” says Captain Parry, “it is observable that the ingenuity lies in the principle, not in the execution. The experience of ages has led them to adopt the most efficacious methods, but their practice as handicrafts has gone no farther than absolute necessity requires; they bestow little labour upon neatness or ornament. In some of the few arts practised by the women there is much more dexterity displayed, particularly in that important branch of the housewife’s business, sewing, which, even with their own clumsy needles of bone, they perform with extraordinary neatness.” “The thread they use is the sinew of the rein-deer, or, when they cannot procure this, the swallow-pipe of the small seal. This may be split into threads of different sizes, according to the nature of their work, and is certainly a most admirable material*.” Ellis says of a tribe on the coast of Hudson’s Bay: “In general their clothes were sewed very neat, which is performed with an ivory needle and the sinews of deer spitt fine, and so used for thread. There is likewise a good deal of taste and judgment discovered in the manner in which they adorn them with stripes of different coloured skins, sewed in the manner of borders, cuffs and robings for their clothes, which altogether look very tight, neat, and even elegant, or at least handsome, as well as convenient.” He adds that

* Parry, v. 293. (12mo edit.)

they have an ingenious contrivance for protecting the eyes from snow-blindness, and that "the same spirit of invention shews itself full as much, or rather more, in their instruments for fishing and fowling,"—of which he gives a description. Of another tribe he says: "I must confess that I could not help admiring very much, not only the industry, but the ingenuity of these people*." Crantz mentions that the Esquimaux in Hudson's Bay, described by Ellis, "agree with our Greenlanders in almost every thing, and very likely were one people originally †." He says of the latter: "We cannot sufficiently admire the neatness and ingenuity of their needle-work ‡."

In the construction of their winter habitations, the only materials employed by the Esquimaux at Winter Island are snow and ice. The huts are built in the form of domes, and are nine or ten feet high in the centre. For the admission of light, a round hole is cut on one side of the roof of each apartment, and a circular plate of ice, three or four inches thick, and two feet in diameter, let into it. The light is soft and pleasant, like that transmitted through ground glass, and is quite sufficient for every purpose. "When after some time," says Captain Parry, "these edifices become surrounded by drift, it is only by the windows that they could be recognised as human habitations. It may perhaps then be imagined how singular is their external appearance at night, when they discover themselves only by a circular disk of light transmitted through the windows from the lamps within §."

The length of one of the best of seven canoes belonging to the same tribe of Esquimaux was twenty-five feet; the extreme breadth twenty-one inches, and the depth ten inches and a half. "The skin with which the canoe is covered is exclusively that of the small seal, prepared by scraping off the hair and fat with a knife, and stretching it tight on a frame over the fire; after which, and a good deal of chewing, it is sewn on by the women with admirable neatness and strength ¶."

As mechanics they "have little to boast, when compared with other savages lying under equal disadvantages as to scantiness of tools and materials."—"Their principal tool is the knife, and, considering the excellence of a great number which they possessed previous to our intercourse with them, the work they do is remarkably coarse and clumsy. Their very manner of holding and handling a knife is the most awkward that can be ima-

* Ellis' Voyage, pp. 65, 106.

† Crantz's History of Greenland, i. 132.

‡ Ib. p. 137.

§ Parry, v. 202. Tents are used in summer: Captain Lyon describes one of them in his Private Journal, p. 228. The snow-huts seen by Cartwright in Labrador were similar to those mentioned by Captain Parry. See Cartwright's Journal, i. 96. (Newark, 1792.)

¶ Parry, v. 215. See Lyon's Private Journal, p. 311.

gined *." The Greenlanders appear to be rather more skilful than the people described by Parry:—"The men," says Egede, "meddle with no work at home, but what concerns their tools for hunting and fishing tacklings, viz. their boats, bows, arrows, and the like. All other work, even of building and repairing the houses, belongs to the women. As dexterous and skilful as the men are at their work, so the women are not behind hand with them; but, according to their way and manner, deserve to be praised and admired †." Beechey found indications of considerable constructive ingenuity in the neighbourhood of Behring's Strait. At Hotham Inlet, near Kotzebue's Sound, he saw in the hands of the natives implements on which "were etched a variety of figures of men, beasts, and birds, &c. with a truth and character which shewed the art to be common among them ‡." In another place this navigator met two or three chains, cut by the Esquimaux out of a solid piece of ivory §. Captain Franklin saw, among the Esquimaux whom he met at Upper Savage Island, Hudson's Strait, imitations of men, women, quadrupeds, and birds, carved with labour and ingenuity out of sea-horse teeth. "The dresses of the men and the figures of the animals were not badly executed, but there was no attempt at delineation of the countenances ¶." Manifestations of Constructiveness were found by Mr Collie among the natives of St Lawrence Island, Behring's Strait: "carvings and etchings, if they may be so called, on ivory and bone, of the figures of their most familiar objects,—themselves, their dogs, boats, seals, rein-deer, walrus, and other animals,—their dances, with attendant musicians, &c., and small ivory images of themselves." He robbed some of their tombs, and his note of the development inferred from four skulls so obtained, was published in the fourth volume of this Journal, p. 685. In two of the skulls he states Constructiveness to be large; in another, rather large; and in the fourth, very large. Beechey says, that "their implements were better made" than those of the other Esquimaux tribes, but "so similar to them as to need no description ¶¶."

We formerly saw, in the contempt with which the Esquimaux regarded the British navigators, indications of active SELF-ESTEEM. The skulls present a very full development of this organ, the average being a little above "rather large." To what has already been said on this subject, we have only to add, that the tribe whom Captain Lyon describes hold the neigh-

* Parry, v. 290.

† "A Description of Greenland, by Mr Hans Egede, missionary in that country for twenty-five years. Translated from the Danish. London, 1745." p. 112.

‡ Beechey's Narrative, p. 261.

§ Ib. p. 296.

¶ Franklin's Narrative of First Journey, p. 18.

¶¶ Beechey's Narrative, p. 242-3.

bouring inhabitants of Southampton Island "in the most sovereign contempt, considering them as savages, and as vastly inferior to themselves *."

LOVE OF APPROBATION is, on the whole, not remarkable for either strength or deficiency †. In some individuals the feeling is strong, but generally it does not seem to be prominently displayed. The ornaments of the tribe at Winter Island are very few; and though the women received with eagerness beads and similar articles, "scarcely any thing made its appearance again ‡." Tattooing, however, "seems to be an ornament of indispensable importance to the women, not one of them being without it §." Captain Lyon gives the following pleasant description of the behaviour of a girl whose vanity was more conspicuous than usual. "We had for some days been much amused by young Arnalooa, who, having had her face washed, and her hair ornamented with a few buttons and some scarlet cloth, gave herself all the airs of an experienced coquette, craning up her neck, and affecting to twinkle her eyes in a most engaging manner. An occasional smile or condescending look was vouchsafed on the bystanders, in order to exhibit her teeth, which had been subjected to the discipline of an old tooth-brush. The husband paraded her about with great satisfaction, while a large party of women were mimicking them both, and imitating Arnalooa's toss of the head. I mention this little anecdote of an arctic belle, as a fresh proof that an innocent love of admiration and finery is not confined to Europe and other civilized countries, though the treasures of the toilet are widely different; a musk-ox tooth, a sailor's button, or a nail, pendent from the pig-tails, being as much prized as a set of diamonds would be in England ||." Egede mentions, in his description of the Greenlanders, that "as for what we call civility and compliments, they do not much trouble themselves about them. They go and come, meet and pass one another, without making use of any greeting or salutation ¶." And we are told by Captain Parry, that whatever labour the Esquimaux of Winter Island may have gone through, and with whatever success in procuring game, "no individual ever seems to arrogate to himself the credit of having done more than his neighbours for the general good **."

The skulls and dispositions of the Ceylonese may be contrasted with those of the Esquimaux, in respect of the organ and faculty of Love of Approbation. The former people, as

* Lyon's Private Journal, p. 345.

† Mr Collie's estimate of this organ in the four skulls mentioned above is,—1. full; 2. full; 3. large; 4. rather small.

‡ Parry, v. 194.

§ Ib. 197.

|| Private Journal, p. 174.

¶ Egede, p. 125.

** Parry, v. 287.

we shewed in a recent paper *, are excessively vain and fond of ceremony; and with this the shape of their heads corresponds.

It is difficult for occasional observers to discover in what degree the RELIGIOUS FEELINGS are experienced by such a people as the Esquimaux. The skulls shew a pretty good development of Veneration, but Wonder and Causality are moderate †. Causality, enlightened by knowledge, leads mankind to infer a Presiding First Cause from the marks of wisdom which every where present themselves in the material universe: Veneration prompts to revere and worship the Being whose existence is thus inferred; while Wonder, besides being the source of the astonishment and admiration with which we contemplate His existence and attributes, gives the mind a bias toward the occult and supernatural. Of such a Being, the Esquimaux have not the most distant conception; and in their superstitions there is less of the supernatural than is usual among savages. The Arctic Highlanders, indeed, seem to have no religion or superstition whatever, and not the most distant idea of a future state. Captain Ross directed Sacheuse ‡, his interpreter, to ask one of them, named Ervick, whether he had any knowledge of a Supreme Being; "but, after trying every word used in his own language to express it, he could not make him understand what he meant. It was distinctly ascertained that he did not worship the sun, moon, stars, or any image or living creature. When asked what the sun or moon was for, he said, to give light. He had no knowledge or idea how he came into being, or of a future state; but said that when he died he would be put into the ground. Having fully ascertained that he had no idea of a beneficent Supreme Being," continues Captain Ross, "I proceeded, through Sacheuse, to inquire if he believed in an evil spirit; but he could not be made to understand what it meant. He said, however, that they had many *angekok*s, or conjurors, who had power to raise a storm, or make a calm, and to drive off seals, or bring them." "Finding that Otooniah, a lad of eighteen years of age, was a young *angekok*, I got him in the cabin by himself, and, through Sacheuse, asked him how he learned this art. He replied, from an old *angekok*; that he could raise the wind, and drive off seals and birds. He said that this was done by gestures and words; but the words had no meaning, nor were they said or addressed

* Phren. Journ. vii. 639.

† Veneration and Causality are developed as follows in the four skulls obtained by Mr Collie at St Lawrence Island:—Veneration, 1. large; 2. large; 3. moderate; 4. large. Causality, 1. rather small; 2. full; 3. moderate; 4. moderate. The development of Wonder is not noted.—See Mr Collie's Communication, *Phren. Journ.* iv. 635.

‡ An account of this Greenlander will be found in the Appendix to Ainslie's "Reasons for the Hope that is in us." Edin. 1831. Like his countrymen in general, he is said to have been "uncommonly fond of children."

to any thing but the wind or the sea. He was positive that, in this incantation, he did not receive assistance from any thing, nor could he be made to understand what a good or an evil spirit meant. When Ervick was told that there was an Omnipotent, Omnipresent, and Invisible Being, who had created the sea and the land, and all therein, he shewed much surprise, and eagerly asked where he lived. When told that he was every where, he was much alarmed, and became very impatient to be on deck. When told that there was a future state, and another world, he said that a wise man, who had lived long before his time, had said that they were to go to the moon, but that it was not now believed, and that none of the others knew any thing of this history; they believed, however, that birds, and other living creatures, came from it*."

This, in all probability, is the condition of the great majority of the inhabitants of the arctic regions of America. Certain beings, dignified with the name of spirits, are, however, mentioned by Egede, Crantz, Lyon, and other writers; but to these very little respect is paid. They are somewhat analogous to the fairies and hobgoblins of Europe; and it does not appear to what extent belief in their existence prevails. For an account of them we refer to the works of the authors just mentioned †. According to Crantz, the religious opinions of the Greenlanders are very various, "forasmuch as every one hath liberty to believe any thing or nothing." Of the "*spirits*" which are said to hold a place in their mythology, two are of superior rank, one good and the other bad; while those of an inferior grade are more numerous, and have various strange offices assigned to them. Thus, one sort "inhabits the air, and lies in wait for the *souls*, as they ascend upwards, to *take out their bowels, and devour them!*" Another species "seize and devour the foxes when they come to catch fish on the strand." There are two kinds of "*spirits* of the mountains; the first are giants four yards high, and the last pigmies, but a foot tall, but very expert however. These pigmies are the masters, forsooth, who taught us Europeans our arts." There is another race of *spirits* who "have a face like a dog's head: they are martial spirits, and inhuman foes to mankind. However, they only inhabit the east side of the land ‡." These personages, as we have said, are not much regarded, and it is improbable that their existence is generally credited among the Greenlanders. The Arctic Highlanders seem entirely ignorant of them. Captain Lyon mentions sundry spirits with whom the sorcerers or *angekoks* of Winter Island hold communication.

* Ross's Voyage, pp. 127-129.

† Egede, 180, *et seqq.*; Crantz, chap. v.; and Lyon's Private Journal, p. 353, *et seqq.*

‡ Crantz, l. 208.

One of these is "a male spirit of considerable importance;" another, "a male of a gigantic size;" a third, "a female who lives in a fine country, far to the west, and who is the immediate protectress of deer, which animals roam in immense herds round her dwelling; and a fourth, "a large bear which lives on the sea, and is possessed of vast information: he speaks like a man, and often meets with and converses with the initiated on their hunting excursions*."

Superiors in general, whether divine or human, are the objects of the sentiment named Veneration. The imaginary beings just alluded to are possibly regarded with reverence by those individuals among the Esquimaux who believe in their existence and power; but on this subject nothing has been clearly ascertained. At all events, "no kind of religious worship exists among these poor people†." As there is no difference of rank among them, parents form the only class of superiors towards whom Veneration may be directed; and filial respect might safely be looked for as the result of so considerable an endowment of the organ. This quality is, in fact, very generally displayed by the children, whose behaviour towards their parents is highly commended by Captains Parry and Lyon. "Disobedience is scarcely ever known—a word or even a look from a parent is enough‡." "Their tempers are excellent, their spirits good, and they are affectionate towards their parents. As they grow up, however, they become independent, but still consider it their duty to obey and assist their father and mother§." Captain Parry asked a man named Tooloak whether he would accompany him to Europe; but "never was a more decisive negative given than Tooloak gave to this proposal. He eagerly repeated the word 'Na-o' (no) half a dozen times, and then told me that if he went away his father would cry. This simple but irresistible appeal to paternal affection, his decisive manner of making it, and the feelings by which his reply was evidently dictated, were just what could have been wished. No more could be necessary to convince those who witnessed it, that these people may justly lay claim with ourselves to these common feelings of our nature||." Of the children in Greenland, Crantz gives a similar account: "The young people and domestics," says he, "maintain a due respect and reverence for the aged, and all the rest owe for the other¶." It may be added, that the angekoks appear to be looked up to by some of their uninitiated brethren,

BENEVOLENCE is by no means largely developed in the heads

* Lyon's Private Journal, p. 361.

† *Ib.* p. 371.

‡ Parry, v. 274.

§ Lyon's Private Journal, p. 356.

|| Parry, iii. 220.

¶ History of Greenland, i. p. 170.

of the Esquimaux*, and the faculty is feebly manifested. "To the sick who have relations living under the same roof, little or no attention is paid; sympathy or pity being equally unknown. A wife attends on her sick husband, because she knows that his death would leave her destitute; but if any other person would take the trouble off her hands, she would never even ask to see or at all inquire after him. A man will leave his dying wife without caring who attends her during his absence; a woman will walk to the ships in high spirits while her husband is lying neglected and at death's door in a solitary hut. A brother will not be able to inform you if his sick sister be better or worse; and in her turn a sister will laugh at the sufferings of her brother. A sick woman is frequently built or blocked up in a snow-hut, and not a soul goes near to look in and ascertain whether she be alive or dead †." Their conduct to the aged is of a peculiarly unfeeling nature. "Old and helpless persons lead a quiet and undisturbed life while their own or adopted children live," and while Veneration thus comes in to stimulate Benevolence; "but should their natural supporters die, no one would move a foot to save them from being frozen or starved to death. The protection afforded to the poor old wretches is of a negative sort, for they are fed merely because food is brought for all the inmates of the hut; but no one of their nearest relatives would, in a time of scarcity, forego a mouthful for their accommodation. In moving about, they are handled as roughly as if they were in full vigour; and if they are performing a journey, and sinking from fatigue, the stoutest, even of their own descendants, will not resign to them a seat on the sledge ‡." Crantz gives a very unfavourable account of the humanity of the Greenlanders: "If a stranger dies and leaves no relations or sons that can be of service, no one will take charge of the fatherless family, except somebody happens to want a maidservant. No one gives them either food or shelter; and afterwards they can see the poor people freeze with cold and starve with hunger, and be as indifferent about it as if they were creatures of another species §." "But the most hard-hearted scene of all is this: when a poor destitute widow, that has no near relations, lies with her children on the ground, bewailing the loss of her husband almost to distraction, all the chattels of her husband are in the mean while clandestinely purloined by the guests, who at the same time bear compliments of condolence on their tongue ||." An instance of this fell under the observation of Captain Lyon. He went

* In three of Mr Collie's skulls, however, it is stated to be large; in the fourth, rather small.

† Lyon's Private Journal, p. 357.

‡ Ib. p. 356. Parry, v. 280.

§ Crantz, l. p. 189.

|| Ib. p. 192.

to see a widow who by all accounts was in a most wretched state. "I found her," says he, "in a snow-hut which was indescribably filthy, the roof broken so that the piercing wind rushed in, and with no furniture except an apology for a skin, on which the miserable woman was lying. She appeared forsaken and left by her countrymen to die; and I have every reason to believe, from the ragged and nasty state of her only dress, that she must have been robbed as soon as her husband died, in the same inhuman manner as the Greenland widows are, according to Crantz. I shall never forget the piteous state and squalid looks of this deserted woman *."

WONDER is another of the organs whose development is moderate. The skulls are remarkably narrow and sloping in the region of that organ. The weakness of the corresponding feeling appeared on the very first visit of the Winter Islanders to the ships; for on that occasion, as Captain Parry informs us, they "expressed much less surprise and curiosity than might naturally have been expected †." Beechey says of a tribe near Behring's Strait: "It is remarkable that, although so far from Kamtschatka and the usual track of vessels, these people expressed no surprise at the appearance either of the ship or of the boat ‡." And Captain Lyon relates, that when the officers shot some birds in Southampton Island, the natives, who saw them fall, "expressed neither surprise, fear, nor curiosity about the guns §." On entering one of the tents, five women, who were inmates, "shewed no signs either of fear or surprise, but received us as if they had been accustomed to the sight of Europeans all their lives ||."

The sorcerers pretend to have interviews with the "spirits" formerly spoken of, and endeavour to support their claims by means of incantations having much of the nature of ventriloquism. Captain Lyon was present at the performance of one of these ceremonies, and has published an account of it in his Journal ¶. Exhibitions of this sort are, however, "not of common occurrence, and of course, by their rarity, are rendered of greater importance. There is much rivalry amongst the professors, who do not, however, expose each other's secrets, but are very mysterious or silent when spoken to on the subject **." That the people do not look upon these jugglers as men possessing supernatural power, is pretty obvious from what took place when the chief sorcerer exhibited his "tricks" and "buffoonery" to Captain Parry. "In general," says the Captain, "the wo-

* Lyon's Private Journal, p. 386.

† Parry, iii. 186.

‡ Beechey's Narrative, p. 272.

§ Lyon's Brief Narrative of an unsuccessful attempt to reach Repulse Bay, p. 57.

|| *Ib.* p. 59.

¶ Private Journal, p. 359.

** *Ib.* p. 367.

men paid little attention to his grimaces, and the whole ended with a hearty laugh from all parties*."

The Esquimaux are said by Captain Lyon to have a unanimous belief in a future state. There are four distinct places of blessedness; the lowest land being the last and most inviting. In this lowest world, we are told, "a perpetual and delightful summer prevails; the sun never sets, but performs one unceasing round; ice and snow are unknown; the land is covered with perpetual verdure, fine sorrel grows everywhere, and the dwarf willow is found in abundance for firing; the large lakes of fresh water abound with fish, and the tents of the 'souls' are pitched along their banks; the sea is always clear, and whales roll about in so tame a state, that the male souls have only to go out in their kayaks, harpoon the one they want, and tow it to the shore; deer and birds range within bowshot of the tents, and are killed as requisite: thus universal and eternal feasting and jollity prevail, and the whole time of the souls is occupied in the favourite amusements of eating, singing, dancing, and sleeping†."

The organs of the INTELLECTUAL FACULTIES generally are not large; though some of the skulls indicate a pretty full development of Individuality. Captain Parry mentions, that, in point of intellect as well as disposition, considerable variety was perceptible among the different individuals of the tribe at Winter Island, but that "few of them were wanting in that respect." By *intellect* he obviously means readiness of apprehension. "Some, indeed," he adds, "possessed a degree of natural quickness and intelligence, which perhaps could hardly be surpassed in the natives of any country." One woman, named Iligliuk, was particularly thus gifted. In Captain Parry's opinion, "she would indeed easily have learned any thing to which she chose to direct her attention; and had her lot been cast in a civilized country, instead of this dreary region, which serves alike to 'freeze the genial current of the soul' and body, she would probably have been a very clever person‡." To this woman the British were indebted for a tolerably accurate chart of the neighbouring coasts§; and it is curious that, in a sketch of her head given by Captain Lyon in his "Brief Narrative," a great development of the organs of Form, Individuality, and Locality, is apparent—the distance between the eyes, and also between the eye-brows, being unusually great. There is in general, however, so far as the skulls before us indicate, a very moderate endowment of the Perceptive Faculties. One of the smallest organs is Colouring, for the exercise of which there is certainly little opportunity in such barren and monotonous regions.—"Dyeing

* Parry, iii. 223.

‡ Parry, v. 283.

† Lyon's Private Journal, p. 374.

§ Ib. iii. 250.

is an art wholly unknown" to the Esquimaux*.—The organ of Order is equally deficient; and the habits of the Greenlanders and other Esquimaux tribes are described on all hands as most filthy and disgusting †. "The Greenlanders," says Egede, "as to their manners and common way of life, are very slovenly, nasty, and filthy; they seldom wash themselves, will eat out of plates and bowls after their dogs without cleansing them, and, what is most nauseous to behold, eat lice and such like vermin, which they find upon themselves or others. They will scrape the sweat from off their faces with a knife, and lick it up ‡." This author gives farther details, but they are too disgusting to be quoted here. Crantz says, "it is enough to turn one's stomach to see their filthy hands and face all besmeared with grease; their meat dressed and eaten in such a disgusting manner, and their nasty dirty clothes and sleeping-places all alive with vermin §." According to Captain Ross, the habits of the Arctic Highlanders are "filthy in the extreme; their faces, hands, and bodies were covered with oil and dirt; their hair was matted with filth; and they looked as if they had never washed themselves since they were born." Frobisher, who explored the entrance of Hudson's Bay in the reign of Queen Elizabeth, gives a similar description of the people on that part of the coast. He says: "They defile their denness most filthily with their beastly feeding, and dwell so long in a place (as we think), until their sluttishness lothing them, they are forced to seek sweeter ayre and a new seate ||." This is exactly in accordance with Captain Lyon's account of the interior of the tents at Igloodik; in which he found accumulated "an immense heap of flesh, blubber, bones, birds, eggs, &c. &c. &c., which lie at the mercy of the heels of all who enter,—the juices forming an intolefably filthy mud on the shingle floor. From this profusion of delicacies, thus jumbled together, it may be unnecessary to add, that the food of the family is selected as wanted ¶." At Southampton Island, "the tent floors, with the exception of the small space allotted for sleeping on, were entirely strewed with salmon and their offal**." In the north-west, Beechey found the same utter neglect of cleanliness. The tents of a tribe at Cape Thomson were, says he, "as usual, filthy, but suitable to the taste of their inhabitants, who no doubt saw nothing in them that was revolt-

* Parry, v. 295.

† In Mr Collie's four skulls, Colouring is full, moderate, small, and rather small; Order, small, moderate, full, and rather small.

‡ Egede's Description of Greenland, p. 127.

§ History of Greenland, i. 168. See also p. 144.

|| Hakluyt's Collection of Navigations, Voyages, Traffiques, &c. iii. 95.

¶ Private Journal, p. 229. See also pp. 236 and 280. The tents of the Esquimaux in Labrador present a similar spectacle. See Cartwright's Journal, i. 140.

** Lyon's Brief Narrative, p. 60.

ing. They testified much pleasure at our visit, and placed before us several dishes, among which were two of their choicest—the entrails of a fine seal, and a bowl of coagulated blood." Farther on, the people were found "extremely diminutive, dirty, and forbidding. Some were blind, others decrepit; and, dressed in greasy worn out clothes, they looked perfectly wretched. Their hospitality, however, was even greater than we could desire; and we were dragged away by the wrists to their hovels, on approaching which we passed between heaps of filth and ruined habitations, filled with stinking water, to a part of the village which was in better repair*." To crown the whole, we may quote from Captain Lyon a specimen of the cleanliness and delicate taste of the Esquimaux at Winter Island. A lamp having been purchased by Captain Parry while it was burning, "the woman who sold it instantly extinguished the light, and vigorously commenced cleaning the lamp, which contained as much soot as oil, by scraping it with her fingers, which, with their load of sweets, she conveyed rapidly to her mouth. The tongue finished the operation; the lamp was licked perfectly clean, while in return it covered her face with soot, and caused us all a laugh at her uncouth figure, in which she joined most heartily." The children, he adds, "were as dirty as human creatures could possibly be †." Details like these will not surprise the phrenologist who contemplates the deficient Ideality and Order, and the lymphatic temperament, which characterise the Esquimaux.

The organ of NUMBER, also, is remarkably small ‡. None of the skulls exhibit more than a "moderate" development; and both Parry and Lyon notice that the eyes of the Esquimaux are turned up at the exterior angle—they have the peculiarity of "not being horizontal as with us, but coming much lower at the end next the nose than at the other §." This "remarkable formation of the eye," says Captain Lyon, "is in all alike ||." This configuration accords with their "imperfect arithmetic, which resolves every number above ten into one comprehensive word ¶." The Arctic Highlanders are unable to reckon farther than five; and in answer to Captain Ross's inquiries concerning the numbers of the tribe, they could only

* Beechey's Narrative, pp. 263, 266.

† Lyon's Private Journal, p. 119. See Cartwright, i. 55.

‡ "Moderate" in three of Mr Collic's skulls; "full" in the other. Beechey says, that "in appearance and manners also, and indeed in every particular," the natives of St Lawrence Island very closely resemble the other Esquimaux. "They were, *if any thing*, less dirty." P. 224.

§ Parry, v. 184. || Private Journal, p. 309.—The Chaymas of South America, as Humboldt mentions, have a similar peculiarity: "the corner of the eye is sensibly raised up towards the temples;" and they "have great difficulty in comprehending any thing that belongs to numerical relations." Humboldt's Pers. Narr. iii. 223, 241, 242.

¶ Parry, v. 319.

say that there were "plenty people." Others, however, could reckon ten*. Nor is the skill of the Greenlanders materially greater. Their numerals, says Crantz, "fall very short, so that they verify the German proverb, that they can scarce count five: however, they can make a shift with difficulty to mount as high as twenty, by counting the fingers of both hands, and the toes of both feet." "When the number is above twenty, they say 'it is innumerable †.'"

The Esquimaux display no great amount of musical talent. They attempt to sing and dance, but with very little success. Captain Parry concludes his account of one of their exhibitions by observing that "nothing can be poorer in its way than this tedious singing recreation ‡." An attempt was made by Ross to amuse some of the natives who had gone on board his ship, by ordering tunes to be played on the violin: "they, however, paid no attention to this, seeming quite unconcerned about the words or the performer §." Cartwright "did not admire the tunes" of the people of Labrador; and "as to their dancing, one would have supposed," says he, "that they had learned that art from the bears of the country ||." The organs of Tune and Time are very moderately developed ¶.

With REFLECTIVE INTELLECT the Esquimaux are not highly gifted, and no manifestations of a profound understanding have been discovered amongst them. Many of the Winter Islanders, however, were arch, good-humoured, and jocular **, and hardly liable to the charge of stupidity.

Such are the peculiarities of this singular race; and no candid reader will deny that the more uniform and strongly marked features of their character correspond in a remarkable manner with the general shape of their skulls. In describing the dispositions of this people, we have endeavoured to ensure accuracy by uniformly quoting the words of actual observers; and as the skulls may at all times be inspected in the Museum of the Phrenological Society, it is in the power of every one who takes an interest in the subject to verify what has been said regarding their configuration. Though, as already remarked, the comparison of national character with a limited collection of skulls, can never be so satisfactory as the comparison of a single head with *its* concomitant character, enough, it is hoped, has been said in the preceding pages to demonstrate, that even in the former case Phrenology is far from being inapplicable.

ROBERT COX.

* Ross's Voyage, pp. 95, 127.

† Crantz, i. 225.

‡ Parry, v. 301.

§ Ross's Voyage, p. 94.

|| Cartwright's Journal, i. 145.

¶ This is the case also with the skulls from St Lawrence Island, already repeatedly alluded to. ** Parry, iii. 237; and v. 283.

ARTICLE VI.

ON THE INJURY OF SKINS OF CATTLE, FROM WANT OF
CLEANLINESS.*(To the Editor of the Phrenological Journal.)*57. FREDERICK STREET,
EDINBURGH, 7th May 1833.

SIR,—In perusing the article in your 34th Number, on the “Nature and Functions of the Skin,” in which the evils resulting from want of cleanliness are set forth, an observation which I had often previously made in the exercise of my trade immediately recurred to me,—which is, that the skins of animals are much deteriorated, when sufficient attention is not paid to their cleanliness during life. It is a general enough practice, especially in the north of Scotland, to put cattle into straw-yards, and allow them to wallow among their filth, which often adheres to their skin and becomes quite hard; and as no care is taken to have it removed, it seems to act most powerfully on the animal. I regret that I am not acquainted with the chemical properties of the dung and its operation on the skin, but I fear it must have a most prejudicial effect, as that part of the skin which has been subjected to its influence is entirely destroyed in its texture and tenacity, and rendered totally unfit for any purpose when the skins are dressed for leather. What is much to be regretted is, that the parts of the skin which are most destroyed are nearly the best, being generally the butts,—although often the bellies are affected also. To shew you the effect produced, I send you a specimen of leather cut out of the butt of a skin: it will be observed that the cuticle and parts next it, appear as if they had been destroyed by supuration or some such cause, probably occasioned by the perspiration being checked in the first instance, and by the putrid action of the dung on the cuticle in the second; for the disease, though it must have commenced in the cuticle, seems to have entered farther and penetrated the true skin. It appears a fair conclusion, that if that part of the skin is so very much destroyed, the rest of the skin cannot fail to be also injured, as the remaining parts are always what is termed “slack,” that is—open and porous in the texture, and ill filled in the substance of the skin; nor can the animal be so healthy, or its flesh afford such wholesome food, as if cleanliness had been duly attended to.

In December 1831 I sent a few remarks on the subject to the Highland Society of Scotland, at the suggestion of John Robison, Esq. They were remitted to a committee, a meeting of which I was desired to attend, but was unexpectedly prevented

by indisposition. I therefore do not know whether the Society was previously aware of it or not ; my object, however, in so doing, was, in case they were ignorant of the extent of the evil, to inform them of it, and to suggest the remedy of currying them as is done with horses, whose skins almost never present any appearance of the kind. Since I sent the paper to the Highland Society, Mr Robison informed me, that, in a conversation which he had with Sir John Sinclair, Bart. on the subject, Sir John said he was not aware of the evil done to the skins in the manner before described, though he was aware of the great advantage the cattle received from their being curried. I think these few remarks embrace all that is important on the subject, that I am acquainted with ; but should any thing else occur, I will feel happy in giving every explanation in my power. I am, &c.

JAMES DOWIE.

[The foregoing communication, which is from a respectable and intelligent tradesman, is of some importance, both in a commercial point of view, and as affording a striking illustration of the principles expounded in the article referred to by our correspondent. We set a high value on the observations of practical men, and will always be happy to receive from them illustrations, similar to that now published, of principles inculcated in our pages.—EDIT.]

ARTICLE VII.

THE CHARACTERS OF THEOPHRASTUS; ILLUSTRATED BY PHYSIOGNOMICAL SKETCHES. To which are subjoined, HINTS ON THE INDIVIDUAL VARIETIES OF HUMAN NATURE, AND GENERAL REMARKS. London, 1831. (*Family Classical Library*, No. XVI.)

OUR inducement to notice this edition of the Characters of Theophrastus, is the circumstance that it has been made the vehicle of an attack against Phrenology, which, if passed over in silence, may excite prejudice and foster error. But before offering any remarks on that subject, we shall briefly advert to the "Characters" themselves.

Theophrastus was the successor of Aristotle, as teacher of the Peripatetic philosophy at Athens. He was born in Lesbos, about 395 years before Christ, and lived to an advanced age. His writings were very numerous : of these the Characters are by far the most celebrated ; but the mutilated condition in which the text now appears, has severely tried the ingenuity of commentators. A paraphrastic translation into French, seasoned by numerous allusions to contemporary persons, was published in 1687 by the satirist La Bruyere, and continues to maintain its popularity among our continental neighbours. The

present English version is executed with considerable spirit. It is illustrated by fifty well-executed engravings of heads, which, however, are mostly caricatures, and frequently present a marked inconsistency between the form of the head and the character illustrated. The "Ruffian" is very accurately portrayed.

Theophrastus was a patient and accurate observer of nature, and the pictures which he has drawn of the mental peculiarities of some of his fellow-citizens, shew how little alteration the dispositions of mankind have undergone since the days of Alexander the Great. "The phrases and the actions described by the successor of Aristotle," says the translator, "are precisely the phrases and the actions of beings with whom we are ourselves conversant. These faithful records of human nature serve to prove, that, under every changing influence of time and climate, of institutions, and opinions, and manners, Mind, with all its shades of difference, is the same." Thirty characters—some of them, however, presenting hardly a shade of difference—are successively described. These are, the Dissembler, the Adulator, the Garrulous, the Rustic, the Plausible, the Ruffian, the Loquacious, the Fabricator of News, the Sordid, the Shameless, the Parsimonious, the Impure, the Blunderer, the Busybody, the Stupid, the Morose, the Superstitious, the Petulant, the Suspicious, the Filthy, the Disagreeable, the Vain, the Penurious, the Ostentatious, the Proud, the Fearful, the Old Trifler, the Detractor, the Oligarch, and the Malignant. Many of the descriptions are exceedingly amusing; and, as a picture of the manners of the Athenians, they possess the highest interest. They are, in many cases, happy illustrations of particular faculties, or combinations of faculties, occurring in excess. In the "Garrulous Man," for instance, we find a humorous example of *activity* of mind without *power*—of a character resulting from a head of moderate size, with powerful Individuality and Language, but no great endowment of Secretiveness and the reflective faculties. The temperament is active, and there is an almost total destitution of the faculty of Concentrativeness. The individual seems incapable of keeping his mind fixed on one object for three seconds together, and his conversation wanders from topic to topic with admirable disregard of coherency and sequence. "The garrulous man," says Theophrastus, "happening to sit beside one with whom he has no acquaintance, begins by recounting the various excellences of his wife; then he says that last night he dreamed a dream, which he narrates at length; this leads him to mention, one by one, the dishes that were placed within his reach at supper. By this time his tongue has gained velocity in going, and he proceeds in a loftier strain: 'Alas!' saith he, 'how much more de-

praved are the men of our times than were their ancestors! and what a price has corn fallen to now in the markets! and how the city swarms with strangers! By the time the Bacchanalia are well over, the sea will be covered again with ships: should it please Heaven, just now, to send rain, it would be a vast benefit to the wheats.' Anon, he announces his determination to farm his own land the ensuing year. 'But how hard it is,' says he, 'in these times to get a living! I must tell you, being, as I perceive, a stranger, that it was Damippus who displayed the largest torch at the late festival. By-the-bye; can you tell me, now, how many pillars there are in the Odeum? Yesterday I was sick:—hem! What day of the month is this?'"

In the "Plausible," "Vain," and "Ostentatious" characters, we have an accurate view of the effects of powerful Love of Approbation, not much trammelled by Conscientiousness: the "Parsimonious," and "Penurious" men, are excellent personifications of Acquisitiveness; and in the description of the "Fearful" character, is embodied a lively and admirable picture of the feelings of those who are tormented by exorbitant Cautiousness, unbalanced by a full development of Combativeness. We intended to quote some of the best passages, but find that our limits forbid. We therefore proceed at once to consider the annotator's "Hints on the Individual Varieties of Human Nature."

It was to be anticipated that Phrenology would attract some attention from the author of these "Hints;" and accordingly he has said not a little on that subject: of the *quantity* of the remarks with which he has vouchsafed to honour the phrenologists, no one can with reason complain; for he is ever on the watch for opportunities to turn aside and deliver his antiphrenological opinions at great length. With the *quality* of his remarks, however, it is natural that we should be not quite so well satisfied: for Phrenology is with him one of "the crude, fantastic, and not altogether harmless theories which at present attract a degree of popular attention to the science of human nature," (p. xiv.); it deserves to be classed with "the fitting systems advanced by the dialecticians, the medico-metaphysicians, the infidel theologians, the physiognomists, and those designated by the unmeaning term materialists, who have appeared in quick succession during the past sixty years, in Germany, France, and England," (p. 154):—and phrenologists are "adventurers rioting in a wide region of unclaimed wealth, and gaining attention to systems that might well have suited the days of alchemy and magic," (p. 149);—"builders of systems, who do not fail to cover the space that has been abandoned to them with every form of grotesque absurdity," (p. 153);—"speculatists, whose minds, more ardent than comprehensive,

are soon infatuated with their own apparent success, and burn with impatience till they have laid the mighty foundations of a new system," (p. 158).

We do not mean to enter into a detailed examination of the whole of this writer's arguments against Phrenology. Not one of them is new; and it is a nauseous task to reiterate what has been said on innumerable former occasions. It may be useful, however, to inquire briefly to what degree of respect his anti-phrenological dicta are entitled.

To enable a man to form a sound judgment respecting any doctrine which may be promulgated, two qualifications are necessary: 1st, He must know what the doctrine is, and by what facts and arguments it is supported; and, 2dly, He must have reasoning faculties sufficiently sound and effective to give him a clear perception of logical consequence. That he may be a faithful witness to others, a *third* quality—unfortunately as rare as it is estimable—must be possessed, to-wit, *Candour*. If a man be deficient in even *one* of these three requisites, his expressed judgments, particularly on questions where personal feeling can find an entrance, are of no value whatever: when *all* are absent, he deserves not to be listened to for a moment. The latter is the condition of nine-tenths of the critical oracles who have given forth responses concerning Phrenology; and it is, in an especial manner, the condition of the author of these "Hints on the Individual Varieties of Human Nature."

In the *first* place, he is grievously ignorant with respect to Phrenology and the nature of its evidences. A single quotation will make this evident. "Let us open our eyes," says he, "to the light that has lately been poured on the science of human nature by those *who have taught us that imagination is not imagination but imaginativeness; AND THAT THE POWER OF RECALLING OR OF RECOMBINING IDEAS IS IDEALITY*. I say, under this guidance, in spite of the difficulties to which I have here adverted, we shall be able to pick from a crowd of persons, at discretion, either the Enthusiast or the Superstitious; for both of them, having the biform organ of imaginativeness, will have *foreheads bulging at the corners* like the bows of a Dutch Indiaman. Where we are to seek for the indication of the very essential difference between the two minds, *I am not sufficiently versed in the system to be able to determine.*" (P. 128.) From this passage it is obvious that the writer never read an elementary work on Phrenology in his life. Had the case been otherwise, he would have known that no phrenologist has taught "that imagination is not imagination but imaginativeness;" that of the latter term he himself has the merit of being the sole inventor; and moreover, that what the phrenologists express by the word *Ideality* is not "the power of recalling or of recombining ideas,"

but "a sentiment which vivifies the other faculties, and impresses a peculiar character called poetical or ideal,"—which "aspires to imaginary perfection or completion in every thing *." And he would have learned, besides the non-existence of an organ of imaginativeness, that so far is any "bulging at the corners" of the forehead from having a share in making up the character of the "Enthusiast or the Superstitious," that, on the contrary, the narrower the forehead the greater is the liability, *cæteris paribus*, to enthusiasm and superstition. His own statement, that he is "not sufficiently versed in the system to determine" "where we are to seek for the essential difference between the Enthusiast," whose characteristic, we are told, is to "woo his genius," and the Superstitious, who "cringes to his demon," is an express acknowledgment that he is unacquainted with even the rudiments of what he nevertheless *knows* to be a "crude, fantastic, and not altogether harmless theory!"

Since, then, this champion, like many a doughty adventurer who has entered the field before him, has thought it unnecessary to ascertain the enemy's position, or the strength of the fortifications within which they are encamped, it is less wonderful than ludicrous that in his very first onset he should have mistaken his friends for the foe, and directed his shafts against his own antiphrenological party instead of aiming at those whom he has pompously sallied forth to extirpate:—He abuses the phrenologists for omitting to do what they not only have uniformly done, but have had many just occasions to complain of their adversaries for neglecting to do! "A man," says he, "commits a murder, and is hanged for it; and the head is borne away in glee by eager speculatists on the bony and medullary development of organs: the cast is taken with religious care, and the ominous protuberance of destructiveness is triumphantly pointed out at the due degree of its latitude and longitude; and forthwith the instance goes to the corroboration of a system; and all this on the very inconsequential presumption, that a man who has caused the death of another, under the circumstances which bring the case within a legal definition, must be, by his physical conformation, a destroyer of life. But even supposing there to have been in this case plain indications of the existence of some original propensity to destructiveness, or combativeness, or what not, they ought to be considered simply as furnishing a suggestion for inquiry: it is egregiously unphilosophical to assume overt acts, indiscriminately, as the ground of scientific classifications of character." (P. 89.)

Now, what is the *true* state of the matter? It is, that phrenologists, instead of looking only to "overt acts indiscriminate-

* Spurzheim's Phrenology, 3d edit. p. 209.

ly," have, in all cases where they have drawn inferences from the actions and cerebral development of criminals, anxiously inquired into the minutest details of history and character, and have arrived at their conclusions only by comparing the facts so ascertained with the cerebral development of the criminal. When a cast of Thurtell's head, for example, was laid upon the table of the Phrenological Society, it was observed by one of the members, that "to do justice to the case, it would be requisite to obtain minute and authentic information concerning the real traits of his character, *as they appeared in private life*, as well as in the dreadful public exhibition with which his career terminated*." And what was the conduct of *the antiphrenologists* on this occasion? They exulted in the discovery that Thurtell's head exhibited a large organ of Benevolence; and proclaimed that the "overt act" which brought him to the gallows was inconsistent with such a development, and sufficient to overturn at once the whole phrenological system! It was not *the phrenologists* but *the antiphrenologists* who were in this instance "egregiously unphilosophical;" and as soon as reference was made to Thurtell's character in private life, it was ascertained that, in spite of his violence and dissipation, he had all along been distinguished for kindness and generosity. In reference to the cases of Haggart, Macinnes, Burke, and various other murderers, the antiphrenologists adopted the same "egregiously unphilosophical" mode of procedure.

The author announces that he "does not perceive that hitherto any approach has been made towards a scientific knowledge of the physical concomitants of mind." (P. 90.) It would be somewhat wonderful if he *did* perceive such an approach; seeing that it has been made by none but phrenologists, and of their labours he is utterly ignorant.

He goes on to propound what he calls "obvious and capital objections" to "the system which has lately made great pretensions." One of these "capital objections" is, that the phrenological analysis of the human mind is, "to say nothing of the preposterous jargon in which it is conveyed, at once defective and redundant; scanty without being simple, and full but not comprehensive." We regret that the meaning of this sentence is not so "obvious" as the objection which it is meant to express is "capital;" for in that case a possibility of commenting on it might have existed. The author's allusion to the "preposterous jargon" of Phrenology is more intelligible, though not remarkable for originality. But, without resorting to the question, "What's in a name?" we may be permitted to inquire, Whether any good reason exists why phrenologists, as well as

* Phrenological Journal, i. 325.

the cultivators of other branches of science, should not have a technical language, and why they should not be permitted to invent terms to signify ideas for which no adequate or convenient expressions existed in the English language. Is there a whit more of jargon in *Philoprogenitiveness*, *Acquisitiveness*, and *Ideality*, for example, than in the *hydrofluosilicic acid* of the chemist, and the *sternocleidomastoid muscle* of the anatomist?

The annotator continues: "The system neither does, nor with its exclusive means can it, calculate on the derangements, obscurations, or mislocations of the symbols, consequent on disturbing intercautions in each individual combination of the elements." (P. 90.) The answer to this objection—expressed without the least admixture of pedantry or "jargon"—is very simple. The system both "*does*" and "*can*" accomplish what we are told it cannot. It is enough to hint to the objector that this is another point regarding which he is "not sufficiently versed in the system to be able" to form an opinion.

He says farther—and thinks himself arguing against Phrenology in saying—that "there is reason to believe (at least the contrary cannot be affirmed) that the qualities of the mind are related to, dependent on, and more or less remotely influenced by, such qualities of the organ of thought as are wholly unconnected with the causes that determine the figure of the brain." (P. 91.) The qualities spoken of are the "chemical properties, not merely of the solids and fluids of the cranium, but of all the secretions of the body;" in other words, the constitutional temperament of the individual. These qualities, it is said, the phrenologists utterly disregard—let the words of Spurzheim testify with what truth: "There is no doubt that the individual corporeal systems, such as the circulatory, secretory, nervous, and others, influence the whole body, modify its functions, and endow them with greater or less activity." "We deny not the influence of organic constitution upon the manifestation of the feelings and intellectual faculties *."

An advice is kindly offered by our author to the phrenologists, which is, that "instead of fumbling for mysteries on the head," they ought "to seek, in the texture and colour of the integuments, in the forms of the cartilages, in the proportions and the habits of the facial muscles, and in the condition of the teeth, for the unequivocal indications of the qualities of the secretions, and of the tone and susceptibility of the nervous system. In the interpretation of these concomitants of temper and faculty, we are little liable to error; because the symbol and its meaning are

* Phrenology, 3d edit. p. 24. See to the same effect, Spurzheim's "Phrenology in connexion with the study of Physiognomy," p. 15;—and Combe's System of Phrenology, 3d edit. pp. 32, 559, 569; and Elements of Phrenology, 3d edit. p. 141.

daily placed together under our observation." (P. 94.) And thereupon he takes high offence at those who have " indiscreetly called themselves phrenologists," for neglecting his favourite symbols—to every one of which, nevertheless, *except the teeth and gristles*, they pay due regard;—comparing them to " lovers of mystery and of gratuitous difficulty, having before them parallel columns of an ancient inscription, the one consisting of unknown hieroglyphics, the other expressed in a familiar character, and who must be permitted to place their sleeve over the latter, otherwise they will not enjoy the gratification of deciphering the former." (P. 115.) We shall be glad to learn that the author, by inspecting teeth and gristles instead of skulls (for this seems to be the only point wherein *his* " symbols" and those of the phrenologists are at variance), is able to divine natural dispositions with as much accuracy as the " fumblers for mysteries on the head" do in cases like that reported in the third article of our present number.

Enough, we presume, and more than enough, has been said to prove our *first* proposition, that the author under review is altogether in the dark with respect to the doctrines maintained by phrenologists. Let us now inquire, in the *second* place, whether his judgment is such as to render him capable of forming a sound opinion on a philosophical question like the present.

Lord Bacon, as all the world knows, has said, that the only way of acquiring knowledge is to observe what exists, and then to draw inferences or conclusions from the facts so ascertained. This doctrine is now universally assented to by philosophers; and no one who acts in opposition to it is considered worthy of being looked upon as a sound reasoner.

To shew that the annotator of Theophrastus is in practice no follower of Lord Bacon, we have only to quote the following specimen of the mode in which he accounts for some of the mental peculiarities described in the Characters. Speaking of the Dissembler, he says, " Constitutional simulation perhaps most often results from a *malformation of the intellect*, and becomes by consequence and habit a disease of the sentiments. *It seems to have its origin in the faculty of abstraction*: an excessive determination of thought towards *the relations of cause and effect* will tend to carry the mind onward, beyond those that are obvious and natural, among those that are obscure, remote, and minute. The connexions of cause and effect observable in the world of human affairs, being much less constant, uniform, and simple than those which are presented to our senses in the world of nature, this region of hidden causes and effects affords a peculiarly seductive field of exercise to malformed minds of the class above mentioned." (P. 69.) Had this writer bestowed even a scanty share of attention on the characters of those around

him, he would have learned, from every day's experience, that "constitutional simulation" is as frequently to be met with, uncombined with a "determination of thought," either "excessive" or moderate, towards the relations of cause and effect, as among men whose "faculty of abstraction" is remarkable for its power. According to the theory just cited, every one's cunning is in direct proportion to his ability to trace cause and effect. Will the most superficial observer of mankind assert that such is the fact?

Another example of the author's mode of reasoning may be given: "*It is to be presumed as possible, and even probable,*" says he, "that two minds, differing widely in force, tendency, or disposition, MIGHT *be found* tenanting heads alike in dimension and figure; while the difference between them *should proceed* solely from some chemical differences in the secretions. And, until it shall be fully proved that the qualities of mind are influenced by no such chemical differences, wholly independent of figure and dimension, the interpretation of mind, by mathematical symbols alone, must be liable to indefinite uncertainty." (P. 91.) We have already seen what amount of truth there is in the insinuation that "mathematical symbols *alone*" are regarded by phrenologists. In fact, one of the fundamental principles of their science is, that size, only when other circumstances are alike (*cæteris paribus*), is a measure of power; or, as Professor Caldwell expresses it, that "the energy and excellence of the brain depends on its size, configuration, and *tone*—its *extensity and intensity*. In this respect," says he, "it is analogous to the muscles, whose size alone does not always determine their strength. *Their tone or intensity avails them much*. Hence although a large man is *very generally* stronger than a small one, the reverse is *sometimes* true *." The method of *discovering* the tone or intensity of the brain was treated of in the seventh article of No. XXXVII. of this Journal. With *presumptions of possibilities* no rational men—and among such men phrenologists venture to rank themselves—ever disfigure their arguments. Instead of egotistically presuming the accuracy of speculative opinions, they employ their eyes and their understandings in looking around them and discovering *what actually exists*. And by such a course it has been fully ascertained that no such monstrosity can be found, as two minds which differ widely in "tendency or disposition," "tenanting heads alike in dimension and figure." It is true that these tenants may differ widely in "force;" but this, as has been shewn, is one of the principles of Phrenology itself. "We readily conceive," says Dr Spurzheim, "how different organic constitutions may produce different degrees of activity of the faculties generally; but it is impossible to shew that the same

* Caldwell's Elements of Phrenology. Lexington, 1824, p. 38.

temperament should bestow great energy on *some faculties*, and strong *peculiar passions*, while the manifestations of others remain very weak*." To such reasoners as the annotator on Theophrastus, we recommend an attentive consideration of the following passage, taken from the work of the founder of Phrenology, Dr Gall:—"Whoever is not impelled by an innate instinct of observation; whoever finds too difficult the abnegation of his own opinions, and of his own learning, acquired in his earlier studies; whoever is more bent upon the improvement of his fortune than upon unfolding the treasures of nature; whoever is not possessed of an imperturbable patience against the interpretations of envy, jealousy, hypocrisy, ignorance, apathy, and indifference; *whoever has too high an idea of the force and justness of his own reasonings to believe himself obliged to submit them to the test of EXPERIENCE A THOUSAND AND A THOUSAND TIMES REPEATED*, will never advance the physiology of the brain: and yet these are the only means by which my discoveries can be verified, corrected, or refuted †."

One additional specimen of the accuracy with which the annotator has observed human nature may be not out of place: He has discovered that, wherever there is an ardent love of truth, a long train of other qualities, intellectual and moral, uniformly accompanies it! "In a mind distinguished by a genuine regard to truth there will be found, besides the emotions of *self-respect* and religious integrity, a *firm and steady coherency of thought*; *precision in the faculties of perception*; a *great power of attention*; and, in the habitual series of associations, much more of *regular antecedence and consequence* than of fortuity or instantaneous impulse." (P. 98.) Alas for the integrity of such men as John Walker, who, as the reader will perceive from our first article, had as little "firm and steady coherency of thought," and as much "fortuity and instantaneous impulse" in "the habitual series of his associations," as the annotator ever found in combination with the most shameless disregard of truth!

Thirdly, in what light is the *candour* of our critic to be viewed? The answer is obvious. No honest man ever misrepresents the tenets of those from whom he differs, or ventures to pronounce judgment till he has thoroughly examined the subject on which it is his intention to decide. Such, however, being the course pursued by the author of the "Hints," it follows that his candour is not to be loudly boasted of. Dishonesty takes away from even a well informed and acute thinker, and still more from one who is ignorant and superficial, all claim to be looked up to as an authority; a fact well exemplified by the

* Phrenology, 3d edition, p. 24.

† Sur les Fonctions du Cerveau, tome vi.

conduct of certain writers, who, some years ago, wrote bitterly against Phrenology, but, though now convinced of its truth, have not the candour openly to acknowledge their conversion. Such men would not be dishonoured by following the example of the late celebrated chemist Dr Joseph Black, who had the magnanimity to address Lavoisier as follows:—"For thirty years I taught the doctrines of phlogiston, ten years of which time I combated your discoveries. That barrier to every improvement, prejudice, required ten whole years—a second siege of Troy—before it could be subdued. I now see, clear as the noon-day, the truth of the new system. I have begun to teach it; and the young students, having no prejudices to overcome, are every one of them delighted with its simplicity and truth. Your new terms are already familiar to them." This letter is cited by Edgeworth, in his *Essays on Professional Education*, p. 235, "to the eternal honour of the candour of a great man, and as a warning even to men of first rate abilities against the force of prejudice."

Having thus shewn that the annotator is destitute of every quality which renders a critic's opinion worthy of being regarded,—knowledge, philosophical understanding, and an upright spirit,—we leave the reader to judge whether the cause of phrenology or that of antiphrenology is likely to be forwarded most by the publication of any such "Hints on the Individual Varieties of Human Nature."

Yet, however widely the annotator may have departed from the rules of sound philosophy in his conduct towards the phrenologists, the departure has by no means arisen from ignorance of those rules, or from insensibility to their paramount importance. But this, so far from palliating his delinquencies, only renders them the greater. It shews that he is capable of preaching in one strain, and acting in another directly the opposite; of running deliberately into a line of conduct, of the unrighteousness of which he is perfectly aware. The following passages sufficiently demonstrate the truth of our averment:—"The time," says he, "so often spent by the metaphysical inquirer, in painful and unavailing efforts to hold asunder the elements of his own consciousness, would probably produce results more certain, intelligible, and useful, if employed in the analysis and comparison of other minds, as they are exposed to observation in the physical appearances, the words, and the conduct, of the individuals who surround him. In the former course, as experience has amply proved, little can be gained beyond a higher elaboration, or a new combination of abstract phrases, which, after all, will be fully intelligible to no one but to their inventor. In the latter course, general facts might be

gradually ascertained; and the science of the mind might be so constituted, as should render it wholly independent of logical niceties or prudish delicacies of expression. It seems to have been too generally assumed as an obvious and unquestionable principle, that, when mind is to be made the subject of philosophical investigation, the sufficient materials of the inquiry are contained in every one's consciousness; that the whole study is introspective; and that a perfect analysis of a single mind would yield us all that is attainable, or even desirable, in this department of knowledge. It is true that it has been the common practice of metaphysical inquirers, especially in modern times, to make occasional references to facts gathered by observation; but this has only, or chiefly, been done when such facts seemed conducive to the establishment and illustration of a theory which had been previously formed by an introspective analysis of its author's individual consciousness. It hardly needs to be shewn, that the analogy of the inductive philosophy points to a method directly the reverse of this. We must indeed learn, in the first instance, by the introspection of our own minds, to interpret the symbols of mind as they are everywhere presented to our observation in the forms and the actions of conscious beings. But having once mastered these symbols, we should henceforward be employed, not in an inane measurement and remeasurement of our alphabet, but in actually perusing the great and various volume of nature." (Pp. 79, 80). And again:—"It is not for the sake of its ultimate uses that any branch of science will ever be successfully cultivated. And it is simply as a matter of science that an advancement in the knowledge of human nature ought to be sought after. The world of mind is to be studied as the world of matter, under the influence of that one motive which alone is the proper incitement of philosophical labour, namely, the purely intellectual desire to know. This motive must be unincumbered by any regard to the fruits or the consequences of knowledge, when acquired. The spirit of science is free; it will submit to no subserviency to a second purpose. The faintest reference to some desired practical result, or the slightest bias of the mind towards a premised conclusion, infallibly produces its degradation or perversion." (P. 155). It is to be lamented that the author has so carefully abstained from reducing to practice the principles here inculcated. By acting on these very principles, the founders of Phrenology have succeeded in converting what at first appeared to be a mass of discordant materials, into the beautiful system which, in spite of the imperfections inseparable from every recently discovered science, is quickly drawing to itself the admiration of intellectual and philanthropic men in every quarter of the world.

ARTICLE VIII.

PHRENOLOGY APPLIED TO EDUCATION.

(TO THE EDITOR.)

SIR,

SOME time ago I heard from a friend, who lives near Cheltenham, and has a small school there, in which he has found Phrenology very useful. Part of his letter may perhaps be interesting to you, and I shall therefore extract what he says on that subject:—" I had the good fortune to be introduced to Dr Spurzheim by a common friend. He was a most amiable, modest, well-informed man. It was a weight of most conclusive evidence falling under my own observation, which led me to apply myself actively to the study of his discoveries. Upon first seeing my boys, he remarked that I had some difficult dispositions to manage, and that there was little talent in the whole number. This only created a smile; but upon his proceeding to look at them one by one, he astonished me by giving a most correct outline of the character of each, and pointed out their propensities most exactly. In fact, Mrs ——— would scarcely be persuaded that I had not been prompting him, and giving him all the boys' histories previously. Following the hints he gave me, I have adopted a different mode of treating one boy, and have had the pleasure of seeing its good effects. I consider his discoveries of wonderful benefit to education, and am sure of their truth. Upon the sight of one boy he said, ' Don't torture him here,'—pointing to the corner of his eye. He afterwards told me he alluded to the organ of Number. The boy's dulness at cyphering had perplexed us all, and even carried with it the appearance of obstinacy. I have not, since my acquaintance with Dr Spurzheim, allowed his days with the writing-master to be clouded with tears. The faculty must be exercised constantly in a playful manner." I am, &c. T.

ARTICLE IX.

ON NATIONAL EDUCATION.

THE Lord Chancellor, at a public meeting held at York on 10th October 1833, is reported to have said, that "the efforts of the people are still wanting for the purpose of promoting education, and Parliament will render no substantial assistance until the people themselves take the matter in hand with energy and spirit, and the determination to do something."

We have frequently adverted to the great difficulties that lie in the way of a national system of education; and concur with the Lord Chancellor, that only the people themselves can remove them. But the question *by what means* they ought to proceed in accomplishing this great work, is one of preliminary, yet paramount, importance, and concerning which we wish that his Lordship had entered a little into detail in his speech: There are two great obstacles which require to be dealt with. First, the ignorance and apathy of the great mass of the people themselves, which render too many of them still indifferent to education; and secondly, religious prejudices, which prevent the adoption of any general system of instruction, acceptable to all sects.

There is greater apathy among the people on the subject of education than many will believe. The grossly ignorant are not aware of its value, and the purely selfish are so exclusively engrossed with the love of gain, or the pursuits of ambition, that they value no knowledge except that which ministers directly to the gratification of these propensities. Various means may be used to awaken a better spirit among the people. Government ought to require a certain extent of education as a qualification for employment in the national service, even in the humblest rank. The effect of this would be to put a public brand of incapacity and of exclusion on gross ignorance; and to present the prospect of contingent advantage as a consequence of instruction. The higher classes might require certain attainments in education in all persons employed by them. The clergy should be enjoined to expound to their flocks the importance of education, and the kind of instruction which is best calculated to benefit the people; as also to urge on them the obligation of obtaining that instruction as a Christian duty. Christianity requires its disciples to act habitually from the highest and purest motives, and to shew forth practical wisdom in all its departments; yet it is morally impossible to do so while the mind is enveloped in intellectual darkness, is labouring un-

der an eclipse of the moral sentiments, and is animated chiefly by the lower feelings of our nature; all which are the inevitable results of active intercourse with the world, without the guidance of intellectual, moral, and religious instruction.

It appears to us that part of the Sunday might be legitimately applied to teaching secular knowledge to the people. There are no specific rules laid down in the New Testament regarding the observance of the Sabbath. Every thing is left open to human regulation; and we are expressly told that "the Sabbath was made for man, and not man for the Sabbath." The public religious exercises in which the Sabbath is at present spent were instituted upwards of two centuries ago, when there was almost no science or useful knowledge in existence. If the leaders of the Reformation had wished to teach the people on Sundays all that they themselves knew, they would have been limited to Hebrew, Greek, Latin, Logic, Mathematics, and religious knowledge. It is clear that none of these branches of information except the last would have been edifying to the industrious population; and we may presume that on this account alone Sunday's instruction was limited to religious truths. Matters have greatly changed since that time; and there now exists a vast fund of information, calculated to cultivate the moral and intellectual faculties of man; and the question presents itself, Is there any valid objection to part of Sunday being dedicated to teaching it to the people?

To answer this question, a few preliminary considerations require to be discussed. A labourer, merchant, or professional person, who has been engaged for six days of the week in arduous bodily exertion, in the pursuit of gain, or in the career of ambition, has maintained in activity during that time his muscular system or his propensities and inferior sentiments, with such of the intellectual faculties as are conversant with the details of actual business; but he has had very little exercise for his moral sentiments and reflecting powers. Sunday, therefore, finds the labourer exhausted with bodily fatigue, and with his brain obtuse and dull through physical depression and mental inactivity; while it overtakes the merchant and professional man full of a sustained activity of faculties allied chiefly to this world, and having very little reference to religion and the next. All come to listen to the precepts of Christianity in a state of very imperfect preparation either of body or of mind. Besides, the views delivered from the pulpit are in general representations of the *system* of belief which the preacher has adopted, with extremely little of practical information regarding the duties of life. We have sometimes put this question to serious and reflecting individuals: How much of the line of conduct which you pursue in the management of your children,

and of your business, during six days in the week, beyond the religious instruction of your family, has been adopted in consequence of what you have heard from the pulpit? And they have been puzzled to give a satisfactory answer. Before an individual can become a practical Christian, he must possess an instructed and disciplined intellect, and moral sentiments duly trained and exercised. By the constitution which the Creator has bestowed on the human mind, the study of the various works of creation and their mutual relations and adaptations, is the best exercise for the intellect; while the exposition of His power, wisdom, and goodness, displayed in them, presents a powerful stimulus to the moral and religious sentiments. It is reckoned lawful to feed, clothe, and clean the body on Sunday, in order to prepare the individual for religious exercises. We would go a step farther: we would feed and clothe the mind also, by communicating useful, instructive, and elevating knowledge of the Creator and his works, as the first branch of the Sabbath exercises; and after the intellect had been excited, and the moral and religious sentiments had been roused into vivid action by the contemplation of his wisdom and boundless goodness, we would proceed to the proper exercises of religious worship and adoration. It appears to us, that in doing so, we would act in accordance with the great design of Christianity, which is, to render man truly an intellectual, moral, and religious being. If we survey dispassionately the present condition of Christian Europe, and our own country in particular, we shall be forced to acknowledge, that, notwithstanding all the teaching and preaching of many centuries, the spirit of practical Christianity does not yet pervade the mass of the people. One cause of this barrenness of result appears to us to be, the nonfulfilment of the natural conditions which are required to fit men to become real Christians,—in other words, the nonenlightenment of their intellects, and the nonexercise of their moral sentiments on the works of Creation. Religion has hitherto partaken too much of an abstract, contemplative, and sentimental character. The opposition in spirit, principle, and practice between it and the world, have been constant themes of declamation with divines. The views, the hopes, and the fears of the religious have shot past this world and centred too exclusively in the next. We think that this is not doing justice to Christianity. This world appears to us to be constituted on the principle of the supremacy of the moral and religious sentiments*, and we perceive no unsurmountable obstacle to a complete reconciliation between pure religion, and the best interests and highest enjoyments of mankind in this world. To accom-

* See this doctrine expounded in Combe on the Constitution of Man.

plish this end, however, we must demonstrate to the understandings of the people, the nature and objects of their faculties, the relative importance and authority of each, and the sphere of activity in which it will find its completest gratification, and then reconcile all this knowledge with religion. We must place them in circumstances calculated to bring into activity their highest powers, and we must modify the arrangements of daily life, and the allotment of time to different employments, so as to leave opportunity and leisure for attaining this end. We conceive that the clergy could not more effectually serve the cause of Christianity, than by teaching the people on part of each Sunday, how to fulfil these indispensable preliminaries to the practical development of the Christian character.

These views are presenting themselves to various minds, and are appearing occasionally in different publications. It is gratifying to observe that, in the last report of the committee of the General Assembly, appointed to inquire into the state of the National Schools of Scotland, the connection between secular instruction and religious improvement is distinctly recognised. It contains a declaration, that if they were to specify such schools as have been found the most distinguished for religious character, "they could not hesitate to name those schools in which the greatest variety of secular instruction has been imparted."

In a pamphlet which we have recently seen, entitled "Daily Bread; a Prayer for Knowledge, Gratitude, and Principle *," the following observations occur:

"I would address these few pages to Christians more desirous of uncompromised sincerity in their ministers, and useful knowledge in their schools, than of very definite professions and rigidly set forms. Their *Catholic Religion* would remove many temptations to insincerity, and get rid of many obstacles to truth, and allow an effectual advance to be made towards a discipline in closer and closer agreement with God's system. However long the establishment of the principle may be resisted, there can be no doubt that whatever is true ought to be attained, and that whatever is false ought to be removed; and that, till this is effected, evidence and conviction, principle and conduct, are resting on unsafe foundations. No principle can be plainer than that God's truth ought to be made man's discipline; and no fact is more evident than that thousands of the higher orders have been, and that millions of the people are, in danger of being alienated from pious feelings and religious obligations by that insincere delay which refuses to advance, as it might, into plain evidence and strong conviction, and insists to linger among scept-

* London: B. Hunter, St Paul's Church-yard. 1833.

ticism and irreligion, unprincipledness and anarchy, darkness rather than light.

“ There is in this statement no substitution of the individual's hopes for *the real facts of the case*. The writer of these few remarks looks around him, limiting the extent of his observation to the parish in which he lives and to the lapse of a few months, and what does he observe? Instances of gross and wretched fanaticism in the middle ranks of society; of open, and, which is more deserving of remark, of half concealed irreligion amongst the people. Under these circumstances, will not the sound-minded amongst the higher, the middle, and the lower orders, (using these terms as indicative of the distinctions of fortune, and not as marking differences of intellectual or moral worth), require from the clergy that they advance beyond an insufficient discipline into a knowledge which may effectually instruct men in what is God's government, namely, in physical causation and in moral consequence; in what therefore is certainly man's duty, namely, to conform his conduct to the divine system: and which must ever prove to be man's interest, namely, to obtain the blessings God has offered by the means God has appointed.

“ I do not offer these remarks to the consideration of enthusiastic persons, who, placing imagination in the seat of reason, are, if very ignorant, often very sincere, and therefore influential with the people; influential, namely, from the strength of their sincerity, and not from the truth of what they teach. But I rather appeal to the sounder judgment of those who, having a much larger knowledge, have often much less sincerity, and therefore speak more sense indeed to the people, but with infinitely less force. These persons, with a large learning, and a clear intellect, are not deficient in *foresight of the consequences* of the intellectual and moral difficulties in which the people are more and more rapidly placed. But they prefer trusting to the chances of the time to settle the public mind; in other words, to the chances of trial by combat of the violent; trial by providential ordeal of the superstitious; trial by political management of the worldly-wise, rather than to doing their own duty to sincerity and truth, by leading the public mind out of the anarchy of error into the government of conviction.

“ It may be thought a hard word, but it is not spoken in any spirit of offence, but simply because it is true, that just so much reform may be expected from the church, and not one jot or tittle more, as is demanded by the general voice of the people. If a feeling of deep dissatisfaction, gradually increasing to indignation, should originate in the Mechanics' Institutes, as being the most intelligent and the best informed of the people, should spread through the Political Unions, as being the most energetic of the people, and should at length pervade the whole

body of the people,—*a feeling of deep indignation* at the manifest inactivity of the clergy, and at the gross ignorance in which they leave the people (for the reading of two set forms of prayer, and the preaching of two sermons per week, is indeed small work often for large pay, and this small work is of a kind quite inadequate to the intellectual and moral wants of the people,) it may be hoped that the clergy, at length shamed into giving a wholesome daily bread of instructive and interesting discipline, will at once redeem their own character from the charge of something very nearly approaching to utter neglect, and at the same time lead the mind of the people out of that house of bondage, ignorance, bigotry, fanaticism, sensuality, and irreligion, and place it in that promised land of knowledge and civilization which Providence intends it to enter. The National School-room might, each evening of the week, be resorted to by the parents of the children who attend during the day, if they were sure of hearing, not dry heavy prosings, listened to with the decorous gravity of a sad dull duty, but a discipline of useful knowledge, interesting information, and elevating feeling.

“ Let the people ask these prelatical triflers *how much time* a clergyman is necessarily employed each day in their service, and what proportion it bears to the time which the statesman, the lawyer, and the physician, the manufacturer, the merchant, and the shopkeeper, the artizan, the labourer, and the servant, are obliged to work at *their* occupation. In the next place, let the people estimate *the worth of the work itself* which is done for them. Does it defend their minds from *bigotry*? Let the ministry which still excludes the catholic statesman from giving peace to Ireland, and proposes rather to employ the bayonet and the court-martial as pacificators; let the thousands who are ready to dip their hands again in Irish blood, namely, in order to check that damnable doctrine, answer this question. Does it defend their minds from *fanaticism*? Let the thousands who have followed Southcote and Irving in all their absurdities, and let the thousands who have *not* followed these teachers, only because they have not had an opportunity of doing so, answer this question. Does it deliver the great body of the people from mere *sensuality and gross ignorance*? Let the thousands who flock to the ale-bench, because their home is dull and unintellectual, answer this question.

“ Yet it is notorious that numbers, especially of the *younger clergy*, would be as forward, as they are well able, to render a very different service to the church, the state, and the people: men who *enter* the church with one only feeling, so help them God, namely, to do their duty to God and man, and who afterwards have their sincerity miserably compromised, and their usefulness wretchedly limited, by their superiors. The people

are not more called upon to do justice to themselves, than to those clergy who feel themselves chained down to the services of the church, and to nothing but the services of the church, by their right reverend masters.

“The clergy, therefore, might do much to instruct the people, and to lead them to a desire for education. The press ought to lend its powerful aid in rousing the people from their lethargic slumbers, and in prompting them to “take the matter of education into their own hands, with energy and spirit.”

The second obstacle to a national system of education, is the great strength of religious prejudices. There is only one point in which all sects are agreed, namely, that religion must form a leading feature in education; but unfortunately their unanimity in this opinion, is the great cause why its accomplishment is completely frustrated. Each sect insists, and conscientiously does so, that its own tenets and no other shall be taught in all schools claiming its countenance and support; while the multitude of sects is so great, that no particular tenets can gain general approbation. In dealing with this difficulty, the want of a philosophy of human nature, affording acknowledged principles on which to found arguments and representations, is severely felt. The whole ground over which we require to travel is debateable; and views which appear wise and practical in some minds, seem dangerous or chimerical to others. If the public were made acquainted with phrenology, the half of the difficulties would disappear.

The religious sentiments are inherent in the mind, and are stronger, if possible, than even reason itself. Almost every nation has manifested a strong tendency to adore deities of some kind, to seek their protection and propitiate their favour. Where the understanding has been uncultivated, and no revelation has been received, these natural tendencies have assumed the form of the grossest superstitions. The reflecting observer, however, still perceives the presence and power of the religious feelings, even under the disguise of their wildest aberrations. Where revelation, literature, and philosophy have been possessed, the religious sentiments have exhibited themselves in the purer forms of the Christian faith and morals; but the natural tendency to worship pre-existed, and was only called forth and directed into the right path by these lights from heaven. Science and philosophy are the natural allies of pure religion. Wherever they have been wanting, Christianity has been debased by superstition. Britain presents a brighter aspect of all the Christian virtues than Italy and Spain, and the people are more enlightened. Education, therefore, even in science, will promote and purify religion. If these views be sound, and we regard them as supported by all authentic history and experience, the religious sen-

timents are inherent in the human mind, and desire gratification ; and hence religion itself, regarded simply as the offspring of human feeling, rests on as secure and immutable a basis as any of the institutions of society which spring directly from the instincts of our nature. Revelation, as we have said, directs these sentiments to their highest objects, and hence religion is protected by a double rampart against injury or destruction. If this be the case, a system of national education might safely be adopted, which should communicate the great principles of morality, and also useful practical knowledge to the young, leaving to each sect the duty of infusing, in separate schools, into the youth acknowledging its allegiance, its peculiar articles of faith.

If the religious feelings be inherent in human nature, and revelation have given them the true direction, there would be no more danger to Christianity in this proceeding, than there would be to Astronomy, as a branch of education, from teaching other sciences without incorporating it with them. Pure religion, surrounded by an atmosphere of intellectual light, would flourish in its native vigour ; and guided by a cultivated understanding, would give forth fruits of true holiness and goodness, far richer and more abundant than it has ever yet produced in modern times. We cannot fancy any scheme of national education, *including* religion, that will give general satisfaction to all denominations of Christians ; so that, unless religious instruction can be safely separated from the course of ordinary tuition, and communicated at separate hours, we fear a total shipwreck of every scheme of national education. We think that this separation may be safely made.

Another plan that promises success, is to render it imperative on the heads of families and the proprietors of parishes, to provide efficient schools for their whole population, to be conducted under their own superintendance ; giving them power to assess landlords and tenants up to a certain rate per cent., to raise the necessary funds. At first, there would be conflicting views among the people as to what should be taught, and what seminaries are requisite ; but reason and right feeling would ultimately prevail. The very discussions that would arise in the first movements of this machinery, would stir up the public mind to the importance of education ; for experience shews that opposition rouses the energies of contending parties, and conduces ultimately to the attainment of objects that are really valuable, and capable of standing a searching scrutiny. The advantage of giving heads of families of every rank a vote in the disposal of the funds, is obvious : because it is only by such means that instruction suited to the tastes and wants of the whole community can be attained.

One obstacle likely to impede the working of such a scheme

is, that the people, in their aversion to taxation, and ignorance of the value of education, would spare their pockets and starve their minds ; but time and discussion would gradually render their views more liberal ; and we doubt whether any schools, although presented to them free of expense, would be appreciated and attended, until their understandings are enlightened on the great subject of education itself. The supply of mental food would, by this plan, be always commensurate with the demand ; and the *instruction* communicated would advance with the progress of knowledge. There is an obvious objection to giving the control of national schools to the clergy or to any fraction of the community. They would inevitably render them subservient to the interests of the class to which they belonged, to the injury of the great body of the people. We at one time thought of recommending grants of money by the government to parishes, to be applied to purposes of education ; and we believe that this plan would be more acceptable at first, because men are so shortsighted that they could be made to believe that they were receiving a boon, and obtaining education without cost, when, in fact, they would be paying the whole expenses in the form of general taxation. A formidable objection to this scheme appears to us to consist in the tendency to profusion, and in the cultivation of a spirit of dependence on government, to which it would inevitably lead. In Dublin, several lectures have been endowed, but they are meagrely attended by the community, who do not appreciate the value of instruction.

Government might confer corporate privileges on all voluntary associations for the promotion of education, whose laws should be approved of by some judicial authority to be named by the King. The Association in Edinburgh for the Promotion of Useful Instruction has done much good, and is proceeding in its career most successfully ; but its efficiency and stability would be greatly increased, if it could obtain, without expense, the strength of a legal constitution, entitling it by law to hold property, to act by directors, and to exercise the other administrative functions of an incorporation. The passing of an act of Parliament, countenancing education even to this extent, would have a very beneficial effect in leading the people to take the matter with energy and spirit into their own hands.

We are aware that the suggestions now offered are very imperfect, and require to be much more fully expounded than we can at present accomplish ; but we desire to throw out such ideas as present themselves to our minds, that some progress may be made towards a definite plan of national instruction. It is only by liberal and enlightened discussion that truth and utility can be promoted.

ARTICLE X.

PROGRESS OF PHRENOLOGY IN PARIS.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,

EDINBURGH, *November 10. 1833.*

IN compliance with your request, I have committed to writing the result of my observations on the state of Phrenology in Paris during my late visit to that capital.

First, As to the Phrenological Society. I was present at the first meeting of the Society for the season, at which the annual election of office-bearers took place. I was particularly struck with the circumstance, that all, or nearly all, of the office-bearers are medical men. The President for this year is M. Andral, and among his colleagues are Drs Broussais, Bouillaud, Appert, Fossati, and others, whose names have escaped my memory. This simple fact is the best answer to those who hold the opinion, too prevalent in this country, that anatomists are necessarily anti-phrenologists*.

The meeting was very fully attended, and all the members present seemed to be deeply interested in the progress of Phrenology. A proposition is now before the Society for procuring a hall, and a museum, for their collection, which is rapidly increasing. The Society has hitherto met in the house of M. Appert, and their collection is at present scarcely accessible to the members for want of room to arrange it.

Secondly, As to the teaching of Phrenology in Paris. I was present at several of a course of lectures delivered by M. Dumoutier. The room was invariably crowded to excess, and the lecture, though extending to nearly two hours, listened to with the greatest attention and interest. M. Dumoutier, who was formerly a teacher of anatomy, has likewise established classes

* It has been said, that the Parisian anatomists only admit the division of the brain into the three regions of Propensity, Sentiment, and Intellect, while they doubt the subdivision of these regions into special organs. If this were true, the reserve might be owing to a consciousness on their part of the want of sufficiently minute observations of their own, and would be highly creditable to them. But I saw nothing of this. On the contrary, various specimens presented to the Society were described and discussed with reference to special organs, just as they would have been here. Besides, as the evidence for the two classes of facts is precisely of the same nature, and as the more general divisions alluded to have *resulted from*, and not *preceded*, the observation of special organs; I hold, that whoever admits the former, cannot impugn the latter, except by making more accurate observations than those of Gall, Spurzheim, Combe, and Vimont, whose conclusions, like those of all observers, may be rectified by a more extended and minute acquaintance with facts, but in no other way.

for practical instruction in Phrenology. These I frequently attended, and was much pleased with the plan adopted. The students, about twelve in number, were seated round a large table, on which were placed two or three casts. After having been instructed in the division of the head into regions, they were required one after another, to describe the heads, (which were of course selected as being of the same general form or type, but differing in details,) and state what appeared to them the more prominent features of the character indicated by the development. Neither time nor trouble was spared in these practical lessons by M. Dumoutier, who is quite enthusiastic in his pursuit of the study, and is forming a very fine collection of specimens, which is already very rich in casts of distinguished individuals and of criminals, and particularly in the crania of idiots.

The most pleasing piece of intelligence which I have to communicate is, that the French Government are seriously thinking of establishing a Chair of Phrenology. Should this be done, Phrenology, all over the world, will receive an impulse, of which the effects will be most important. As it is, the science has made a start in France, and that country seems now resolved to make up for the neglect with which the labours of Gall and Spurzheim were treated there during their lifetime.

Lastly, As to works on Phrenology. The splendid work of Dr Vimont is now completed, as far as regards the plates. It is impossible to admire too much the accuracy of the representation of the objects depicted, (many of which, by the kindness of Dr Vimont, I was enabled to compare with the plates,) the beauty of the lithography, or the patience and perseverance which have enabled the author to accomplish such an undertaking. This work will in future be that chiefly referred to for the anatomical facts on which the phrenology of man and animals is founded: a distinction which is well merited by the unvarying conscientiousness which has presided over its execution.

When I left Paris, M. Dumont's translation of Mr Combe's work on the Constitution of Man was about to appear; and the Phrenological Society were just publishing the 5th number of their Journal. Considerable interest was excited by the proposed publication of a mask of Napoleon, taken after death, in the possession of Dr Autommarchi. This mask, which extends some way behind the ears, is *very large*. The most prominent organs are Comparison (Causality is somewhat less marked), Benevolence, Wonder, Secretiveness, and Destructiveness; at least, such is the result of a rather hasty survey. There is certainly a very noble forehead, but for want of the posterior parts, such as Love of Approbation, Self-Esteem, Combativeness, &c., the value of this gift to science is much diminished.

In the month of October, an American gentleman left Paris,

taking with him upwards of 200 casts, for the purpose of teaching Phrenology in some part of the United States; and another American, a young man, is now in Paris, devoting his whole attention to anatomy and phrenology, with a view likewise to teaching the latter science in America.

On the whole, I have returned with the impression, that Phrenology is making great progress on the other side of the Channel; and that our neighbours are now availing themselves of their unrivalled facilities for phrenological observation; from which, when properly cultivated, the science may expect to derive incalculable benefit. I am, Sir, yours, &c. &c.

W. G.

ARTICLE XI.

ELOQUENCE.

THE two passages which we are about to quote are from the works of Chesterfield and Goldsmith. We place them together as an example of the extent to which men unguided by a true philosophy of mind may differ on subjects connected with human nature. Our readers will have no difficulty in discovering which of the two authors entertained the sounder opinion.

"It is certain," says Chesterfield, "that, by study and application, every man may make himself a tolerable good orator,—eloquence depending upon observation and care. Every man may, if he pleases, make choice of good instead of bad words and phrases, may speak with propriety instead of impropriety, and may be clear and perspicuous in his recitals, instead of dark and unintelligible: he may have grace instead of awkwardness in his gestures and deportment; in short, it is in the power of every man, with pains and application, to be a very agreeable, instead of a very disagreeable, speaker; and it is well worth the labour to excel other men in that particular article in which they excel beasts." "It is said that a man must be born a poet; but it is in his power to make himself an orator: for to be a poet requires a certain degree of strength and vivacity of mind; but attention, reading, and labour, are sufficient to form an orator."

Goldsmith, on the other hand, says: "I have called eloquence a talent, and not an art, as so many rhetoricians have done; as art is acquired by exercise and study, and eloquence is the gift of nature. Rules will never make either a work or a discourse eloquent; they only serve to prevent faults, but not to introduce beauties; to prevent those passages, which are truly eloquent and dictated by nature, from being blended with others, which might disgust, or at least abate our passion."

ARTICLE XII.

ON THE APPLICATION OF PHRENOLOGY IN THE FORMATION OF MARRIAGES. Being the substance of a Public Lecture delivered by Mr ALEXANDER SMART, Secretary of the Dundee Mechanics' Phrenological Society.

IN treating of the application of the principles of Phrenology in the formation of marriages, it will be necessary to advert to the group of the social faculties, from which springs the impulse to the connubial union. The *first* of these is Amativeness. From this faculty the sexual feeling originates. The organ is generally larger in males than in females. Its size is known chiefly by the breadth of the neck from ear to ear: in new born children it is the least developed of all the cerebral parts. It attains its full maturity between eighteen and twenty-six years old, at which latter age it is equal to about one-seventh of the whole brain. When its development is very large, it leads to libertinism and conjugal infidelity; but when under the guidance of the moral and reflecting faculties, it excites to mutual kindness, and the exercise of all the milder amenities between the sexes. The *second* is Philoprogenitiveness or love of offspring. This faculty is in general much stronger in the female than in the male, and more so in some females than in others. In society great differences are observable among individuals, in the manifestation of this feeling: some cannot endure the incessant and teasing prattle of children (as they choose to call it); while of others it is the highest delight to witness their innocent gambols, soothe them under their petty crosses, and caress them with the strongest demonstrations of affection. The feeling shews itself in the girl, in her early attachment to dolls: it continues to grow with her growth, and strengthen with her strength, long after she becomes

"A happy mother, mid the smiles
Of ripened worth, and sunny beauty."

The last faculty of the social group is Adhesiveness, from which springs the instinctive tendency to attachment. Like Philoprogenitiveness, the organ is generally larger in the female than in the male; and consequently, to use the words of a powerful phrenological writer, we find the feeling manifested "with a constancy and fervour in woman, which it would be in vain to expect from man. It has been truly said, that the most generous and friendly man is selfish in comparison with woman. There is no friend like a loving and affectionate wife. Man may love, but it is almost always with a view to his own gratification; but when a woman bestows her love, she does it with her heart and soul."

These faculties minister highly to human happiness, when gratified in accordance with the dictates of the moral sentiments and intellect; but when not controlled by these higher powers, their gratification is pregnant with evil. If under the dictates of Amativeness and Adhesiveness, a partner be chosen of whom the other faculties do not approve, bitter days of repentance must arrive, as soon as the former feelings begin to languish, and the moral sentiments and intellect to receive offence from the qualities of the individual. On the other hand, if the domestic affections are guided by intellect to an object pleasing to itself and the moral faculties, these themselves will be gratified; they will double the delights afforded by the domestic affections, and render the enjoyment lasting. Another principle is, that the manifestation of any faculty in others, stimulates to action the same faculty in us. Thus when any individual addresses us in the language of Self-Esteem and Destructiveness, the same faculties are awakened in us, and we are impelled to return a correspondingly bitter answer; but let us be addressed under the influence of Adhesiveness and Benevolence, and our answer will partake of the warmth and affection arising from these feelings. Again, when any faculty becomes spontaneously active by being presented with its appropriate object, it calls other faculties of a like class into activity. It seems to be upon this principle that lovers are more amiable in each other's eyes than they appear to the rest of the world: for while in each other's society, the domestic faculties are called into a state of delightful activity; these again, rouse Ideality, Benevolence, Veneration, and Conscientiousness, which greatly heighten the delight experienced by them in their interviews with each other. I need not farther enlarge upon this part of my subject: each of you, probably, has either already experienced the delightful sensations hinted at, or will hereafter; for the feeling is so universal, that we may triumphantly ask with the poet,

“Where is the heart that has not bow'd,
A slave, almighty Love, to thee?
Look at the cold, the gay, the proud,
And is there *one* among them free?”

Some, possessing fine temperaments and a good endowment of the domestic and moral faculties, experience in these moments the most ecstatic joy. Moore has described it as a

“Light, that ne'er will shine again
On life's dull stream.”

We may here remark, that these pleasurable feelings are denied to the sensualist. Milton has truly said, that “the embrace of harlots is tasteless, joyless, unendeared;” and Phrenology shews clearly how this arises—it is the momentary gratification of one or more of the inferior feelings, by which the moral faculties, with Self-esteem, and generally Love of Approbation, are wounded.

Having made these preliminary observations, I shall proceed to notice the principles upon which marriages are contracted in savage life and in the different orders of civilized society, and to point out how far these principles are in accordance with Phrenology; next, I shall attempt to lay down and elucidate some of these principles,—give a summary of the whole,—and conclude with an address to the youth of both sexes upon the practical application of them as guides to conduct. I begin, then, with the native of New Holland. His mode of courtship is certainly unique—nor is there much danger of its being adopted in any other country. Goaded by the impulses of Amativeness, he provides himself with a club, endeavours to discover the retreat of another tribe—if a hostile one so much the better,—in the neighbourhood of which he lies in ambush until night overtake them; and when, by the light of the fires, he discovers a female straying to any distance from the encampment, he rushes upon her from his hiding-place, levels her with his club, seizes her by the feet, and runs with her to some secret spot, regardless of the injuries which she may receive from her head striking against the roots of trees or stones during the flight. Every one must consider such conduct savage in the extreme, but it is in perfect accordance with the organization. All is animalized, and from a head and mind like his, much higher conduct cannot be expected. Nor let us on other grounds too rashly condemn the untutored savage. He, it is true, inflicts physical pain in the accomplishment of his purpose, but he makes the amende honorable by adhering to her as his wife, and by using every endeavour to heal the wounds he has caused; while, on the other hand, the European seducer, with all his intellectual and moral superiority, in place of merely inflicting *physical* pain, abandons his victim to *mental* agony, and leaves her to the scorn of an ungenerous and an unpitying world—a prey to “remorse, regret, and shame.” Happily, however, seduction is not a prevailing vice among the humbler sons of toil; it is a depravity which, it is to be feared, the higher ranks of men will continue to practise until they add to their wealth the nobility of virtue. So much for love in savage life. Let us now turn to that of the nobility of our own country, of a sketch of which, as given in Mr Fox’s Repository, I gladly avail myself. “When (the writer asks) the education of their daughters is ended, what then remains for them? Are they not led like lambs to the slaughter? Are they not put up for sale at the fashionable shambles? where they are brought out to be exposed to the highest bidder, with more real coarseness, though disguised under the veil of hypocrisy, than it is the lot of female servants to undergo at a statue fair. Are their feelings ever consulted—their likings or dislikings? Are they not bidden to sit, and to walk, and to recline, in those

modes which are most likely to attract the eyes of the chapman? May they speak ere they are spoken to, and are they not required to overcome every feeling of repugnance when a likely bidder appears, to make his offers? Are they not studiously instructed that marriage is not an affair of judgment, affection, or love, but merely a matter of bargain or sale; for the purpose of securing as much of wealth or station, or both, as they can possibly achieve? Are not the whole arrangements made with diplomatic caution, and is not a half concluded bargain frequently broken off in consequence of a better offer? Disguise this conduct as you will (adds the author), under the fine sounding names of honourable alliance, excellent match, and other specious terms, which have been invented to make interest look like affection; but such marriages, entered into by a female for wealth or station, are at best but prostitution clothed in the robes of sanctity. And what is the usual result? The lordling is soon tired of his new toy, and wanders in quest of fresh excitement, leaving his victim to her own sad thoughts, and the consciousness that there exist desirable things which neither wealth nor station can purchase." It is to be hoped that this picture of our aristocracy is highly coloured, and not nearly so universally true as the respected writer believes it to be. If it be accurate, however, marriage amongst our nobility is nearly as much an affair of the animal faculties as is the marriage of the New Hollander. In the savage, the activity of Amativeness rouses Acquisitiveness, Secretiveness, and Destructiveness; in the peer, it excites Acquisitiveness, Self-esteem, and Love of Approbation; while Benevolence, Veneration, and Conscientiousness, are kept in a state of abeyance to these inferior faculties, and left ungratified. And what is the result? Mutual loathing and disgust quickly ensue—libertinism becomes the pastime of the peer; too often the infidelity of his consort ensues; and the progeny of this unhappy marriage, inherit the powerful animal, and weak moral and reflecting, faculties of the parents*. While such selfishness and ignorance of the Creator's laws are to be found in what is called exclusive society, we have little reason to wonder, if their inferiors in the middle ranks partake in some degree of the same fashionable debasement; and accordingly we find, that the same pursuit after wealth in the formation of the marriage-compact characterises many of this class. Hence the questions—"What money has she?—is there any property?" are usually the first that are put by one who hears of the marriage of a friend. Intellectual and moral considerations are either given to the winds, or regarded as secon-

* With all the faults which belong to the aristocracy as a class, we cannot agree with Mr Fox, or the author, in holding the preceding description as generally applicable. It is too strongly drawn.—EDITOR.

dary to the acquisition of wealth. I do not mean that it is always so; but it will be admitted that individuals of this class too generally consider a marriage wise or foolish, according as the dower is ample or deficient. Nor can a favourable description of the conduct of the operative classes be always given in this respect. It is a daily occurrence to see a mere boy and girl, under the blind impulse of the sexual feeling alone, *rush* into marriage, destitute alike of the means necessary to enable them to sit down with comfort in their own house, and of the judgment to retrieve a past error;—ignorant of each other's dispositions, unacquainted with the duties they have to fulfil, and destitute of the physical strength which might enable them to emerge from poverty. Hence quarrels often ensue—home loses the attractions it ought to possess—want and all its attendant train of miseries overtake them. Philoprogenitiveness is wounded by the death of the children in infancy, from want of sufficient care and sustenance;—Benevolence and Conscientiousness, also lacerated, give rise to feelings of remorse, when reflection points to the absence of parental attention and moral training;—Self-Esteem and Love of Approbation are rendered painfully active by the consciousness of inferiority;—life is embittered by domestic feud and the immorality of the offspring, and shortened by excessive labour and irregular habits. It is thus that marriages contracted for the direct gratification of the domestic faculties, without reference to the moral and intellectual powers, prove ultimately unsatisfactory, and pregnant with evil to both parties. Happily, however, there are many exceptions to this picture in the humbler walks of life; because many estimable individuals intermarry, as it were, by accident, without any previous knowledge of the principles which ought to regulate their choice. Some of these principles I shall now proceed to lay down and briefly illustrate.

Man, as an organized being, is subject to organic laws. One of these laws is, that a healthy and vigorous constitution of body in the parents, is necessary to communicate existence in a perfect state to the offspring. The progeny of too young or imperfectly developed parents will be feeble, and probably short-lived.

Another organic law is, that mental talents and dispositions are transmitted by hereditary descent; or, more shortly, that "like begets like," subject to some important modifications; and that mental and moral endowments are determined by the form, size, and constitution of brain. The temperaments indicate, to a certain extent, this constitution. It seems a general rule also, that the faculties which predominate in power and activity in the parents, when the organic existence of the child commences, determine its future mental dispositions.

The first of these laws will not be denied by any ; yet, though of great practical importance, it is often, from ignorance, overlooked. An individual with weak lungs, indicated by a compressed chest, stooping shoulders, and other symptoms that may be known to himself, should carefully avoid intermarrying with another so constituted ; because the offspring will prove subject to pulmonary complaints that may carry them off in infancy ; or if, by careful nursing, they should be enabled to survive that period, they will most probably fall victims to consumption before they attain maturity. In like manner, with respect to any other constitutional malady to which we may be subject, we should avoid perpetuating it by an alliance with persons in a similar condition, because, in that case, it would descend in an aggravated state to the offspring. These remarks are peculiarly applicable to that most deplorable of all maladies—insanity. This, as is well known, descends, in many families, from generation to generation ; and if individuals belonging to such families intermarry, it is more than probable that the offspring will be either weak in intellect or absolutely insane.

A knowledge of the temperaments is of great practical importance. Every one, therefore, should endeavour to ascertain his own ; for, from the union in marriage of two individuals with very active temperaments, children will most probably be produced, having nervous systems still more predominant than those of the parents ; and such children run a very great risk of dying in infancy from convulsions, or, if they survive, are peculiarly predisposed to high cerebral excitement, bordering upon insanity, in which there is great danger of its ultimately terminating. Again, the union in marriage of two persons of a lymphatic temperament will give birth to offspring that will inherit the inertness of the parents, and will, consequently, be unfit to struggle successfully against the difficulties of life. Much more might be said on the importance of a knowledge of the temperaments, but I must refer to books on Phrenology for farther information concerning them.

The organic law by which hereditary qualities descend to the offspring, is acted upon by every practical farmer with complete success in the rearing of his stock. Strange that it should never have occurred to such men, that they, as organized beings, are subject to the like laws, and that, if they desire to improve their own race, they have only to obey them. This law is also practically acted upon by the too-often immoral dog and cock fighters. More need not be said to establish its existence, because it is as universally admitted as it is disregarded in relation to man.

The next organic law is, that intellectual and moral endowment is determined by the size, form, and constitution of the

brain,—a fact of the utmost importance in leading to the choice of a suitable partner.

The phrenologist finds too many illustrations of domestic infelicity arising from ill-assorted unions. Thus, a young woman in whom the domestic and moral faculties were strong, and whose intellect was considerable, married a man about her own age, with great force of character, resulting from a large head, and with large animal and intellectual, but deficient moral, organs. During the first year or two of their married life they contrived to live peaceably; but, by degrees, the husband acquired dissipated habits, and neglected his domestic duties. His wife used every endeavour, by mildness and persuasion, to reclaim him, but, from his deficiency of the moral faculties, without effect. The two eldest children have taken up the mother's cerebral development, and their lives have been exemplary and irreproachable; the younger members of the family inherit the strong animal faculties and deficient morality of the father. The mother confesses she has had little moral enjoyment, and she feels that the remaining portion of her life is to be embittered by the profligacy of her children and the unfeeling indifference of her husband. Another instance may be given, of a young man whose father possessed great strength of character, by which he raised himself to the middle rank of society. The son, however, has a small head, with Acquisitiveness, Love of Approbation, and the reflecting faculties deficient. Belonging by birth to the middle ranks, he married a very respectable young woman, entered into business, failed, subsequently contracted the lowest and most dissipated habits, and, after bringing his wife and family to destitution, contrives to secrete part of the charity she receives from her respectable connections, wherewith to regale himself and his low associates. The parents have now three children, two of whom inherit very nearly the father's development. Had the mother been a phrenologist, it is not probable that she would have intermarried with him.

In another couple, where the husband has large organs of the moral faculties, with moderate intellect and large Combativeness and Self-esteem, while the other party has a small head, with excessive Self-esteem and Love of Approbation, there is a never ending contention about trifles. They are total strangers to domestic tranquillity and fireside enjoyments; nor, to all appearance, have they tasted domestic felicity for thirty hours together during the whole thirty years of their married life. Happily for themselves, and perhaps for society, their children all died in infancy. Too many instances might be given, demonstrative of the fatal effects of disregarding the operation of the organic laws in marriage; but I shall conclude this part of the subject by re-

ferring, for several striking instances of it, to Mr Combe's work on the Constitution of Man,—a work that should be very generally perused.

I now proceed to give some facts strongly illustrative of the doctrine, that the faculties which predominate in power and activity in the parents, when the organic existence of the child commences, determine its future mental dispositions. This is a doctrine to which, from its great practical importance, I would beg leave to call your serious attention. It was remarked by the celebrated Esquirol, "that the children whose existence dated from the horrors of the first French Revolution, turned out to be weak, nervous, and irritable in mind, extremely susceptible of impressions, and liable to be thrown by the least extraordinary excitement into absolute insanity." Sometimes too, family calamities produce serious effects upon the offspring. A very intelligent and respectable mother, upon hearing this principle expounded, remarked that there was a very wide difference in the intellectual and moral development between one of her children and the others; and accounted for this difference by the fact, that, during pregnancy, she received intelligence that the crew of the ship, on board of which was her son, had mutinied—that when the ship arrived in the West Indies, some of the mutineers, and also her son, had been put in irons,—and that they were all to be sent home for trial. This intelligence acted so strongly upon her, that she suffered a temporary alienation of judgment. The report turned out to be erroneous, but this did not avert the consequences of the agitated state of the mother's feelings upon the daughter she afterwards gave birth to. That daughter is now a woman, but she is and will continue to be a being of impulses, incapable of reflection, and in other respects greatly inferior to her sisters.

The following is a melancholy instance of the operation of this principle, which was communicated to me by a respectable medical practitioner, and which I have since found from inquiries in the neighbourhood, and from seeing the subject of it, to be substantially correct. In the summer of 1827, the practitioner alluded to was called upon to visit professionally a young woman in the immediate neighbourhood, who was safely delivered of a male child. As the parties appeared to be respectable, he made some inquiries regarding the absence of the child's father; when the old woman told him that her daughter was still unmarried, that the child's father belonged to a regiment then in Ireland, that last autumn he had obtained leave of absence to visit his relations in this part of the country, and that on the eve of his departure to join his regiment, an entertainment was given, at which her daughter attended: during the whole evening, she and the soldier danced and sang together;

when heated by the toddy and the dance, they left the cottage, and after the lapse of an hour were found together in a glen, in a state of utter insensibility, from the effects of their former festivity; and the consequence of this interview was the birth of an idiot. He is now nearly six years of age, and his mother does not believe that he is able to recognise either herself or any other individual. He is quite incapable of making signs, whereby his wants can be made known—with this exception, that when hungry he gives a wild shriek. This is a case upon which it would be painful to dwell; and I shall only remark, that the parents are both intelligent, and that the fatal result cannot be otherwise accounted for than by the almost total prostration or eclipse of the intellect of both parties from intoxication. Numerous instances might be adduced wherein the temporary activity of certain faculties not in general prominent in the parents, has caused strong endowments in the offspring, and nothing but the fear of giving offence induces me to forbear citing many that have come under my own observation. It is well known, that the first born children of very young parents, have usually a larger animal and less moral and intellectual development than the younger branches of the family. Sometimes this is not the case, and the converse happens; but this will be found to be the consequence of straitened circumstances or other causes rousing the propensities of the parents into a state of unwonted activity, at the time of the production of the younger children. Marriage among near relations is also a breach of an organic law, and a fruitful source of evil; but unions of this class are seldom contracted by individuals of *our* order. We find this law principally infringed by royal families, and others of the higher and middle classes, who, anxious to keep up their wealth and their caste, intermarry amongst each other, until mental imbecility results.

I now conclude with a few observations to the young of both sexes, founded on the foregoing views.

To my fair hearers, I would take leave to say:—Persevere in the acquisition of orderly, cleanly, and industrious habits;—learn early to accommodate yourselves to the different dispositions of others with whom you may be associated;—strive to acquire a knowledge of your own dispositions, and endeavour, as much as possible, to render your manner *habitually* agreeable and engaging;—and when your estimable qualities, graces, and accomplishments, attract the attention, or rivet the affections, of others, learn to be circumspect,—act with great caution,—be wary before you give encouragement. Consider that the happiness of yourselves and the welfare of others are dependent upon the choice you are about to make. Learn to know your own physical and mental constitution, and to judge of that of others aright. Re-

member that, if you contract an alliance with any one possessing an unhealthy constitution, that constitution will descend to your progeny, and, in all probability, consign them one by one to the grave, at the very time when they have become most endeared to you. Remember also, that on the industry, honesty, sobriety, and affection, of him to whom you shall unite yourselves, depends your every temporal felicity. And remember, that, unless your feelings, opinions, and sympathies are in harmony with his, unhappiness will be your inevitable portion. "What," says Dr Johnson, "can be expected but disappointment and repentance from a choice made in the immaturity of youth, in the ardour of desire, without judgment, without foresight, without inquiry after conformity of opinions, similarity of manners, rectitude of judgment, or purity of sentiment? Such is the common process of marriage. A youth or maiden meeting by chance, or brought together by artifice, exchange glances, reciprocate civilities, go home, and dream of one another. Having little to divert attention or diversify thought, they find themselves uneasy when they are apart, and therefore conclude that they shall be happy together. They marry, and discover what nothing but voluntary blindness before had concealed; they wear out life in altercations, and charge nature with cruelty." (*Rasselas*, chap. 29.) What, indeed, can be more productive of misery to a refined and educated woman than the habitual society of a man addicted to grovelling pursuits, and who laughs at whatever she most highly esteems? Let not the countenance drest up in smiles, nor the honeyed accents of a lover, enlist your affections in his favour before your judgment has been satisfied of his moral and intellectual worth. Regard not his behaviour towards yourself, but examine into his previous conduct as a son and a citizen. If you find that he has been regardless of the infirmities and wants of those to whom he owed existence; that he could never brook parental restraint, or listen to the counsel dictated by affectionate regard; that he spends too much of his time in idleness, or that, though industrious, he spends too much of his money in the gin shop; that his associates are unintellectual, immoral, and dissipated;—shun him as you would a pestilence: but if you find that he has been dutiful to and is esteemed by his parents and the other members of his family,—that he is industrious and sober,—and that his associates are men of intelligence and moral worth,—then will you have reason to believe that he may prove to you a faithful and affectionate husband, and fulfil all the duties of life with integrity and skill.

To the youthful aspirant towards manly usefulness and honour, I would now address myself. Acquire a knowledge of the physical and moral sciences, to fit you for the proper discharge of the duties of active life. Learn to know yourself,

both as regards your physical frame and your intellectual and moral constitution. Physiology will unfold the former; and Phrenology the latter. Study the laws which the Creator has established for the government of organized beings, and train your faculties to render them a willing obedience. Learn to look around you in the world, and note the consequences to others of their infringement of these laws, and the benefits that follow observance. Become acquainted with the institutions and laws of your country, and with the principles that regulate the population of a state. Cultivate a love of truth and the moral courage necessary to follow it; for, be assured, that it can never lead to danger. Cherish a kindly feeling towards the whole human family: Let no distinction of country or sect be made a pretext for indulging invidious feelings; but remember that it is not given us to be born where we please, and that:

“ True religion is a boon, which Heaven
To man, and not to any sect, has given.”

Neither let inferiority of mental endowments in others prompt you to despise them, nor be elated with the idea of your own capabilities and acquirements; remember that the advantages you possess over others in that respect, are purely a gift of the Creator, and that consequently, though you have been more fortunate, you are not the more meritorious. Labour rather to improve those who are behind you, and do not scorn to imbibe instruction from your superiors in moral and mental attainments. Strive to acquire a knowledge of the duties you may be called upon in after life to fulfil, either as citizens, husbands, or parents. Make Phrenology in particular your study, for acquiring a knowledge of which you possess higher advantages than the artizans of any other city in Europe, with the exception of Edinburgh. Judge not of the importance of the science from what my limited faculties have been able to lay before you, but examine for yourselves the writings of its intellectual and benevolent founders, and then look abroad on society and draw your own conclusions. This you can accomplish with a very trifling sacrifice of time and money, while the benefit you will derive may be the means of insuring much of the happiness of your future life, and will have the immediate effect of exercising and rendering active your moral and intellectual powers. When you have acquired industrious and moral habits, and a knowledge of those laws which the Creator has established for the moral government of the world, endeavour to act in accordance therewith. Be especially on your guard that you do not infringe them in forming the social compact; for the consequences will extend beyond yourself, and go far into futurity. And when a choice has been made in accordance with the dictates of your superior faculties, let both parties endeavour, by fulfilling every

duty, to render yourselves mutually agreeable: then will the joyful husband find by delightful experience, that—

“ It is to lovely woman given
 To soothe our griefs, our woes allay,
 To heal the heart by misery riven,
 Change earth into an embryo heaven,
 And drive life's fiercest cares away.”

ARTICLE XIII.

EARLY ANTICIPATION OF PHRENOLOGY.

IN the London and Edinburgh Philosophical Magazine and Journal of Science for October 1838, p. 308, we find, under the above title, the following intelligence:—

“ The Rev. W. D. Conybeare, F. R. S. &c. has favoured us with the following notice of a curious anticipation of the modern Phrenological System, bearing date as early as 1503: it occurs in an old Encyclopædical kind of Work, entitled *Margarita Philosophica*, printed at Friburg in that year. The author, speaking of the mental functions, says, ‘ Sensus interiores numero quinque sunt: Sensus Communis, Imaginativa, Æstimativa, Cogitativa, et Memorativa. *Horum Organa in substantia cerebri subtilissimis secernuntur pelliculis; quæ primum totum cerebrum tribus distinguunt ventriculis, quorum anterior et medius rursus bipartuntur:—*1ma portio anterioris organum est Sensus communis; 2da, Imaginativa. Ima, autem ventriculi medii attribuitur Æstimativæ; 2da, Cogitativæ; posterior vero ventriculus totus Memorativæ deputatur.’ This is illustrated by the sketch of a head divided just like one of Gall or Spurzheim's models, a part of which is copied in the annexed.”

There is little novelty in this “curious anticipation of the modern phrenological system.” The engraving copied in our first volume, p. 387, from Ludovico Dolce's work on the Memory, published in 1562, exhibits a mapping out of the head very similar to that which appears in the sketch given in the Philosophical Magazine; although the seats of some of the faculties are in very different positions, as well relative as absolute. An account of many such “curious anticipations” will be found in the first volume of this Journal, p. 378; and for additional remarks on the subject the reader is referred to our last number, p. 381. The radical distinction between these theories and the doctrines of Dr Gall is, that the former were mere speculations unsupported by a shadow of evidence; while the latter are firmly based upon observation and experience.

ARTICLE XIV.

RAPHAEL'S SKULL.

THE occasion on which the skull of Raphael first became an object of phrenological inquiry, is stated by Dr Gall, in his *Anatomie et Physiologie du Système Nerveux*, vol. iv. p. 153. —“ Dr Scheel of Copenhagen,” says he, “ had attended one of my courses of lectures at Vienna, from which city he went to Rome. One day he suddenly entered my house, at a time when I was surrounded by a considerable number of auditors, and presenting to me a plaster cast of a skull, requested my opinion of it. I instantly replied, ‘ I never saw the organ of the arts (Constructiveness) so greatly developed as in that skull.’ Scheel continued to interrogate me. I then pointed out to the bystanders a considerable development of the organs of Amativeness and Imitation. ‘ How do you find the organ of Colouring?’ continued Scheel. I would not have adverted to it, for it was only moderately developed. M. Scheel then declared, with the utmost satisfaction, that what he had put into my hands was a cast of the skull of Raphael.” This anecdote is repeated in the section on Constructiveness in Mr Combe’s System of Phrenology.

About eight years ago, Mr William Scott read to the Phrenological Society “ Remarks on the Cerebral Development of Raphael d’Urbino, compared with the accounts given of his character and genius.” In that paper, which constitutes the first article of our seventh number, Mr Scott pointed out the correspondence between the configuration of the reputed skull of Raphael, and his genius and dispositions: While Constructiveness, Ideality, Form, Imitation, Secretiveness, Comparison, and Causality, the organs necessary for eminence in the fine arts, were found to be large; Amativeness, Adhesiveness, Love of Approbation, Cautiousness, Veneration, and Conscientiousness, were also greatly developed, and accorded with the amorous, affectionate, urbane, mild, respectful, religious, modest, and honourable character, which distinguished the man. For this reason, and because the skull was universally believed to be that of Raphael, casts of it were received, as authentic, into most of the phrenological collections. Lately, however, an announcement appeared in the newspapers, that in consequence of strong suspicions that the skull preserved in the Academy of St Luke was not genuine, the tomb of Raphael, in the Pantheon, had been opened, and his entire skeleton found undisturbed. This account is corroborated by a letter dated 20th October 1833, from a member of the Phrenological Society, presently resident at Rome, to a friend

in Edinburgh, from which the following is an extract.—“The great painter, during his life, was allowed to build an altar in the Pantheon, and adorn it with a statue of the Madonna. It was his last request, and he left a clause in his will to the same effect, that he might be buried in this shrine, and placed beneath the altar raised at his own expense. Some doubts having been expressed, whether he had really been laid in this consecrated spot, a search was permitted, and the result has been the discovery of a *perfect* skeleton, in a small arched vault beneath the statue of the Madonna. I paid a visit to these relics, and found the bones lying in their natural position, with the skull attached. The light was so imperfectly admitted into the vault, which was secured by glass and bars of iron, that I could not ascertain the predominating organs indicated by the head. The skull appeared to me to be large, but not so equally balanced as the hitherto reputed one; which has now been removed from the Academy of St Luke. The bones were re-interred two nights ago. I was present, and witnessed this very interesting ceremony. I have learned that a cast of the head has been taken, which I shall endeavour to see; and, if possible, I shall note the development. If a duplicate can be got, I shall secure one for the Phrenological Society.”

The probability that a skull, corresponding in so many unconnected particulars with the character of Raphael, and for many years exhibited as his, is in fact that of another individual, is so small, that we have still much difficulty in believing that the skeleton, or at least the skull, now discovered, is that of Raphael. As the evidence has not yet reached us, we are without the means of coming to any sound conclusion on the matter. We shall investigate farther, and publish the result.

ARTICLE XV.

AN ANECDOTE TO THE HONOUR OF PHRENOLOGY.

ABOUT two months ago, an article under the above title appeared in the *London Court Journal*, and was subsequently copied into some of the other newspapers. We have made inquiries respecting the authenticity of the anecdote, and learn from good authority that it is essentially, though not in all the details, correct. Dispositions are inferred from the head, but, we believe, not in exactly the following circumstances. The article in the *Court Journal* is this:—

“An anecdote has recently been made known to the world, through the medium of one of the criminal tribunals of the continent, which we are inclined to record among what a talent-

ed young friend once reproached us for terming the remarkable coincidences of Phrenology.

“During the autumn of the year 1830, a large assemblage of persons sat down to the *table d'hôte* of the chief hotel at Valence, in Dauphiné; and the sort of desultory conversation ensued which usually takes place among the heterogeneous guests of public ordinaries. Among the most respectable of the company was an eminent physician of Lyons, who is well known to have devoted a considerable portion of his time to the study of the doctrines of Doctors Gall and Spurzheim. Being known to several of the company, he was of course attacked on the subject of his favourite hobby, and he defended it with equal spirit and good-humour. Exhilarated by the repast, several persons present requested the doctor, at the close of the dessert, to pronounce his opinion on their faculties and qualifications; and much surprise was expressed, particularly by the ladies, at the accuracy of his verdicts. One individual, however, stood aloof, annoying the rest of the party by his sneers at their credulity, and insulting the learned gentleman by accusations of charlatanism. ‘I will defy any man living,’ said he, ‘to infer the character and conduct of a man from the organization of his skull.’ The doctor said nothing, but appeared considerably agitated.

“‘As if it were possible,’ continued the stranger, ‘for a man’s thoughts to raise bosses upon a bone!’

“‘For your sake,’ replied the physician, at length losing his patience, ‘I trust that it is not; for if Phrenology have any power to interpret the handwriting of the Almighty, you are one of the greatest villains in existence,—a thief and an assassin!’ A general outcry of indignation arose in the room. The stranger proposed the ejection of the learned physiologist through the window; when the uproar and consternation were checked by the sudden entrance of the master of the hotel.

“‘Gentlemen,’ said he, ‘I am sorry to acquaint you that a great criminal is harboured among you. The police are at the door, having certain information that an individual concerned in a robbery of plate, which was effected last night in a neighbouring town, has been dining at this ordinary.’

“Every eye was turned upon the furious stranger, and in a few minutes he was in the custody of the police, the stolen plate having been found concealed in his baggage. But what was the amazement of all present when he was detected by a gendarme as the celebrated Robert St Clair, the accomplice of Dammas Dupin, executed for the murder of an innkeeper and his wife at Montmorency! St Clair, after escaping from the galleys at Rochefort, and lurking in Piedmont, Switzerland, and Germany, had managed to evade the pursuit of justice, by spreading a report

that he had been found murdered on the Turkish frontier. After some days of solitary confinement in the dungeons of Valence, he made the most ample confession, and was eventually tried, condemned, and guillotined.—We need not add, that the fame of the phrenological doctor has risen to the highest pitch in his native province.”

NOTICES.

EDINBURGH.—The following valuable donations were laid on the table of the Phrenological Society at the first meeting this winter :—Seven skulls of executed *Thugs*, or stranglers of Central India; presented by Henry Harper Spry, Esq. of the Bengal Medical Service, Sangor, through George Swinton, Esq. Dean House.—Casts of the heads of two Laplanders, and of the skull of a Swedish criminal; presented by Mr G. Schwartz, Stockholm.—Six skulls of Druids from the Hebrides; presented by Donald Gregory, Esq.—Skull found in April 1833 under the foundation of the old steeple of Montrose; presented by the Rev. Thomas Liddell.—Cast of the head of Linn, a parricide; presented by Dr M'Donnell, Belfast.—Casts of the heads of a musical Child, a Negro, and a South American savage; presented by Dr William Gregory.—Plate illustrative of the *Théorie des Ressemblances*; presented by the Chevalier da Gama Machado.—American edition of Dr Spurzheim's work on Physiognomy; presented by Nahum Capen, Esq. Boston, U. S. For these highly esteemed donations, the best thanks of the Society were voted. It is hoped that the friends of science will embrace every opportunity of adding skulls and casts to the Society's collection.

At the request of the Directors of the Edinburgh Association for procuring Instruction in Useful and Entertaining Science, Mr Combe delivered, to a crowded audience in the Waterloo Rooms, three lectures on Education, as an introduction to the courses on Natural Philosophy, Astronomy, and Physiology and Zoology. The success of the Association this winter is very gratifying, not fewer than 776 tickets having been sold during the first fortnight; of which 219 are for Mr Lees's lectures on Natural Philosophy, 282 for Mr Gray's on Astronomy, and 273 for Mr W. A. F. Browne's on Physiology and Zoology.

GLASGOW.—On 9th November, Professor Hunter commenced a course of weekly lectures on Phrenology at the Andersonian University. He delivers, on Thursdays, popular lectures on Anatomy and Physiology.

At the Glasgow Mechanics' Institution a course of popular lectures on Anatomy, Physiology and Phrenology has been begun by Dr J. R. Wood, a gentleman whose talents are highly spoken of. The first lecture was on 6th November at half-past eight, and the course will be continued every Wednesday and Saturday evening for six months.

GREENOCK.—A Phrenological Society has lately been instituted in this town. It started with about twelve members.

MANCHESTER.—In September last a course of six lectures on Phrenology was delivered by Dr Epps, in the lecture-room of the Literary and Philosophical Society, to a highly respectable and numerous audience. We have seen in a Manchester newspaper a report of the sixth lecture, but Dr Epps's opinions appear to be somewhat misrepresented. He is reported, for example, to have said, “that there are no means of proving Christianity to be a true system by internal evidence, except by Phrenology;”—a sentiment which it is very unlikely that he ever expressed.

LIVERPOOL.—Here also Dr Epps has recently lectured, (in the Mechanics' Institution). A spirit of phrenological inquiry has been the result, and the Directors have purchased a number of works on Phrenology for the library of the Institution.

PORTSMOUTH.—The members of the Phrenological Society held their first meeting for the season at the Old Town Hall on Thursday 7th November, when a lecture was delivered to the members, and many respectable visitors, by Mr J. H. Bignell.—*Portsmouth Herald*, 10th November 1833.

SOUTHAMPTON.—Mr J. R. Stebbing delivered here, in October last, a course of Lectures on Phrenology, at the Mechanics' Institution, to a very numerous audience. "He commenced by a general view of the anatomy of the head, designed to show the situation of the brain, and the different parts into which it is divided. After a most effective and entertaining defence of the nomenclature of the science, in which the lecturer contended that the names of the organs were formed in strict accordance with the English language, he proceeded briefly to explain the functions of the several organs. He concluded by an ingenious vindication from the charge of fatalism and other objections frequently made to the science. We are not at present disposed to enter into a discussion on the truth of the principles of phrenology, but we give Mr Stebbing full credit for the ability which he exhibited in his very perspicuous and interesting exposition of what, if true, is certainly a very important branch of knowledge."—*Hampshire Advertiser*, 5th October 1833.

HALIFAX.—We learn from the *Halifax Guardian* of 9th November, that Mr Levison was about to commence a series of lectures on Phrenology in that town. "Though we do not profess," says the *Guardian*, "to be adepts in Phrenology, yet we can say with truth, that our inquiries into the subject, and our personal communications with Mr Combe (one of the ablest and most philosophical reasoners of whom Britain can boast), have convinced us of the very great importance of the subject, and divested us of many prejudices which we once entertained respecting it—those, in particular, which relate to its supposed tendency to materialism and fatalism. We shall be very glad if Mr Levison accomplish his purpose, as an exposition of the principles of Phrenology by a man of ability and learning, involves disquisitions of the highest interest, even to those who are not convinced of the peculiar doctrines of the science."

PARIS.—The progress of Phrenology here is very gratifying. For particulars we refer to a communication in the preceding pages.

UNITED STATES.—The *North American Review*, for July 1833, (published at Boston), contains an attack on Phrenology. The writer misapprehends, in the usual manner, the doctrines which he opposes. We have prepared a reply, but are compelled by want of room to postpone it.

Second American editions of Dr Spurzheim's "Phrenology," and "Philosophical Principles," have appeared at Boston. His "Examination of the Objections made in Britain against the Doctrines of Gall and Spurzheim," and also his work on *Insanity*, have been reprinted at the same place, the latter with an Appendix by A. Brigham, M.D., author of "Remarks on the Influence of Mental Cultivation on Health." An American edition of Dr Andrew Combe's *Observations on Mental Derangement* is in the press.

The following pamphlets by Dr Caldwell of Lexington have been received and will be noticed as soon as possible:—1. *Thoughts on the Pathology, Prevention, and Treatment of Intemperance, as a form of Mental Derangement.* 2. *A Discourse on the Advantages of a National University, especially in its Influence on the Union of the States.* 3. *A Discourse on the first Continental Celebration of the Birthday of Washington.* 4. *Thoughts on the Structure and Dependencies of the Science of Medicine.* 5. *True Mode of improving the Condition of Man.*

A work by Mr J. L. Levison, entitled "Mental Culture, or the Means of Developing the Human Faculties," has been announced.

The publication of several articles and communications, partly in types, is still unavoidably delayed.

ERRATUM IN THIS NUMBER.—At p. 415, line 6, for *organisation* read *disorganisation*.

EDINBURGH, 1st December 1833.

THE
PHRENOLOGICAL JOURNAL.

No. XXXIX.

ARTICLE I.

PRACTICAL APPLICATION OF THE PHRENOLOGICAL PRINCIPLES OF CRIMINAL LEGISLATION TO THE PENITENTIARY SYSTEM.

IN a former article (Vol. VIII. page 109) we endeavoured to lay down the principles of criminal legislation, which are discoverable in the views of human nature as unfolded by Phrenology. We did not then go into the details of the system of RESTRAINT, which, we generally gave it as our opinion, should and will supersede all direct positive infliction of pain. We are encouraged to revert to the important subject, by the cheering fact that the public and the legislature are busy with it, and have both made a stretch forward in those sound and liberal principles, which the phrenologist, as he has the best means of knowing their consequences, is best qualified to appreciate. On the 26th of February last, Mr Hume presented a petition from nearly 6000 persons in the Metropolis, to the House of Commons, praying a revision of our criminal laws, which he concurred with the petitioners in considering unenlightened, cruel, and self-defeating. Mr Pease vindicated his title to represent the Benevolent Society to which he belongs, by cordially supporting the petition. The Solicitor-General declared himself friendly to the investigation of our criminal code; and could sanction the taking of life in those crimes only where the individual injured would be entitled, preventively, to kill the criminal. Mr Lennard thought that no crime should be punished with death which was committed against property, without violence. Mr G. Lamb said, that a gentleman had gone to the United States of America, to investigate the secondary punishments of that country; and trust-

ed that an improved system of secondary punishments would soon be adopted in our own. The Attorney-General would yield to no man in the wish that punishment should be as lenient as is consistent with the safety of person and property; and was of opinion that farther mitigation might be safely, if cautiously, introduced. In this conversation, every speaker proposed MITIGATION, which was welcomed with loud and general cheering. Mr Lennard has since introduced a bill abolishing the punishment of death for breaking into and stealing in dwelling-houses, which has been passed;*—and we happen to know that views going quite as far as those which we have already expounded, and are now farther to expound, have, in another shape, † met the eyes of several of the leading members of his Majesty's Government and of both Houses of Parliament, and been considered by them instructive and practically useful. In this triumph of a higher morality than has ever yet regulated the treatment of criminals, we sincerely rejoice. We see in it the power of the ethics we ourselves have been urging, almost unheeded, for years; and we hail it as the most irrefragable and gratifying proof of the soundness of our philosophy. It will be easily believed that we now resume our task with equal confidence and pleasure.

The reader will keep in mind our *tripartite* division of our fellow creatures. In Class first, the animal propensities greatly predominate. This class are the most disposed to crime, and the least, if at all, moved by the terror of example. In Class second, there is a rather nice balance between the animal organs and the moral; they are therefore good or evil according to circumstances, and are deterred by example. Class third, are virtuous in various degrees, but in little or no danger of being betrayed into the commission of crime. We had got as far, in our former article already referred to, as a general recommendation of PENITENTIARY RESTRAINT, and shall now endeavour to enter more minutely into the reasons of that great reform in criminal legislation.

First of all, then, we would propose to dismiss RETRIBUTIVE VENGEANCE for ever from our legislation in crimes, and, what alone will secure this result, *from our own feelings towards criminals*. Difficult, we acknowledge, will be this apparent inversion of our moral sentiments; but, as phrenologists, holding it to be only a just, and, therefore, natural direction of them, we feel assured, and indeed have actually seen, that it will soon

* Next Session of Parliament will probably see the abolition, or great modification, of imprisonment for debt.

† Edinburgh Law Journal, Number VIII, Article 1st. A few copies of this paper were separately printed for circulation in London. The result has been most encouraging.

recommend itself to the reflecting. There is an approach to this in the reprobation with which all treat the element of revenge, when it betrays itself in keenness, or violence, or vindictiveness, in a judge in his directions to a jury in a criminal case, however aggravated that case may be; and we feel more respect for him when he treats the wretched prisoner at the bar as unfortunate as well as criminal. Indeed, good feeling has established this as the current term, both at the bar and on the bench, for characterizing the prisoner's condition. Now this is not merely civil,—it is just. When we consider the original constitution and actual circumstances of criminals, as already described, we cannot in justice avoid looking upon them as unfortunate, as patients more than criminals, and longing to see them as patients put “under treatment.” This treatment ought to have two great aims; *first*, to protect society from its dangerous members, who are criminally diseased or disposed; and, *secondly*, to amend the criminals themselves by an enlightened system of reformation. We think that both ends may be gained, with a much smaller degree of suffering than is called for on the retributive principle, BY A JUDICIOUS SYSTEM OF REFORMATORY SECLUSION OF ALL CONVICTED CRIMINALS, WHATEVER MAY HAVE BEEN THEIR CRIMES.

We do not pretend to originality in the advocacy of penitentiary treatment. We are anticipated by Jeremy Bentham, the father of the system, by Archbishop Whately, and by the legislators of the United States, in proposing its substitution for all secondary punishment: the two last reserve death for such crimes as murder and fire-raising; while the London Prison Discipline Society have the distinction of taking the lead in recommending the secondary treatment for all crimes whatever, murder not excepted. Major Palmer, too, one of the inspectors-general of prisons in Ireland, has written an excellent pamphlet on this subject. But we* do claim some views of penitentiary treatment itself, which more closely consult human nature than any which we have met with; and, therefore, we humbly hope, free from errors in principle, which have occasioned the failure of the penitentiary system in various ways, when it promised most fairly †. From some errors we think, with much deference, that the Prison Discipline Society's plan itself is not free. With the solitary exception of that proposed by Mr Livingstone, Secretary of State at Washington, to be presently noticed, all the penitentiary plans have a machinery for the *direct* infliction, in lesser or greater degrees, of suffering, called punishment, continued through the whole course of the

* By *we*, we here mean the phrenologists, of course including Professor Caldwell. See his admirable paper in vol. vii. p. 385 and 493 of this Journal.

† Millbank itself has disappointed expectation.

period of detention. They all include *compulsory* labour, which is labour enforced by yet severer pain as the consequence of refusal, in the form of stricter confinement, privation of food, and, as is true of the boasted Auburn of America itself, stripes with a cow-skin whip at the discretion of an under-keeper, and even flogging with a cat of cords under the eye of the governor. We mean to shew that, with all or any of these penal appliances, the convict's amendment is morally incompatible.

The last Report of the Committee of the House of Commons on secondary punishments, " recommends that, in all cases that have *hitherto* been punished with imprisonment, with or without hard labour *, the prisoners be in future confined in light solitary cells, except when at *hard* labour; that in proceeding to or returning from exercise, they be marched in single files, and strict care taken to prevent even a whisper passing from one prisoner to another; that to prevent conversation while at exercise, *the wheel* be divided into compartments, with partitions, to contain one person in each, and that no more prisoners be taken out for exercise at a time than may be sufficient to fill the wheel; that no prisoner be allowed to receive visits from his friends, or to hold any communication with them even by letter, except in special cases, and with the permission of the visiting Magistrates; that, when shut up in their cells, the strictest silence be enforced, and for that purpose a *turnkey* be constantly perambulating the galleries of the prison; further, that every cell be furnished with books of a moral and religious character, and such employment provided for the prisoners when not at hard labour; as may tend to encourage habits of industry, and repay a portion of the expense incurred in their maintenance."

This plan is a copy of that of the prison of Auburn in the State of New York; only the labour in the latter is more intelligent and useful than the wretched, degrading, and absurd labour of the tread-wheel, which prevails in almost every House of Correction in England. We think, with deference, that the views of the Committee of the House of Commons, although an immense advance upon those of our ancestors, are yet but partially enlightened and guided by philosophical principles. But we hail the spirit which actuates the Legislature, and expect from it the very best results as its lights increase.

In their Eighth Report, the Committee of the Prison Discipline Society say:—" The Committee have given to this subject (a substitute for transportation and the hulks, which two last they consider as having utterly failed) their best consideration, and have no hesitation in declaring their conviction that an

* The Committee propose to have a variety of secondary punishments, retaining, but improving, the unimprovable one of transportation. This *variety* is admirably exposed in all its self-defeating effects by Archbishop Whately.

effectual substitute may be found for the penalty of death in a well regulated system of penitentiary discipline ; *a system which shall inspire dread, not by intensity of punishment, but by unre-mitted occupation, seclusion, and restraint.* The enforcement of hard labour, strict silence, and a judicious plan of solitary confinement, will be found the most powerful of all moral instruments for the correction of the guilty ; and when to these are added the application of religious instruction, the utmost means are exercised which society can employ for the punishment and reformation of the human character. This discipline admits of a great variety of combination, and is therefore adapted to the treatment of offenders of different classes of criminality. For successful examples of this nature, the Committee refer to some of our best houses of correction, and especially to the Penitentiary at Millbank. It is, however, from the United States that the most extensive experience on this subject is to be derived ; where a system has been adopted which combines solitary confinement at night, hard labour by day, the strict observance of silence, and attention to moral and religious improvement. These plans are enforced with great success at the prisons at Auburn and Sing-Sing, in the State of New York, and at Weathersfield, in the State of Connecticut. At sunrise, the convicts proceed in regular order to the several work-shops, where they remain under vigilant superintendence until the hour of breakfast, when they repair to the common hall. When at their meals the prisoners are seated at tables in single rows, with their backs towards the centre, so that there can be no interchange of signs. From one end of the work-rooms to the other, upwards of 500 convicts may be seen without a single individual being observed to turn his head towards a visitor. Not a whisper is heard throughout the apartments. At the close of day, labour is suspended, and the prisoners return in military order to their solitary cells ; there they have the opportunity of reading the Scriptures, and of reflecting in silence on their past lives. The chaplain occasionally visits the cells, instructing the ignorant, and administering the reproofs and consolations of religion. The influence of these visits is described to be most beneficial ; and the effect of the entire discipline is decidedly successful in the prevention of crime, both by the dread which the imprisonment inspires, as well as by the reformation of the offender. Inquiries have been instituted relative to the conduct of prisoners released from the Auburn penitentiary—the prison at which this system has been longest observed—and of 206 discharged, who have been watched over for the space of three years, 146 have been reclaimed and maintained reputable characters in society.

“ Another system of penitentiary discipline practised in the

United States is of a more formidable character, the severity of which has excited considerable opposition. It is enforced at Philadelphia and Pittsburg, in the state of Pennsylvania. The main feature by which it is distinguished from the government at Auburn, consists in the enforcement of solitary confinement *by day* as well as by night. It was originally intended that this perpetual solitude should be inflicted at the Philadelphia prison without any relief arising from manual labour, but the Commissioners appointed to revise the penal laws of Pennsylvania were adverse to the experiment. This system has now been in operation for the last eighteen months, and it must be allowed that, although the plan is in some respects objectionable, the serious apprehensions to which it has given rise have not been realized. Both these prisons were lately visited by a member of this Society, who paid particular attention to the effect which continued solitude had produced upon the health of the prisoners. 'I attempted,' he writes, 'to detect any latent evils belonging to the system, and was for this purpose allowed to repair to the cells alone; I did so frequently, and was at length satisfied that the prisoners had sustained no injury from the seclusion. Each prisoner is employed in some branch of trade, and is required to execute a given quantity of work; if he disobeys, he is kept on low diet, no corporal punishment being allowed. There is, however, but little necessity for resorting to punishment; *for, rather than remain in idleness, the prisoners prefer employment for its own sake, as well as for the intercourse which it occasions with the prison-officers. Labour is here prescribed as an alleviation of punishment, and not superadded to aggravate it.*' Satisfactory as this may be to a certain extent, it is notwithstanding extremely difficult, at a distance so remote, and with conflicting evidence, to form a correct judgment upon the safety and expediency of continued solitude, even when mitigated by employment; and after having maturely weighed the statements adduced by the advocates of the respective systems, the Committee adhere to the opinion expressed in their former Report, that solitary confinement *by day* as well as by night, however suitable for short periods, and as a temporary punishment for gaol-offences, would not be justifiable as an ordinary system of prison discipline. It appears that before the adoption of the present system at Auburn, an experiment was tried at that prison of the effect of perpetual solitude upon eighty prisoners, during a period of ten months. The result was decidedly unfavourable to the adoption of the plan, and it was accordingly abandoned. The punishment was found in many cases to injure the health, to impair the reason, to endanger life, to leave the prisoner enfeebled and unable to work on quitting confinement, and as ignorant of any useful occupation

as when he entered it. Reformation did not follow, and consequently recommitments were more frequent. This testimony is corroborated by the opinions of the governors of several of the best regulated prisons in England, whom the Committee have consulted on this important subject. They unite in stating their conviction, that solitary confinement is a punishment to be used with extreme caution; that the health of every individual must be regularly watched; that serious effects would have resulted from its adoption in their own experience, had they not been prevented by the timely removal of the prisoner into society, and that it would not be wise to render general a discipline, the administration of which requires unceasing vigilance, and the abuse of which may be so fatal to the mind as well as health of the prisoner. Much of the benefit ascribed to solitary confinement may be derived from allowing the prisoners to labour in classes agreeably to the course pursued at Auburn, but restricting them to the most rigid observance of silence. Great importance is justly attached in these penitentiaries to the effect of religious impressions in a state of solitude; and, doubtless, the arrangements for imparting such have been carefully made."

We have quoted largely from this report, because it contains a concise view of the American practice, in addition to what itself proposes. There is, however, an omission in the report, inasmuch as no allusion is made to the corporal punishment of Auburn, by which the discipline of the establishment and also the convict's labour, are enforced. Mr Stuart, a late traveller in the United States, when visiting Auburn, made minute inquiry into the whole system of the penitentiary, and states pointedly that, for infraction of duty, stripes are inflicted by the keeper, or *assistant keeper*, with a raw hide whip; and that in aggravated cases the convict may be flogged by *the keeper or his deputy*, with a cat of six strands of small twine applied to the naked back. He adds, that so certain is conviction and so speedy the punishment, that an instance does not occur above once in three months.

The Archbishop of Dublin, in his Letter to Earl Grey on Secondary Punishments, with its appendices, advocates severity in penitentiaries, for *example's sake*; and the character of secondary punishment, on which he lays most stress, is that it shall be "formidable." He is unanswerable in his exposure of the absurdity and mischief of the prevailing secondary punishments; but we by no means find him so trust-worthy a guide in his plans of substitution. He is no doubt a convert to the universal application of penitentiary discipline as secondary punishment; but his reprobation of "tenderness" to the convicts amounts almost to unwillingness that the feeling of punishment

should ever quit the latter's consciousness, or that he should have a tale to tell to others in which there should mingle one grain of comfort or happiness. It is no answer to the Archbishop that, under such a system, reformation is not to be expected; for he considers reformation, as we shall presently see, a very secondary consideration in the treatment of criminals. He, of course, proposes compulsory labour, and suggests an original and plausible modification of it, namely, that a convict's sentence should be measured not by time, but by work, a certain extent or amount of labour (a fair portion being enforced daily) being assigned him, so that he may have a motive to assiduity in order to shorten his confinement, while the assiduity will give him habits of industry, which will avail him after his discharge. We fear that such labour, however assiduously and speedily accomplished, being yet essentially penal and compulsory, and unaccompanied by any thing which bears the semblance, philosophically, of moral or intellectual exercise, of higher motives and more permanent social attainments, will be performed with a view to liberation only,—in other words, from a hatred of labour, and an appetite for criminal indulgence, the only idea the convict is apt to connect with liberty.

Mr Secretary Livingstone of Washington shoots a-head of the Archbishop of Dublin very decidedly, and arrives at a position much nearer that which is recognised by a sound philosophy of man. He has astounded his countrymen by the novel, but eminently philosophical, proposition of *voluntary* labour in penitentiaries, and the negation of all *direct and positive* infliction of pain or suffering, at the hands of the superintendents. The scheme is as ingenious as it is benevolent, and as, from Mr Livingstone's high character and influence, there cannot be a doubt that his plan will be extensively tried in the United States, we shall now describe it in as few words as possible.

Mr Livingstone's penitentiary is so constructed that each convict has a cell, with an adjoining small court, to himself. The cell is small but light, and well aired and warmed; and here the newly introduced convict is shut up, coarse fare is supplied to him, and he is rigidly denied all occupation whatever. This grievous state of negation, in which the faculties stagnate, whose activity is essential to human happiness, in a very short time becomes intolerable to him; and as soon as he requests it, but not sooner, something to do is given to him. There is work for him in the court adjoining his cell, though still in solitude. The kind of work is suited to his qualifications or previous habits. From the time he commences work, he finds a slight improvement in his diet, and a greater as he becomes more in-

dustrious. If he is idle, or in any way abuses the *privilege* of labour, he forfeits his claim to it: it is taken from him, and he returns to close confinement and coarse fare in his cell. In the trials already made—for the plan has been tried, we believe, in Louisiana—there is scarcely an instance of this retrogression; or, if there have been any, the reconfinement is brief, as work and better fare are both soon again desired. When he has been steadily industrious for six or twelve months, which have been lightened by frequent visits from officers of the establishment and religious teachers, who instruct, converse with, and encourage the solitary labourer, he is considered trust-worthy, a great improvement takes place in his condition. He is permitted to work and take his meals in the society of some others, in his own stage of improvement, the number not to exceed ten, who at night return to their solitary cells. When together, their intercourse and demeanour are of course narrowly watched by a judicious person, who at the same time gives them instruction and amusement; and the least attempt at mutual corruption, the first symptom of abusing the indulgence, is followed by its cessation; and the convict finds himself back a stage, not yet in his solitary cell again, with coarse fare and without employment, but at the stage of solitary labour from which he has shewn that he was not yet fit to be advanced. This inferior privilege he may, if he chuses, also lose, and retrograde to what was his first condition when he entered the establishment. From this he may emerge whenever he pleases. Every step is taken by himself.

His promotion to the social state unabused has other advantages besides his improved diet,—which is better than the fare of his solitary labour, itself better than the fare of his idleness: he will be allowed, if he can, to work at more profitable employments, and receive his gain in the form of tools, books, or whatever he pleases, meat and drink, to prevent abuse, excepted; or have the surplus added to the stock which is laid up for his discharge. His hopes of ultimate liberty are encouraged, with judgment; but the impression is never allowed to be weakened that this final consummation depends upon himself alone, and that partiality, and favour, and allowance, and indulgence, are all utterly out of the question.

Here, then, is a system which abstains from enraging or debasing the convict by direct infliction of pain or suffering. He may punish himself if he pleases, by returning to solitude and coarse fare; and he may promote himself to considerable comfort and enjoyment. This last privilege is as important as new in penitentiary discipline; and, attained in the manner Mr Livingstone proposes, it seems that the greatest protester against rendering culprits comfortable can scarcely object to it.

We would adopt Mr Livingstone's excellent plan, so far as

it goes; but we are inclined to build a little higher than his symmetrical structure, or, shall we rather say, found a little deeper.

A penitentiary or reformatory asylum, according to our view of it, must, to be perfect, fulfil five requisites:

1st, It must protect society from the individual criminal, by a mechanical seclusion and detention of his person, so complete that the idea of escape may never occupy or distract his thoughts.

2d, It must provide for the reformation of the criminal, during his detention, to the utmost attainable extent, on sound practical principles.

3d, It must restore the convict to society when, but not till, he is so far reformed as to be trusted with his liberty.

4th, Its detention and seclusion of the convict must be such as to operate in the way of example, to deter from crime all others upon whose *will* example ever operates.

5th, Lastly, It must fulfil all these requisites with little, or, if possible, no expence to the public.

First, We need not here enter into the first requisite, that of the mere mechanical means of effectual confinement. That is the responsibility of architects and engineers. Mr Livingstone's regime, which we would adopt, will of course require a great number of separate cells and attached solitary working courts. This is mechanically practicable. Auburn has one thousand cells in each wing. The befitting accommodation for promoted criminals is not less obvious. Provision should be made for a careful separation of males from females, and young from adults. The locality should be high, dry, and healthy, and the water good. The principles of the system would direct the architect, and it is these principles we are at present concerned in establishing.

Secondly, The convict's reformation. The Archbishop, as we formerly hinted, holds this consideration to be of secondary importance in penitentiary discipline. Example to others he holds the chief end of all punishment, which ought, therefore, according to him, to be formidable. Reformation may be attempted, but it does not, in his view, belong essentially to a "*penal* system." We think, with deference, that this is a great error. His system is unnecessarily penal, and therefore reformation cannot coexist with it. We agree that formidable punishment and reformation cannot be united, and we shall presently shew why; and that the opinion of the impracticability of reforming criminals,—which has grown almost into a proverb, and seems much to influence Dr Whately,—is founded more on the fact of uniform failure, than on essential impracticability, if proper means were employed. The Arch-

bishop says, that "all the efforts of rulers to make men good by law have utterly failed." But all the law hitherto applied has been to inflict pain upon men for being bad, unaccompanied with any rational attempt to make them good. The Archbishop argues that, by the reformation of criminals, you do not prevent crime in the rest of the community, inasmuch as criminals are not a specific, existing, separable class, like men with red hair or black skins, whose reformation would rid society of crime, by amending *all* the criminals. The reformation of certain individuals would be no better than the cure of certain individuals during the prevalence of a pestilence; it would not arrest the course of the disease among the rest of the community. To this we would answer, that crime is not a contagious or epidemic pestilence, which tends to run through a whole people. Those decidedly predisposed to crime are, according to our views and observation, much more of a class than Dr Whately supposes; and they are a class nearly all of whom, at least in the lower ranks, come in contact with the law. Even under the wretched system now prevalent, their number, on an average of years, can be nearly ascertained; and it will appear in the sequel that a proper penitentiary system is nearly certain of getting them all into its hands, when reformation will not only be a moral duty, but a direct riddance to society of criminals and crime.

It is, moreover, as a high moral duty that we have given Reformation so prominent a place among our five points or requisites: we do not mean that of itself it is to do more than operate indirectly and partially as a diminution of crime; but then it is not our sole appliance. As we propose to seclude criminals and rid society of them for periods the shortest of which will be long, they have an irresistible claim upon us for education, intellectual and moral. To immure a criminal, and forget him—or to remember him only for the stated infliction of pain upon him, is utterly abhorrent to all our notions of moral obligation. Immured as he is, he is yet a morally and religiously accountable being. We have separated him from the society with whose safety his liberty is incompatible; but we are bound, the more for that very reason, to attend to his intellectual, moral, and religious, as well as his physical wants. Just because we have forced him into an artificial mode of life, established by ourselves for our own safety, we are called upon to preserve his health of body, and to improve his mind,—intellectually, as far as he is capable, by instruction in useful knowledge,—and morally, by subduing and regulating his animal and vicious propensities, sensual, covetous, and violent, and exercising his moral faculties and social affections, some endowment of which, above the sad blank of idiocy, is the portion of

every sane human being. We shall of course succeed in very different degrees, according as the balance stands between the superior and inferior feelings in each subject. The state of this balance will likewise regulate the duration of the individual's seclusion from ordinary society; and surely those even who shrink from Phrenology as an element in conviction, will not object to it as a test of capacity for liberation. When, by an enlightened age, penitentiaries shall be held to be hospitals for moral patients, and not engines to protect society, by holding out the spectacle of the sufferings of perfectly free agents either *paying back* that loss which their actions have occasioned*, or deterring others from crime by their example, the duration of the convict's detention will depend, not upon the mere act which brought him there, but upon the continuance of his disease. As long as penitentiary discipline shall consist of severe and degrading compulsory labour, of stripes, irons, insults, and brutality, without an attempt at improvement, mental or moral, beyond being herded into a chapel on Sunday for an hour or two,—and this constituted the old idea of a house of correction,—a prescribed and short duration of such irrational usage is imperative. Nay, it was and is the prominent problem of criminal legislation to proportion punishments to crimes,—to weigh out, to an odd scruple, the quantum of suffering which shall counterpoise the quantum of guilt in the *act* committed; and certainly it would be monstrous to detain the convict, on such a principle, one moment longer in the place of mere suffering, than the exact time necessary to permit society to *take out*, in his groans, the supposed debt *ex delicto* contracted by him. But no one is ever sent to an hospital for a previously prescribed period. Sixty days of the infirmary, or the madhouse, as a medical prescription, would be justly ridiculed, in and out of the faculty; and so it will come to be when moral infirmaries, applying rational and effectual means of cure to those afflicted with that worst of diseases called a proclivity to crime, and being withal mild, benevolent, and encouraging to the patient, are substituted for the present irrational treatment. The unhappy criminal will then be regarded more in relation to his moral constitution than to his conduct; or if the latter be estimated, it will be in the way of evidence of the former. His sentence for an overt act of crime will be the restraint of the penitentiary, till an authority, beyond all question as to intelligence, and all suspicion as to uprightness and benevolence, shall deem it safe to venture him once more in society. It is evident that, for such a

* This is the etymology of *retribution*, and is the vulgar *rationale* of punishment. "Qui non luit in pecunia, luet in pelle." Our law-makers and law-administrators disclaim this in the abstract; but it nevertheless enters largely into their practical judgments, as is well observed by Archbishop Whately.

process, the shortest time must be long. Ordinary education is the work of years; and *a fortiori* must moral training be when working against the wind and tide and current of criminal propensity. Nay, as in lunatic asylums there may be cases of very long duration, there may be cases for life in our asylum, cases of relapse after dismissal, and return to necessary restraint on fresh conviction. These last ought to be held cases for life. If any one shall object that this is any thing but mild treatment of criminals, and that there is more justice in inflicting a month's confinement for a first and slight offence, and then giving the criminal another *chance* for a good life; we would answer, that the latter course is but the first step of a series of penal inflictions, alternating with intervals of the most wretched sensualities and profligacies called freedom, which necessarily bring the sufferer back to punishment—and that, on the proportion principle, more severe than the first—to be again dismissed to greater misery than he leaves, and more resolved upon, and better fitted for, crime. He returns a third time, of course, to your bridewell, to be visited with yet increased infliction, till at last the account of proportion has so much accumulated to his debit, that a violent and ignominious death alone is held adequate expiation. What is the restraint of a few—of a number of years—of a lifetime—in a well constituted reformatory asylum, compared to the cruelty, the injustice, the irrationality of this?

In no part of his treatise is the Archbishop of Dublin more unanswerable than in his argument on what are called first offences, or more properly first convictions. We, as well as the Archbishop, would never pass over first convictions; but when he would administer to them severe but short pain, we would apply to them long but mild corrective education. If our views are sound, it would soon be with first offences almost exclusively that we should be called upon to deal. In one view of first offences taken by Archbishop Whately we cannot agree, namely, that a first offence, even when slight, shall be visited by sharp and severe suffering, by way of example to others. This is as much against our moral perceptions, as it would be to punish a slight offence retributively with severe suffering. If we are told that it is expedient to do so, then are expediency and morality at variance; which is absurd. We should have no right, on the principle of either retribution or example, to go beyond a nice apportionment of the penalty to the act; but when the object in view is the moral cure of the individual himself, there is no variance between moral feeling and expediency, even although that cure should require a long seclusion. We never think the longest confinement to a sickbed unjust or disproportionate. This is an answer to the natural question under the old impressions, "Would you send to your penitentiary for years, a boy who

for the first time steals a shilling?" The theft of the shilling is the symptom of a moral disease which requires the boy's being put under treatment; and it is mercy to him to seclude him, and subject him to the education and training which his unfortunate case requires.

But wherein, it will be asked, does our asylum differ from the hitherto most improved penitentiaries, to lead us to expect success, when all other plans have presented a history of failure; and to entitle us to hold that confinement with us shall, not only by its mildness but by its advantages to the convict, counterbalance the evil of its duration; and yet to those beyond the walls, on whom example ever operates, serve all the purposes of motive to abstain from crime?

In our substitution of restraint for pain positively inflicted, which last has been found to do nothing in the way of example with class first, we propose to banish positive direct infliction entirely, and to be content with secluding the convict, and physically preventing him from doing farther mischief, while we subject him to the operation of a rational system of reformation. It is a remnant of the old leaven to devise ingenious methods of rendering a penitentiary as irksome and disagreeable as possible, that the convict may not be allowed to forget that he is undergoing punishment. Novel though the thesis may appear, we state it on our knowledge of the faculties of the human mind and their mode of operation, it is morally impossible to punish, by direct and severe infliction, and reform at one and the same time. Our utmost punishment, therefore, is seclusion and solitude. We would inflict no other directly, but, with Mr Livingstone, we would provide the means of an undeserving convict *punishing himself*, by falling back into degradation, confinement, and poor fare, just as by idleness he would do in free society. In his lowest state, while it lasts, we should not attempt reformation, because we should inevitably fail; and this will at once appear if we consider what reformation really is.

Reformation springs from the moral and religious faculties, and to their activity the quiescence of the animal propensities is a necessary requisite. But directly inflicted punishment is addressed to these lower feelings; it is avowedly intended to excite Cautiousness, but it cannot be prevented from rousing the resentment of Self-Esteem and Destructiveness, and with that the moral feelings, Benevolence, Conscientiousness, Veneration, and Hope, cannot co-operate. It is a solecism to attempt an interchange of kindness when your subject's back is smarting and bleeding from the lashes of your scourge, and he mortally hates and could murder his tormentor. You may quell his thirst for vengeance by the power of your position, but his stripes must heal, and his resentment cool, before you will do

more than waste your breath to talk to him of justice, or mercy, or industry, or self-respect, or devotion. He must have time to come round from the settled sullenness of the degrading treadmill, that brute labour, before he will be in the mood to respect either himself or the society that torments him; nor is it with the same breath that he can be insulted, vilified, abused, and tyrannically commanded, and also led, by the gentler accents of persuasion, to exchange a ruffian character, aggravated by ill usage, and goaded to revenge, for a temper of peace and good will to all around him. It is one of the fallacies which result from ignorance of the nature and working of the human mind, to expect reformation as a result of punishment. They excite feelings the antipodes of each other, and which, therefore, can as little co-exist as the noon-day of London and New Zealand. It is a deplorable error to imagine that you can force reform—that you can, in the active sense, reform the convict; **HE MUST REFORM HIMSELF.** It is your part to take care that you do not hinder him by your punishments; but that, on the contrary, you lead him to *will* to amend, by quieting his animal, and calling into activity his moral, feeling; gradually bringing back his self-respect, by according him a portion of your approbation as he deserves it; and stimulating his industry by realizing to him its fruits in a marked melioration of his condition, and improvement of his prospects; with the ultimate reward of restoration to society, furnished with a means of livelihood and a re-established character, and not without the patronage and countenance of the friends and wellwishers of a genuine return to virtue.*

Mr Livingstone's penal infliction is never operating at the same time with his reformatory process; there is no reform attempted while the convict has not yet left his original cell, or has by his own misconduct brought himself back to it. It is not attempted, because it would be fruitless. The beams of moral culture begin to shine upon him, and communicate their warmth and their light, when he is in the mood to come forth and willingly resume his labour. According to our notions, it is essential that all the functionaries in a reformatory shall belong to our third class, and possess a predominating moral and intellectual constitution. With enough of courage and firmness, and general authoritative weight of character, to put down mutiny with a word, or even a look, and fearlessly suppress revolt if it should break out,—which solitude or well-earned society of small numbers would each render next to impossible,—the ordinary demeanour of such persons should be mild, kind, cheerful and encouraging. These qualities would insure not only the respect

* This would supersede the necessity of the separate establishment of what are called "Houses of Refuge for discharged criminals."

but the affection of the convicts, and such society would itself be the object of their desire, and an incentive to and reward for steady and unwearying good conduct. The reform in the functionary department would require to amount to a revolution. You must reform the office-bearers as preliminary to reforming their charge. From the governor down to the humblest servant in the establishment, you must weed out carefully every remnant of classes first and second of human beings; and having filled every department with class third, train the office-bearers in all their degrees to a systematic exercise of their best feelings in their intercourse with the convicts. Look at the grateful confidence which criminals place in a prison-governor who has treated them considerately and kindly; or in a clergyman of tranquil benevolence and true christian humility, who, when they were in prison, has visited them, not to threaten, and denounce, and terrify, but gently to lead his fellow sinners from the error of their way. The greatest change would be, that the functionaries, secular and religious,—if these must be distinct, though it might lead more directly to practical religion that they were not distinct,—instead of, as now, guarding, coercing, punishing, locking-up, and always overbearing, degrading, and insulting their unfortunate charge, should devote a large portion of their time to intimate society with them, often share their meals, and generally associate with them*. We know that, from the wretched moral education of the "better" classes of society, a towering prejudice will long be in the way of obtaining men of sufficient moral and religious elevation thus to follow a blessed example, and consent to *dwell* with sinners. This repugnance has a deep foundation in the present degradation of the instruments of the criminal law, those who *execute* punishment. Nothing can be conceived more confirmatory of our whole argument than this very degradation. By a law of our nature, we cannot respect the animal feelings: and from these, and these alone, comes the actual infliction of punishment. But when, under a new system, the moral and intellectual faculties, in every functionary within the precincts of the asylum, shall be in constant exercise, the contempt will cease with the degraded character, and the office of a criminal reformator will take rank in social estimation according to the qualities required, and the social benefits bestowed. To many—to the great majority—all this will no doubt appear wild and preposterous; but it is not the less true to nature. There are many evils under which society groans, which can only be cured by means which must shock existing prejudices. But if we will cherish our prejudices, however to our reason they can be demonstrated to be absurd and hurtful,

* Contrast this with the tremendous infliction of *silence* for years.

we have no right to complain of individual and social suffering. Yet it would not be difficult, by proper management, in time to overcome the disposition to vilify the functionaries of a reformatory asylum. We suppose the whole system changed by a grand act of legislation, or an experiment made, under high sanction, in one or two new establishments. Let a few men already high in society, at least of known talents and respectability, set an example, by "taking office" under the system. Let liberal salaries, and even honours, be the reward of the high-mindedness which shall determine such men to devote themselves for so immense a public good. Let the King delight to honour such patriotism; and let all sensible men and women of really good society agree to view it as a passport to, instead of a cause of exclusion from, their circles. These moral physicians would come, in more enlightened times, to suffer no more of debasement from the duties of the moral hospitals, in which they practised, than the medical officer now does by his assiduities in a cholera hospital, an infirmary, or a lunatic asylum. Much of the time of the reformators must of course be devoted to the asylum; but so to their respective vocations is the time of well employed professional men, who yet have leisure hours for the pleasures of choicer society, and the solace of the domestic circle. The Archbishop of Dublin has evidently never contemplated this mode of reforming criminals.

But there are yet farther recommendations of an enlightened reformatory system. There is an element in it which will incalculably facilitate its work. It secludes the *young* offender the instant he has by an overt-act manifested criminal tendencies. In calculating the probabilities of the reformation of criminals, we are apt, as the Archbishop has done, to take them as we now find them, deforming the face of moral nature in all the ages and degrees of hardened and all but hopeless depravity. There are criminals, we admit, upon whom even such an asylum would fail to produce satisfactory effects; and it is to be feared that many of the presently existing criminal adults, if once within the walls, must bid adieu to free society. But it is a noble feature of enlightened legislation, that it contemplates the well-being of the race more than that of the existing generation; and listens not to the selfishness which holds all improvement Utopian which our little selves of an hour are too far gone in moral disease and decrepitude to live to enjoy. We are well entitled to expect great results with the young, and to look to a shorter duration of corrective discipline with them than with the more advanced and confirmed. A few years,—for *years* it ought to be, not, as now, to punish a first offence, but to change a criminal character,—will reform all young offenders who are reformable.

If the seclusion of young offenders shall lighten the labours,

and assure the success of a wise reformatory system, there is yet a previous treatment of the young which will greatly diminish the number of the young offenders themselves, and that is the practical moral exercise of INFANT EDUCATION. Into this subject we need not here enter.*

Mendicity, above all in its most deplorable form infant mendicity, should be rigorously put down.

3d, The convict's restoration to society, when he is so far reformed as to be fit for it, is the third requisite of our seclusion system. The sentence on the first conviction for crime should be so extensive, as to justify any length of detention which his character may on trial be found to require:—a sentence of seclusion, for life, for example, unless declared fit for discharge in a shorter period by a named commission in which perfect confidence might be placed. It is plain that the sentence for life would operate nominally in all cases in which it would be expedient to shorten the term, and would give legal power of indefinite detention in dangerous and incurable cases; which, if the first commitment were in youth, would rarely, very rarely, occur. Before it is hastily concluded that this life detention is disproportionate to, perhaps, a first conviction, let it be recollected that the first overt act gives society the right to protect itself against the tendencies by that act manifested, and to seclude the criminal, not in punishment of that act, but for the safety of society, till his moral cure is complete. The present course is to train him on by a series of confinements and discharges, which combine to ripen him for the gibbet, by means of which society protect themselves against *him* certainly very effectually.

4th, The fourth requisite is society's protection against the criminal tendencies of others, in so far as example may operate from the mode of seclusion which we propose to apply, inexorably and without such a thing as pardon, to every convicted criminal, on his or her first offence. Pardon would be as absurd on our system, as pardon of a sick person that he may not go to the hospital, take the medicine, or submit to the surgical operation. Now, we know and acknowledge that our proposed treatment applied to others, will not deter the unfortunate beings of class first from crime. But neither do the gallows, the scourge, the tread-wheel, forced labour, the hulks, and transportation. Double, quadruple, if you will, the severity of these

* See our views on this fundamental and vital preventive of crime, vol. vi. p. 418, and vol. vii. p. 108. See also First Report of Edinburgh Infant School Society, 1832. Incidents are alluded to in that report which furnish proofs of honest restoration of money found, of safety of property of all kinds, of kindness of the children to each other, and of sparing animals and insects when in their power,—not in a few instances, but as the general and ordinary habits of the little community.

inflictions,—re-establish breaking on the wheel, and the furnace, —and their terrors will pass over the reckless heads of these slaves of criminal tendencies like the idle wind. Things, therefore, as to that class, suffer no change by any mitigation, or any aggravation, of punishment. But even as to them there is a vast gain to society on our system. As things are, these dangerous members of society are all *at large*. Our protection is not catching one of the tigers and hanging him up, or shipping him off now and then, while we trust for safety from all the rest who are roaming, to their being sufficiently moved to *will* to abstain from crimes. What sort of protection is this, and who feels safe with it? Who trusts to such motives for his security on the lonely road or in the detached house? Now, we have in our plan almost a certainty of having the whole of class first safe within walls, and under treatment. The first conviction of each entitles society to lay hold of him. He has declared the war, and, by committing the first hostile act, has demonstrated that he has thrown away the scabbard. You trust to his will, we to our walls. You let the menagerie loose, we fence it round with all the force of engineership; and we should go to bed with much more confidence than you possibly can do.

Class second, whom the present penal sanctions no doubt influence, we say confidently, will be equally influenced by our proposed seclusion. However divested of severe inflictions, mere seclusion for an indefinite term of years, complete change of life and status, and social hopes and prospects, are, in any view, enormous—or, if the Archbishop of Dublin likes the term better, most formidable evils to class second. They are not reckless, but calculating, and will be more influenced by the change of condition—the nearly civil annihilation effected by our inexorable system, which misses no criminal, pardons none, favours none, than even by the present more severe but more uncertain punishments. To our penitentiary they know they must go on the first offence; prosecutors will no longer flinch; juries no longer perjure themselves to screen them: to the penitentiary for the first offence they must go, and commence a several years' task of rebuilding a character which they might have kept entire. It would, of course, be matter of trial, but we anticipate that not more of class second than now fall, would do so under our new system.

It will, moreover, be kept in mind, that individuals of class second are just those who, in the nicely-trimmed balance of their characters between good and evil, and their dependence upon circumstances for the preponderance, are the most likely to benefit by the judicious preventive EDUCATIONAL SYSTEM, which we are entitled to assume coexistent, all over the country, with our reformatory asylums. This class are farther ca-

pable of much higher education and intellectual improvement than class first. It has been proved that a great extent of useful knowledge may, at a very cheap rate, be put within the reach of the humble ranks of society. Such pursuits elevate the mind above the mere sensuality that leads to crime: fill up, with these, the time otherwise wasted in idleness and vice, and you will give those juster views of the relations of things, and of causes and consequences in the conduct of life, which form such important elements in prudence and respectability. If class first may, in various degrees, be morally improved within our asylum, class second may be reformed out of it, so as never to require to come within its walls.

We shall be told, by those who hesitate to place confidence in views so violently novel,—so contrary to all preconceived notions on the subject of crimes and punishments, that crime is a wide word; that it includes violence to the person, as well as plunder of the property; maiming and murder, as well as theft and robbery, forging and swindling; that the maimer or murderer is a totally different kind of criminal from the thief, and that what may deter the one will not deter the other: that the thief is a calculator, the murderer the momentary slave of a sudden and often insane impulse. Such a murderer's crime the Americans denominate murder in the second degree. But the murderer in the first degree, who has coolly premeditated and planned his act of blood, is as much a calculator as the robber of a bank, who has laid his plan and watched its operation for a twelvemonth. Such a murderer has time and coolness to calculate all chances and consequences, and our seclusion—in his case decidedly for life—must and will form a considerable element in his formula. If the history of all murderers, in either degree, were inquired into, from their childhood to their exit on the scaffold, we will peril the whole question upon the fact that they will almost all be found to belong to class first. Our own knowledge on this head is by no means limited, and we have seen no exception. In unhappy cerebral development—as proved by the Phrenological Society's large collection—these unfortunate beings all belong to the same too well marked family. Such persons have all manifested a vicious, ferocious, and revengeful childhood and youth, and an intensely selfish, sensual, and turbulent disposition; and have come forth in overt acts of violence and cruelty, long before their final crime of murder. Those sons of violence are as well known, and as ascertainable in their progress to their last act of outrage against the person, as the thieves in their war against property; and require reformatory treatment quite as much; and although the proposition may be new, and therefore startling, we would place the ferocious, vindictive, and cruel, under

treatment in their youth, whenever a conviction of criminal injury is recorded against them. But the plunderers are as five hundred to one of the slayers. Murder is abjured by your adroit thief. It is too clumsy and noisy a mode of transferring property. As a concomitant of robbery, it is now rarely resorted to. It is for the most part the act of mere revenge, or sudden rage, and not seldom of insanity. The murders by maniacs or monomaniacs, whose specific insanity is an uncontrollable appetite to shed blood, being deducted as clearly the acts of irresponsible agents*, there will remain few *some* murderers to be disposed of.

The obvious course with the infant violent and cruel—for the propensity can be dated from the cradle—is to exercise them practically in mildness and mercy, in an intercourse with children of their own age; to wean them from all cruel practices and destructive habits, from doing injury to other children and animals, and from all impulses to break, deface, and destroy †.

When past the age of the infant school, young persons who continue dangerous should be narrowly watched; and the first act of violent or cruel injury should, without partiality, consign the actor to our asylum. This, as in the case of other crimes, is justice and mercy to the individual himself. The real interests of the criminal and the public coincide in nature; it is a false theory which would represent them as opposed. Insane homicides are of course fit subjects for a lunatic asylum; the blood shed by them is as much inevitable calamity, as if it had been shed by a wild beast, or by accident. But society, from ignorance of the incipient and progressive symptoms of insanity are remiss in observing the unhappy victims of this disease, who all exhibit insane tendencies to injure and destroy, long before they actually take life. If our reformatory asylum be a moral hospital, and not a place of artificial infliction, insanity itself may, in its predisposed inmates ‡, be warded off, by its discipline.

We are, therefore, of those who advocate THE ABOLITION OF CAPITAL PUNISHMENT IN ALL CASES WHATEVER. In offences against property, we deny both the right to inflict capital punishment, and the expediency; and, although in crimes against limb and life we may grant the right, we utterly deny the ex-

* See this important subject treated of in our 11th number, vol. iii. page 365; also vi. 611, and vii. 144; and Phren. Trans. p. 355.

† For the beautiful results of this moral training, see Report of the Edinburgh Infant School Society for 1832. To that report we would especially draw the attention of the societies for the prevention of cruelty to animals. Infant Schools, and these alone, will meet their benevolent wishes, and supersede their *present* fruitless labours.

‡ Archbishop Whately's belief that insane persons may be restrained by the fear of punishment, proceeds from the entire mistake of the nature of insanity which yet pervades society.

pediency. Society will gain nothing, but lose much, by its infliction; and ought therefore, in such cases as have resisted all early preventive training, and eluded all subsequent watchfulness and restraint, to be content with seclusion for life of the miserable murderer.

The Solicitor-General of England would punish capitally, as we observed in the outset, such crimes as the individual attacked might have *repelled* by taking life. With deference, we think there is a fallacy here. An individual assailed is urged and justified, by a law of nature, to defend his own life by destroying his assailant; but the relation between society and the criminal is totally different *after* the murder is committed. It can no longer be prevented, the urgency has ceased, and the treatment of the criminal is to be judged of by altogether different views of expediency, on the principles we have been endeavouring to unfold. We may kill even a maniac who would otherwise kill us; but, suppose he triumphs, who would dream of putting him to death for our homicide, because we had a right to kill him when he attacked us?

The Prison Discipline Society, and the Society for the Abolition of Capital Punishments, are both for visiting even murder with a less punishment than death. The Americans, we think erroneously, reserve it for premeditated murder. The humane and profound Beccaria, a century ago, denounced capital punishment *in toto*, and so much shocked an unprepared age, that he concealed his name. The feeling is yet almost all prevalent that murder *deserves* capital punishment, and will never be *prevented* without it. Here are retribution and example again;—the first, we have already shown, disowned in the abstract, and the last inoperative upon maniacs, and upon the sane who would not be sufficiently deterred by the prospect of detention for life in our proposed penitentiary. We trust, therefore, that we may be speedily delivered from witnessing the tremendous spectacle of man putting man to death; that act which none can see without moral deterioration; and of which the *private* perpetration, proposed by Archbishop Whately from the best motives, is, to our own feelings, only an aggravation of the horror which we in vain attempt to banish from our minds when we think of capital punishment.*

Lastly, The last requisite is economy. The present system is any thing but economical. The secondary punishment of transportation is notoriously costly and unproductive; so are

* The writer of this paper thinks the Archbishop right, in holding the Old Testament declaration, "whoso sheddeth man's blood," &c. not binding under the Christian dispensation. It is not *thereon* that he approves capital punishment.

the hulks; and so are all the houses of correction and jails,—the great majority in this country,—which do not, by the labour of the inmates, pay the whole or a part of their own expense. Of course, all this expense, which would be saved, falls to be deducted from that of the general establishment of our proposed reformatory asylums; nay, much of the loss, and it is immense, which society sustains by criminal depredations, will be saved, when the depredators are secluded and taken care of in a distinct society made for them. Some of the American penitentiaries, by the introduction of profitable labour, have more than cleared their own annual expense, and might therefore rear a sinking fund to pay off the original outlay of the buildings. Auburn, in one year, realized 40,000 dollars, besides building 200 additional cells, and erecting a stone shop 150 feet long by 56 broad. What is to hinder this being done with every penitentiary in this country? Glasgow bridewell comes near to it.* There must exist, at present, prisons and bridewells which do contain all convicted, besides all accused, persons. In these places of confinement, according to the Committee of the House of Commons, 122,000 persons accused of crimes, in seven years ending in 1831, were actually confined. † Of these 85,000 were convicted. One-seventh of this number, or about 12,000, was the average amount of the annual convictions. But there would, under our system, be no such amount of *new and distinct individuals*. Under the present wretched system of conviction and reconviction, we may presume that, in these seven years, the same individual, in every case, contributed to swell the catalogue of convictions by repeated appearances. Besides, the average of actual convictions in these last seven years has so immensely increased upon that of the preceding seven years, and still more on the same period antecedent to them, (62,000 and 35,000 respectively), that we cannot help indulging the hope that so vast a social retrogression has some cause which will not operate permanently. But had each offender, when first convicted, been consigned to our asylum, the convictions would have shown a greatly smaller sum, and the number of individual criminals—for that is the consideration in estimating the extent and number of penitentiaries—a

* It has often occurred to us that our soldiers and sailors might be rendered more productive labourers than they are. Both services would even be benefited, if some useful manufacture were established in every barrack and ship of war, at which the men could be easily taught to work for some hours each day when off duty.

† We surely need not guard the reader from the supposition that we mean to include the detained for trial,—the presumed innocent.—in our penitentiary;—to put the yet unproved sick into our hospital. Places of mere detention require their own reforms to prevent injustice and contamination; and trial should speedily follow apprehension.

much more manageable result. The securing, too, of the old offenders, who train the young, would operate most beneficially. The difficulties will of course, as in all reforms, be greatest at first. The present race of adult criminals would prove a heavy load upon our working; but even that is not insuperable; and it is a necessary evil which we must meet, as we would a war, or any other object worthy of a national effort. We should be immense gainers in the end; in less than half a generation—for justice as well as benevolence legislates for posterity—society would reap all the fruit of preventive training and early reformatory treatment which we so confidently anticipate; and then the establishments and the buildings, which may be required by our present circumstances, would be found unnecessarily extensive and numerous.

Such are the views which we would press upon the consideration of the intellectual and moral leaders of public opinion, as likely to solve that baffling problem of criminal legislation, the efficient, at least the reasonable, protection of society from crime. They involve, *first*, the realization,—and that by the nation, for it is hopeless from voluntary philanthropy,—of an *universal* system of preventive education, commenced all but in the cradle, and carried on till useful knowledge and intellectual activity shall improve the character and elevate the pursuits;—*secondly*, The instant and rigid seclusion—the earlier in life the better—of each unfortunate individual, whose disposition to crime is manifested by an overt act, for want, or in spite, of previous preventive education; *thirdly*, The appliance of a course of reformatory treatment to his moral disease, of a sufficient duration to change his habits and give a higher direction to his faculties; and, as is done in lunatic asylums, the detention of the patient until the cure is so far wrought as to render it safe to venture him again in society;—*fourthly*,—and it is an entire novelty in practice, if not in theory,—the application to this cure of moral and not of animal means. Medically, according to our light, we consult the patient's organic and physical constitution, in order to determine the treatment of his disease: with a view to a moral cure we must consult no less the principles of our subject's moral being; and, contented with the safety we enjoy from his secure detention and seclusion, and with the operation of that seclusion, in the way of example, upon those without the walls whose mental and moral condition fits them to be swayed by example at all, we shall provide for him a mode of life so arranged that, without direct or artificial infliction of pain or suffering upon his body, beyond the calm turning of a key upon him when of himself he descends to zero, he may choose his own position between the extreme of solitary privation, and as much of social

comfort and happiness as the necessary evil of detention will permit, which evil itself he shall have it also in his power greatly to abridge. The moment he voluntarily emerges from the lowest part of the scale,—which he must first endure that he may know it, and to which he may afterwards, if he chooses, return—he shall breathe in an atmosphere religious, moral, and intellectual, and be thereby stimulated to improve his own condition, physical and moral ;—and this at one and the same time will diminish the irksomeness of his confinement, elevate his character to self-respect, and fit him essentially for a reputable return to society.

If such views are yet in advance of the age—if we cannot brook the idea of divorcing two things *apparently* so naturally linked together, as crime and retributive and exemplary pain directly inflicted, we have no right to complain of the failure and the suffering, with which the Creator has willed that all attempts to found our institutions upon the inferior propensities shall punish themselves.

Since the foregoing article was in types, we have perused the Reports for 1833 of the Philadelphia Society for alleviating the Miseries of Public Prisons, and of the House of Refuge of Philadelphia. These convey the latest information which has yet come from America. The first of these reports is gratifying, in so far as it is, in its whole spirit and principle, a marked advance upon the Auburns, Weatherfields, and all the penitentiaries, except Mr Livingstone's, to which we have alluded. The improved model described is the State Penitentiary of the Eastern district of Pennsylvania ; and the report states that it has been adopted by the Western Penitentiary, by the prison for the city and county of Philadelphia, by that for the counties of Alleghany and West Chester, and by the state of New Jersey, in virtue of an act of its legislature. The objects of this system are reformation of the criminal, and deterring others from committing crimes. The means are the perfect and total separation of the prisoners, night and day, from the beginning to the end of their confinement, with labour in their solitude ; while the visits of the prison-officers, who are moral, religious, and humane persons, constitute the only relief to the prisoner in his seclusion, and the means of his reformation. The prisoner is taught to read if he requires to be so, and the Bible and well selected books of a library are lent him for his hours of leisure. He is taught a trade if unacquainted with one, the principal being weaving and shoemaking ; but there are also carpenters, blacksmiths, dyers, wheelwrights, &c. He is treated with kind-

ness and encouragement, but firmness, and is never punished with the lash. Neatness and cleanliness are carefully observed, both in the cells and persons of the prisoners,—exercise is regular, diet is plain and nutritive, and clothing and bedding suitably comfortable.

The results have hitherto been satisfactory, and are highly spoken of in the report, as the admiration alike of natives and strangers. No convict discharged has ever returned; either, it is said, from reformation, or dread of the solitude. Health is not injured by the solitude, inasmuch as communication is continual with the prison-officers. No provision, however, seems to be made for the stated visits of the members of an association of benevolent and enlightened persons, to aid the functionaries in lightening the prison solitude, and encouraging the prisoners in the progress of their reformation,—a christian duty, in the exercise of which an unbounded source of usefulness presents itself to both sexes. Occasional visits, however, of benevolent and pious individuals, are mentioned. Many instances of reformation are recorded, and others which prove that the solitary system is an object of terror to those criminals, at least, who have experienced it. Work is eagerly applied for to relieve the irksomeness of solitude. Pardons are, most wisely, granted with so much difficulty, that they are rarely applied for. Lastly, the prison has paid, hitherto, every expense but the officers' salaries, which it is expected in due time also to defray.

Our observation on this system is, that, while it has more of terror in it than we have recommended, it has less chance of producing genuine and lasting reformation,—real improvement of character. If our plan possesses, as we think it does, example enough, to all who are ever swayed by example, the solitude of years is an awful degree of severity. It farther does not present that encouragement to improvement in industry, skill, and character, which what we have called promotion in the prison itself,—namely to society and other advantages,—furnishes. It is too inflictive, too retributive, for those whom we view as unhappy *patients*. But it possesses one essential advantage, namely, that, were it once established, all our higher appliances could be experimentally grafted upon it. We repeat, that the Eastern Pennsylvanian penitentiary is a grand advance in the general system.

The Philadelphian House of Refuge for young offenders, is the most perfect institution of the kind we have ever seen described. It is a place of confinement, and so far is a penitentiary for the young. The magistrate can commit to it, and the friends of the young offender often apply to have him or her admitted. The education and work, however, are not, and could not well be, solitary. The expense is great, and cannot, to any considerable

amount, be defrayed by the apprentice-labour of the inmates. Such an institution we hold invaluable for juvenile offenders discharged from our prisons, as they are *now* constituted; but, as formerly observed, entirely superfluous in addition to penitentiaries upon the plan we have recommended. The objection that the inmates of our present prisons will not be received into honest employments, will be found to apply as little to *our* penitentiaries as to the Philadelphian House of Refuge.

ARTICLE II.

PHRENOLOGY IN CONNEXION WITH THE STUDY OF PHYSIOGNOMY. By J. G. SPURZHEIM, M. D. First American Edition, improved. To which is prefixed, A BIOGRAPHY OF THE AUTHOR, by NABUM CAPEN. Boston: Mash, Capen, and Lyon. 1833.

THIS we consider to be one of the most valuable of Dr Spurzheim's works. To those who aim at becoming practical phrenologists it is calculated to be of the very highest utility; for, by carefully studying the biographical sketches, of which chiefly it consists, with reference to the engravings, familiarity with the characters which accompany particular forms of head may be gained. The introductory chapters also, which explain the points to be attended to in examining heads, are of great value. We therefore congratulate our American friends on their fortune in having presented to them an edition of the work in all respects worthy of the character of the author. It is printed in the same style as that published at London; and the portraits, which we have very carefully and minutely examined—in many instances even measured—are copied with great fidelity. The lithography likewise is unexceptionable. A representation of Dr Spurzheim from a bust (not Macdonald's) is prefixed to the volume, but is not a happy likeness.

Mr Capen's account of Dr Spurzheim's life, which occupies 168 pages, constitutes nearly half of the volume. It is an unpretending, but very accurate and judicious, narrative,—mostly compiled from the Transactions of the Phrenological Society, Chenevix's article on Phrenology in the Foreign Quarterly Review, Dr Follen's Funeral Oration, and our own Journal. It is the most ample biography of Spurzheim which has yet appeared. As many of our readers must be already well acquainted with the greater part of its contents, it seems unnecessary now to advert to them. We shall therefore conclude by quoting an interesting account of Dr Spurzheim's visit to the

Monitorial School at Boston, which Mr Capen extracts from a paper read before the Boston Phrenological Society, by Mr William B. Fowle.

"Soon after the commencement of Dr Spurzheim's lectures in Boston," says Mr Fowle, "understanding that some peculiarities of my school had led him to express a wish to visit it, I desired a gentleman to invite him to visit the school whenever he pleased. He came, October 3d, accompanied by the gentleman before mentioned. It had been previously hinted to the pupils that Dr S. would visit the school, and they having imbibed the notion that he could see farther than their teacher, were by no means at ease, when a very tall, stout man, with an exterior rather forbidding to children, was introduced. The first impression upon the minds of the pupils was unfavourable, but the countenance of the Doctor, which expressed the delight he felt at the sight of so many interesting subjects for the exercise of his skill, soon removed all apprehension.

"The children were engaged at their desks in a variety of exercises, and I requested him to walk freely among them, remarking that he probably did not wish to see any exhibition of their acquirements. This I said, because I wished him, if he gave any opinions, to do it while entirely unacquainted with the points of excellence which would naturally be developed by any exhibition.

"I had just corrected some pieces of composition, and I remarked to him that one short piece seemed to have such a phrenological bearing that it might amuse him. He read it, and said he should like to see the child that wrote it. I told him where she sat, and we carelessly walked in that direction. Before we reached her, 'Ah,' said he, '*caution.*' 'Ask her,' said he, 'whether she ever heard any discussion upon the points touched in her theme.' I asked the question, and she, blushing deeply, replied, that she never had heard any one speak on the subject. 'Well, my dear,' said he, 'you have not given your *own* opinion; to which side of the question do you incline?' She hesitated, and he turned to me and said, '*Caution* will take time to consider.' She then gave her opinion with great modesty, and it happened to favour his view of the subject. 'A fine head,' said he to me, 'a fine head. What Conscientiousness! and then what Firmness! A fine model of what a female head should be.'

"Caution is characteristic of this young female, who was then about fourteen years old. She is almost timid. Her talents are not so brilliant as those of some other pupils, but her perseverance, which I take to be the product of her Firmness, has always enabled her to rise above common pupils, and to rank with the best. With a perfect knowledge of her character, having

had her under my care seven years, I could not have described her peculiar excellencies as readily as he did.

"As we turned to proceed back to my desk, he laid his hand upon the head of a little girl about five years old. 'Fun, fun,' said he, and laughed. 'Courage too,' said he; 'look out for her pranks.' The child had only been my pupil three or four days, but she had already exhibited symptoms of insubordination. A few months more experience proved her playful to excess, and so courageous in the pursuit of fun, that she disregarded the restraints I usually impose upon insubordination and inattention.

"The Doctor's attention was called to a child about ten years of age, to whom I had found it almost impossible to communicate instruction of any kind, and who seemed to have no memory. He playfully touched her head, and said there was no deficiency of external development, but he should think her mental powers sluggish. She will never commit any thing to memory, said he, but will perhaps learn something from those around her. I then told him her case, but he did not modify his opinion as to the external development. I thought this a paradox, but I was afterwards informed that the intellect was bright until the age of three or four years, when a dangerous tumour on the head was checked by powerful applications, which seriously affected the activity of the mind. He recommended exercise, and almost exclusive attention to her physical education.

"He next cast his eye upon one of the group that surrounded him, and said she had *Form* to a great degree. 'O,' said he, 'if she would only cultivate this power, what could she not do? But,' added he to me, 'she probably never will. Her constitution is bad—too lymphatic. She lacks energy, and nothing but frequent and powerful exercise will ever reform her temperament. O,' said he again, 'how strong!' It is true that her skill in drawing, printing, and writing, is very great, and it is as true that all her movements are very sluggish.

"The attention of Dr S. was now rivetted upon a child about twelve years old, whose head exhibited an extraordinary frontal development. I asked what he thought of her. 'Remarkable, remarkable,' said he, 'for the second education.' I did not understand him, and asked an explanation. 'I think,' said he, 'education consists of two parts; the first relates chiefly to the receiving of ideas, and the second to giving them out. She may not excel in the first part; but when it comes to the second, she will take a high rank.'

"Still he was not particular enough. He then at last said she might not excel in writing, spelling, and such elementary exercises, but, when a little older, would in astronomy, natural philosophy, and subjects of that nature. He did not think she

was inferior to most children in other respects, but her strength lay not there.

“ Her history is this. It is my custom in winter to employ the afternoons in giving lessons to the older pupils in natural philosophy, accompanied by experiments with the valuable apparatus belonging to the school. As the experiments are amusing, I have been accustomed to let the younger pupils attend as spectators, without expecting them to study the subject of the lesson. This child, then ten years old, asked permission to attend as a spectator. Her request was granted, and the next day she asked if she might recite the lessons with the class; for I always required the class to answer not only the questions in their text-book, but also such others as I thought might fairly be asked. The request was novel; but as I never check any ambition of this sort, without first ascertaining that it is unreasonable, I allowed her to join the class, although so much their junior. As the attendance in the afternoon was voluntary, my regular duties ending with the forenoon, I proposed a prize of two dollars to whichever, at the end of the course, should have recited best, and should undergo the best general review. At the end of the season, it appeared that she had recited as well as any one in the class. Next came the review. I prepared twenty-five questions different from any that had been previously asked, and put them all to each of the thirty-two pupils that belonged to the class. Ten did not mistake. I then proposed five more difficult questions to these ten, and she alone answered them all correctly. Still thinking it possible that she might have obtained the knowledge from some other source than reflection, I gave her a further review, till I was satisfied that she had understood the principles, and was at no difficulty to apply them. She took the prize, and what is creditable to her class, it would have been difficult to say which was most pleased, the victor or the vanquished.

“ I next called up a little girl, whom he pronounced quick at figures. She is the quickest I have ever seen in the elements of arithmetic. I then called up the head and foot of a class formed of three or four classes that I had been reviewing, and asked him which was the best arithmetician. He instantly pointed her out, but said ‘ the other was not deficient.’ She was not, when compared with the classes below her.

“ By this time the curiosity of the pupils was so much excited, that all regular work was interrupted. Children that had been called remained standing around the Doctor, and in a short time others joined him, and he had an audience of twenty or thirty. He was a decided favourite. At this moment, a few of the larger pupils brought forward a Miss about thirteen years old, who had, as they thought, a very small head, and respect-

fully requested Dr S. to tell what her head was good for. He turned to me and said, 'Imitation, oh how full!' I asked him how it would be likely to show itself. 'In mimicry,' said he, 'as likely as in any way. Is she not a great mimic?' I had never suspected her of any such disposition, and turning to her companions, I asked them if they had ever seen her attempt to mimic any one. 'O, sir,' said they, 'she is the greatest mimic you ever saw. She takes every body off.' This was news to me. 'You may rely upon it,' said Dr S. 'she will be taking me and my foreign accent off before I leave the room.'

"About fifteen minutes afterwards, he joggled my elbow, and pointed behind him, where I saw this Miss putting her hand upon the head of her companions in the very peculiar manner of Dr S. and saying in his accent, 'You, Miss, have the bump of so and so, and you, Miss, have the bump of so and so.' He laughed heartily at the verification of his prediction. He said she had Courage, much Self-esteem, and little Caution, and must be guarded, or her Imitation would be inconvenient to her.

"I have mentioned some of the most prominent cases that fell under the Doctor's observation. He pointed out one pupil as having the organ of Language largely developed, and she is certainly distinguished for one of her age. I called up several whose *forte* I had not been able satisfactorily to discover, and he generally pronounced that they had none.

"His visit lasted only two hours, and he left the school much to the regret of the pupils, to whom his easy manners, benevolent advice, and knowledge of their thoughts, had strongly recommended him. Next day, they requested me to beg him to honour them with another visit. He promised to do so, but his engagements prevented."

ARTICLE III.

SOME ACCOUNT OF THE GANG-MURDERERS OF CENTRAL INDIA, COMMONLY CALLED THUGS; ACCOMPANYING THE SKULLS OF SEVEN OF THEM. By HENRY HARPUR SPRY, Esq. Bengal Medical Service, Saugor.

THE skulls I have the pleasure of forwarding for the Phrenological Society, through the kind favour of Mr Swinton, were taken from among a party of one hundred criminals executed at Saugor, in Central India, by order of the Supreme Government, in the months of June and July 1832, for thuggee or strangling.

Unacquainted as most in Europe must be with the practices of the thugs, I purpose entering into a short history of the class

generally, and into a more detailed account of those individuals whose skulls accompany this paper. The thugs or stranglers are composed of Hindoos and Mahomedans, who make murdering their fellow creatures the business of their lives. These wretches are considered to have appeared in India with the first Mahomedan conquerors, and they are distinctly ascertained to have existed in great numbers in the reign of Akbur the Great ; no less than five hundred prisoners being executed in one province by order of that Emperor. They are for the most part brought up from infancy to regard thuggee as their calling, and they set about it with the callous indifference incidental to such an impression. Caste, that barrier to intellectual innovation, has for them the same charms it has for the rest of their brethren. Indeed, the stupid adherence of all classes to the habits and customs of their forefathers must be seen to be believed ; and I really am disposed to think many boys go on the roads as thugs, because their fathers did, and not from any inherent ferocity of disposition. As, however, the men whose skulls I send herewith were notorious characters during their lifetime, it is more than probable they had a natural inclination for the work of death. I think that, on examination, the development will be found to justify such a conclusion.

The thugs put an implicit confidence in omens. Among them the partridge*, the shama, the deer, the jackall, the jack-ass, &c. are either good or bad omens ; and again, the same animal or bird appearing or calling on the right hand or the left constitutes it a good or bad omen. They leave their homes in bands at the end of the rainy season, and direct their steps to their high priest or gooroo, generally an old thug (no matter whether Hindoo or Mussulman), who has retired from the trade, and lives upon the contributions of his descendants or disciples, who look up to him with great reverence for advice and instruction, and to whose decision they bend in all cases of doubt or dispute. On this old man they confer presents. They have a *kodalee* or pickaxe, consecrated by solemn religious rites, which they carry with them. The bearer of this sacred *kodalee* is considered to fill a post of high honour : one of the many virtues ascribed to it is, that it can prevent the spirits of the murdered rising from the graves which are dug with it. All oaths of the members of the gang are administered upon this instrument.

Having performed the ceremonies of consecration, they proceed to rendezvous at some place previously fixed on, where the gangs make their final arrangements for the season, such as fixing on

* So attached are they to the partridge that they keep them in cages, and when a thug is brought in a prisoner he prays to be allowed to keep his partridge

their private signals, and so on. Before breaking into parties or gangs, they muster between three and four hundred strong. Without some explanation, it might appear strange that so large a body of men, when collected, should not arouse suspicion. The fact is, that, during the Pindaree power in Central India, marauders of every description were abroad; travellers were consequently obliged to go in large parties, and the thugs could, under the same pretence, assemble in equally large bands. Since the conclusion of the Mahratta war, the attention of the Supreme Government has not, until lately, been particularly directed to the suppression of these monsters; and the fear of the thugs has still induced travellers to go in company,—thus unintentionally prolonging the thug system, and, as Shakspeare beautifully has it,

— “ What they undid, did.”

Their homes are situated in the Bhopaul, Oude, Gwalior, and Bundelkund states, as well as in the Company's possessions in the Doab; and the directions they take are the three great thoroughfares of the Deccan, Scindias, and Holkar's country, down to the sea and the Delhi country. They remain out, infesting the roads, for eight months every year, or till they obtain some valuable booty, when each man generally betakes himself to his own home, and passes the remainder of the year ostensibly in cultivating the ground. Nearly all are married, and their wives conduct their household affairs during their absence, and take charge of the jewels and other property brought or sent home by them. On the road the person of a Brahmin is no longer held sacred, and to kill him is considered no greater sin than the murder of another. Indeed, a large number of thugs are Brahmins.

Wholesale dealers in human blood as these vagabonds are, it is not to be wondered at, that, while abroad, they indulge in every carnal propensity; and it has happened more than once that a gang has split from the leaders, quarrelling about a favourite. A knowledge of these practices coming to their wives' ears, they sometimes leave their husbands and go off with other men. When they are once fairly on the roads, they never shave or eat *pawn* till they have killed their first traveller. It is an invariable rule with them never to rob travellers till they have first strangled them; and it is really wonderful to observe how trifling the object of temptation sometimes is which induces them to commit the crime. Two Brahmins were murdered by a gang of forty thugs, and the only booty shared by them was two brass pots and a dish. Careful distinctions are drawn between those fit to throw the *angocha* (or handkerchief used in strangling) and those who are only aspirants; the latter, for the first few expe-

ditions are not considered sufficiently hardened to witness the strangling of the victims, and are employed therefore as grave-diggers and scouts, and in the performance of other subordinate and menial duties. The former are called "Bhurtotes," and the latter "Shumseeahs." In each gang there are two or three smooth-spoken men, who are usually deputed to join the ill-fated travellers. Dirgpaul was one. They generally contrive in the space of a short time to lull the suspicions of the most cautious, and by degrees to introduce the rest of the gang: at this time, if some fortuitous circumstance favour their purpose, a grand repast is proposed, and the expense readily borne by the thugs; after dinner, some two or three will play the guitar, the rest of the party sitting round smoking and talking. Having by this means lulled all suspicion, the private signal is given, the fatal cloth is thrown round the neck, and in the moment of hilarity and apparent security, the helpless travellers are strangled, unpitied and unheard. One man throws the handkerchief, while two hold the hands; and it is not unusual, if a victim is more restive than ordinary, to give him a kick below, which immediately knocks him prostrate, and the work of death is completed. The bodies are now cast into the graves prepared to receive them; and the gang, having collected the booty, generally decamp. The beds of rivulets are often selected as sites for the graves, but not always. Sometimes they bury the bodies in mango groves, or under large tamarind or burr trees; and the accuracy with which these men will, after a lapse of several years, point out the spot where the murdered bodies are laid, is truly astonishing.

As if to mock and ridicule the solemn institutions of man, these wretches affect to have a presiding deity over them. On their return from their murderous expeditions, they conceive it necessary to propitiate the goddess Bhowanee*, whom they regard as the arbitress of their destinies, and whose mercenary and crafty priesthood, ever ready to minister to the weaknesses and superstitions of her followers, do not scruple to lend themselves to the vices of these wretches, and wink at their horrible deeds. It is well known that these priests give information to the thugs of the movements of travellers, and the despatch of treasure. They suggest expeditions, and promise the murderers, in the name of their goddess, immunity and wealth, provided a due share of the guilty spoil be offered up at her shrine. If they die by the sword, in the exercise, with her sanction, of their murderous vocation, she promises them paradise, with all its most exquisite delights. Bhowance's temple at Bindachurun, a few

* This goddess is also worshipped under the name of Deves Doorga, and Kallee. She is considered to preside over smallpox, cholera, and all other pestilential diseases.

miles west of Mirzapore, on the Ganges, is constantly filled with murderers from every quarter of India, who go thither to offer up in person a share of their ill-gotten wealth.

It seems strange that the Mahomedan thugs should put faith in the attributes of Bhowanee; but all who enter on thuggee appear to embrace the Hindoo creed so far; and indeed every Mussulman, when cholera or smallpox is raging, thinks proper to stop and pay his devotions on passing Bhowanee's temple.

What has here been said of the ministers of Bhowanee, applies, I am sorry to say, equally to the whole Hindoo priesthood of India; and, before closing these general remarks, I cannot refrain from quoting the words of the Abbé Dubois, a man most competent to give an opinion. What he said of them fifty years ago is equally applicable at the present day. He says, "That, when they find themselves involved in trouble, there is no falsehood or perjury which they will not employ for the purpose of extricating themselves. Nor is this to be wondered at, since they are not ashamed to declare openly, that untruth and false swearing are virtuous and meritorious deeds, when they tend to their own advantage. When such horrible morality is taught by the theologians of India, is it to be wondered at that falsehood should be so predominant among the people?" How little astonishing is it, then, that we find a class of fellow creatures, like the thugs, so sunk in the depths of infamy, when the people are led by such unprincipled teachers!

To conclude. The thug character appears made up of inconsistencies. I have seen them alive to the most tender feelings of human nature,—agitated at the mention of a wife or brother's danger; yet, on the roads, their hearts may be said to be as hard as adamant. No appeal, however moving—no recollection, however grateful—arrests their merciless grasp; and the cries of the infant at the breast, and of the fond and doating parent, are equally disregarded.

SOME ACCOUNT OF THE INDIVIDUAL THUGS WHOSE SKULLS HAVE BEEN PRESENTED TO THE PHRENOLOGICAL SOCIETY.

1. *Dirgpaul, Brahmin, son of Newul, Brahmin.*—This man, from his great daring and success, was distinguished among the thugs by the title of *Subahdar*. His ancestors have been thugs for many generations, and his brother Luchman is a thug leader. It is necessary to premise, that the murders herein mentioned are not a tithe of the scenes these men have been engaged in; but only those of which the evidence is officially recorded in the Government office, as taken before Captain Sleeman, the po-

ritical officer at Saugor, to whose indefatigable zeal in suppressing the thugs the Government owes so much.

The first affair at which Dirgpaul figures is in the year 1817, at the murder of a pundit at Selodha, a village north-west of Saugor one march. The body of the pundit, with those of some others in the same grave, was disinterred by Captain Sleeman. He was next concerned in the murder of fourteen shopkeepers at Seronge, and got 2000 rupees, about equivalent to L. 180 Sterling. The day after, seventeen Rohillas, marching through this part of the country, fell in with the gang, and were likewise strangled by Dirgpaul and his party.

In 1821, he was concerned in the murder of four police guards, at a place called Bhanpore; the bodies were buried in a rivulet. The following day, a native officer of Holkar's army, with four troopers, came up, and they also were strangled, and the bodies buried under mango trees. Four days subsequent to these murders, they fell in with a Nawaub, whose name was Amber Khan, and his wife and ten soldiers, all of whom were murdered by this gang. Just as they had completed their work, eleven *cowhattees**, or carriers of Ganges water, came up, who, suspecting what they had been about, let out a hint of the kind. The consequence was, that the gang of thugs fell on them also, and the whole party were strangled. Their bodies were buried in some empty houses close by; and the bones of these twenty-three unfortunate victims have lately been dug up by Captain Sleeman's people, and an inquest held on them by the native local authorities.

In 1823 he was a principal in the murder of eleven men, one woman, and one girl, in all thirteen, on their way from Poona towards Indore. The gang of thugs amounted to 150. Dirgpaul was the man who cajoled the party, and persuaded them to march in company with them. The booty on this occasion was 1000 rupees.

After halting a day at this place of murder, they were joined by more treasure-bearers, travelling with four ponies. In a sequestered spot, at mid-day, the whole were murdered, and the bodies thrown into the jungle. The treasure found on them amounted to 25,000 rupees (L. 2400.)

The last act recorded of Dirgpaul was the murder of a native officer of rank, in the service of the Queen of Oodipore, called Loll Singh, of his wife, a female servant, and six men followers. The thugs mustered 250 strong, 50 of whom were under the command of Dirgpaul, who was the principal man in concerting the murders with another notorious leader. The subahdar Loll

* So sacred is the muddy Ganges water held throughout India, that hundreds of people are annually employed in carrying it over the country. All Hindoos are sworn on the water of the "sacred Ganges" in our courts of justice.

Singh rode a mare, and his wife was nursing an infant boy. The thugs kept in company with the travellers for some days, and, by one of the leaders riding a horse whose tail was docked, they persuaded the subahidar that they were sepoy, and that the rider got the horse from his European officer. Having intoxicated him with opium and stramonium, the thugs fell on him and his companions a little after dusk, and the whole were killed, with the exception of the infant, whom Dirgpaul kept and adopted. This child was brought in with the prisoner, and a fine little fellow he is. He is now being educated at the Saugor Government School, at the expense of government.

This man had a singular leer on his countenance: when he was under trial for his life, and, subsequently, when sentence of death was being passed on him, it did not forsake him; and, with his little wooden spindle twisting cotton, he affected a carelessness, at once unnatural and indecent. He was executed with twenty-nine others, on the morning of the 30th June 1832; and though his *courage* was great, his *caution* prevented him from being too precipitate. Six carts conveyed them to the place of execution, which was outside the town of Saugor, about a mile and a half from the jail. The gibbets were erected temporarily, and formed three sides of a square. The posts supporting the cross-poles were fixed into stone walls, about five feet high, and, from the edge of one stone wall to the other, a beam was placed for the wretched men to stand on after ascending the ladders. The nooses were all ready, hanging from the cross-beams, and each man as he landed on the platform selected his rope. Considering it an everlasting disgrace to their names to die by the hands of the common hangman, the condemned thugs no sooner take hold of the halter, than they push their heads into the noose, and, with loud shouts and cheers, adjust the knot behind the ear, jump off, and launch themselves into eternity! The beam against which the ladders are resting, is the platform on which they stand, and which is withdrawn; but the men are all off swinging before this can be done. Dirgpaul waited to see nearly all his companions off, and I well remember the last look he took of them before he swung himself from the fatal beam.

2. *Gunga Bishun, jemadar, son of Doorga Pershad, Brahmin.*
 —This man was a Brahmin. On being brought in, he denied being a thug, but acknowledged he had served Beharee Loll, the banker, in recovering a part of his lost treasure; something in the manner, I suppose, in which the members of the notorious *bone shops* in London act between the robbers and the robbed. Feringia, one of the approvers, states that Gunga Bishun was considered a very skilful thug, and was a man whom the thugs em-

ployed to inveigle travellers, and induce them to join their party. It was this man who first inveigled the subahdar Loll Singh, whose murder is related in Dirgpaul's case, (No. 1.) "He had great influence over Sepoys," one of the informers said, "and could always bring them to their destruction."

He was at the murder of thirteen treasure carriers, at a place called Choupara. The following is the deposition of Chotee Brahmin, a notorious thug leader, admitted as King's evidence, as taken before Captain Sleeman, September 23. 1831.

"About seven or eight years ago, I left my home on an expedition to the south-west, with six leaders and their followers. We proceeded to Aseerghur, where we fell in with Dirgpaul (No. 1.), now in Saugor jail, with his gang of twenty-five thugs. We joined, and proceeded together to Borhampore, and thence to Hydalabad, where we met Makun Jemadar (who has since been hung at Indore) with 150 followers. We joined them, and proceeded on to Aurungabad, in the Deccan, where we halted two days, and then proceeded on the Poona road to the river Gunga Gadowlee. We proceeded on to a village called Chalagou, and, on leaving it for Dollea, we fell in with six men, escorting treasure to Ojeyn on two ponies, and two ponies unladen. We came on with them to Dorea, but they suspected us, and would not move till they found an escort proceeding with a family towards Ojeyn. We found at Dhoreea eleven Marwarrees, or men from Marwar, on their way to Jyepore, and they were soon persuaded to join us by Dirgpaul (No. 1.), and the treasure-bearers were left behind. We left Dhoreea and proceeded on, twenty-five miles, to Amneyra, where we halted on the bank of a river. About nine o'clock at night they were all strangled, and buried on the bank; and we found on them 1000 rupees. We halted at this place a day, and fell in with fourteen more Marwarrees, on their way from Poonah to Ojeyn, with four ponies, two loaded with gold, and the other two with brass boxes. Some of us moved before and some behind them. About fifteen miles from the former place of murder, near the Tapy River, we strangled all the fourteen at mid-day, and threw the bodies into the jungle. The treasure amounted to 25,000 rupees (L. 2400). The brass-boxes we buried in the bank. At night twelve of the party returned and buried the bodies."

Gunga Bishun was concerned in the murder of a Calcutta carrier, who had brought a parcel of books to Mhow; also in the murder of a havildar (sergeant) and four sepoy, at Koon-dee, in June 1829, on their way to their homes. He was a principal concerned in the following murders. "Deposition of Imamee, approver, taken August 2. 1831. One year and half ago, two shopkeepers, on their way to Saugor, halted at a

well near the village of Deshuttee, and about a gun-shot from a grove, in which a gang of thugs, of whom I was one, were encamped. Ram Buksh and Munneeraw went to the well, and prevailed upon them to join us. We started at midnight; and, at a stream about four miles from Deshuttee, to the east, they were strangled, and their bodies buried in the bed of the stream. We got from them bundles of tinsels, and each shared nine bundles and seven rupees. Also a pony, which Durreecan got and afterwards sold."

The following is the evidence of the father of one of the victims:—

"Deposition of Dameedut Brahmin, from Guzcrat, taken August 18. 1881.—I have been for the last ten or twelve years settled at the village of Omuyta, one stage north of Baroda. Many years after my settlement, Mehesur, the husband of my daughter, came on a visit, and remained with me three years. He, during this time, went to Surat, and there purchased various kinds of lace and silver, to the amount of 450 rupees, to sell at Saugor. About fifteen months ago he left me with Jyphal Brahmin of Omuyta for Saugor. Hearing nothing from them for three months, I wrote to my son Kirpa Suntuṛ at Saugor, who informed me that nothing had been heard of them. I soon after came off in search of them, but found traces no further than Dunno, one stage on this side of Baroda. I came on four stages farther, towards Oodipore, but discovering no traces, returned to Omuyta. Some months after, I came off to visit my family at Saugor; and, hearing a proclamation about two men killed by thugs, with gold and silver lace, I came to inquire, and found that the two men killed at Deshuttee were my son-in-law and Jyphal. My son had a bay pony." The tears flowed down the old man's cheeks while he listened to the detail given of the murder of his son-in-law by Imamee.

Another deposition, of Chotee Jemadar, regarding this man, is as follows:—

"In the month of October last year (1830), I left home with two or three thugs, on an expedition towards Kotah. At Sakheree we met Fouj Khan Jemadar with fifteen thugs, and we proceeded together towards Jypore. At Chorsoo we found Bechoo Jemadar with sixty thugs, all from the Company's territories in the Dooab. They were encamped on the bank of a tank with seven travellers (sepoys) on their way from Ajmere to their homes, whom Bechoo and his gang had persuaded to join. From this ground Kutman, one of Bechoo's party, was sent on to select a place to murder the sepoy, and he fixed on the bed of a rivulet, about three miles distant from Charsoo. We all left our ground about midnight, and when we reached the bed of the river, the signal was given, and the seven sepoy were strangled. 300 rupees shared."

Proceeding on, they killed three people at Bera, and shared 200 rupees.

At Salsont, four travellers were strangled at a fakeer's hut. The fakeer was sent into the village to purchase food, and during his absence the murders were committed. 400 rupees in money, and 100 rupees' worth of property, shared.

At Kaleeghatee, five Rajpoots were strangled under a burr-tree. 125 rupees and two swords shared.

At Secundra four travellers were strangled, and the bodies buried in the bed of a rivulet. 125 rupees found upon them. "We sent back, three days afterwards," continues the deponent, "to ascertain how the graves were looking, and we found the wild beasts had torn the bodies up, and the villagers had seen them."

Gunga Bishun was one of a gang at the murder of some sepoy's at Dhar. There were ten of them on their way to their homes on furlough. Duneew, an approver, states: "We encamped in the grove, outside the town. We made acquaintance with them during the day, and five of the ten were persuaded to come and sleep with us. We started on the road towards Mhow, about midnight, and, at a rivulet about two miles from Dhar, near some tamarind trees, strangled the five. I was employed to bury the bodies. We got 500 rupees booty. We went on towards the Mhow cantonments, and a little distance from the place we separated into two parties; one went into the cantonment-bazar, and the other passed outside. The five sepoy's, whom we could not persuade to join us, came up, and recognised us, and reporting the circumstance to the officer commanding, the party was seized, and sent to the Resident at Indore (Mr Wellesley); but he, not deeming the proof against them sufficient, liberated them."

The last act of this murderer I have to record is the strangling a pundit and a sepoy at another village, called Deahuttee, in 1828.

3. *Soopher Sing*, alias *Khan Mahomed*, alias *Bujoo*.—On being brought in, he denied being a thug. Is a resident of Gwalior. Punna, an approver, says he is the son of Odeyt Thug, and is a thug by trade. Kallecan Singh, another approver, says the prisoner is a jemadar, or leader of thugs; that he was once a Rajpoot, but is now a Mussulman.

The first mention I find made of this man is at the murder of a pundit, in the year 1817, with Dirgpaul (No. 1.), near Saugor, and, a short time after, of sixteen treasure carriers, a few miles from the town of Reylee, in the Saugor territories. He was one who helped to strangle them. The gang amounted to 108 men, and each man shared 100 rupees in money, besides corals and other things.

Soopher Singh was the leader of fifty thugs in the murder of the subahdar Loll Singh, before alluded to; of the eight thugs who threw the strangling cord this man was one.

This man was with Gunga Bishun (No. 2.) at the murder of the Calcutta Chaprassee in 1829, near the cantonments of Mhow. They got from the unfortunate man eighteen rupees, a pony, and the brass plate he wore. The latter was found upon Soopher Singh. He was present likewise at the murder of the havildar and four companions, which took place six days afterwards, at Koondée, in the Kotah territory. In this last murder the thugs shared 1500 rupees among them. He was engaged in the murder of a pundit, and a Brahmin at Deshuttee, in 1828-29. He was also one of the gang who strangled Amber Khan, (a connexion of the Nawaub Jaffier Khan) with his family, at Joura, and afterwards twelve Ganges water-carriers, the bodies of whom were buried in some empty houses, and subsequently dug up, as mentioned in the case of Dirgpaul (No. 1.)

In 1828, he was leader of a gang of thugs in Candeish, and fell in with nine persons going towards Jypore with pearls and gold. Thirty thugs followed these people for three days, without having an opportunity of murdering them. On reaching the village of Dhoree, they strangled eight out of the nine; one escaped, and gave the alarm to the neighbouring police-guard, and seventeen thugs were caught. Out of these, five were hung, four released, and eight transported. The pearls, according to the merchants to whom they belonged, were of the value of 72,322 rupees (L. 7000); and, besides the pearls, the people had treasure in gold mohurs and Venetian ducats.

Sooper Singh was a principal concerned in the murder of a risaldar, a woman, and fourteen companions, at Chapara, on their way from Hydrabad. Each thug shared seventeen rupees. Four poor travellers came up before the murders were completed, and, to prevent them communicating what they saw, they were also strangled; thus making twenty in all. Two of the poor men were going one way, and two another. They did not reach the spot together. "The two that came up first," the informer goes on to say, "we made to sit down; when we had murdered the risaldar and his companions, and when the second two came to the top of the pass, at the foot of which we were, our people persuaded them we had had a dispute, and induced them to descend, which at first they were unwilling to do. When the leaders came up from the murders they were then engaged in, they insisted on strangling these four poor men, who submitted in silence to their doom."

4. *Hosein Alee Khan, alias Hosein Yar Khan.*—Hosein Alee was a Mussulman, and all the informers agree in saying, his forefathers have been thugs for many generations.

This man was a principal in the murder of the Nawaub Amber Khan, in which Dirgpaul (No. 1.) and Soopher Singh (No. 3.) were concerned, and of the twelve Ganges water-carriers. He was also concerned in the murder of the Calcutta Chaprassee, and a few days after of the havildar and four companions at Kondee, as described in Soopher Singh's case (No. 3.)

He was a principal concerned in the Chourahete affair. About ten years ago a brazier of Gurrawara, in the Nerbudda territory, was on his way to Hoshingabad, with a daughter about seven years of age, his wife, his wife's brother, and his own brother. The gang inveigled the party to join them, and they proceeded towards Hoshingabad; but in the jungle, about one coss from the village, and between that and Chourahete, at twelve o'clock in the day, they were all strangled, and the bodies buried near the place. They got about forty brass utensils of different sorts, and two bullocks. The bullocks they let go, but they were subsequently found in the jungle, and brought to Major Macpherson, then in civil charge of the Jubbalpore district. The bodies were dug up by the wild beasts.

This man Hosein Alee was a leader in the Beseynee gang, by whom eleven persons were murdered on their return home from Nagpore. Of the eleven there were two girls, to whom the thugs became attached, and they marched in company together from Nagpore as far as Jubbalpore. Here suspicion falling on them, the whole were searched, and the gold and silver ornaments observed on the girls, which the thugs had not before seen, induced them to determine on killing them. The party left Jubbalpore the following day, and proceeded on some forty miles. On the banks of a rivulet the thugs fell on them and murdered the whole. The bodies were concealed under stones, the ground being too hard to dig deep. They got 1000 rupees worth of gold and silver ornaments, and some other property.

5. *Keramut Khan*, alias *Kurreeem Khan*.—Keramut Khan was the son of Asalut Khan, and was a Mussulman. He was well known to the approvers as a thug by trade, and the family have been thugs for many generations. He was with his father in the murder of some treasure-carriers belonging to a rich banker called Dhunraj Leth, the particulars of which are given in depositions so similar to those already quoted, that it is unnecessary to do more than allude to them.

This man was moreover concerned in the murders of Amber Khan, a relation of the Nawaub of Jowra, with his followers, and afterwards twelve Ganges water-carriers, as detailed in Dirgpaul's (No. 1.) case. He was also a party concerned in the murder of the brazier about seven years ago, near Chourahete, with his wife and daughter, his wife's brother, and his own

brother, as detailed in Hosein Alee's case (No. 4.) A short time before these murders, the leaders quarrelled about three catamites, when they divided and took separate roads.

6. *Buksha, Mussulman, Jemadar of Thugs.*—Buksha was not executed. He died during confinement in the Saugor jail, and was never sentenced.

When he was first brought in, he acknowledged being a thug formerly, but stated he had left off the trade for ten years.

An approver named Punna, states he joined this man's gang of thugs about fifteen years ago, and proceeded to a town between Saugor and Jubbulpore, where, falling in with another gang, he left Buksha, who went on an independent expedition. Motee, a notorious thug (since hung), states this man was concerned in the murders of six men with treasure in 1830, in the Punna States of Bundelkund, and 8000 rupees were found on them. Gunga, an approver, says Buksha is a thug, and has no other trade.

This man was engaged in the murders of five men from Bombay (a serjeant and four sepoy), at the village of Golgunge, about sixty miles from Saugor. He had thirty followers with him, and the umbrella of the havildar was brought into court. A few hours after the murders had been committed, Lieutenant Wintle, adjutant 71st Regiment, N. I., came up and saw the murdered bodies lying in the jungle.

Doulut, the approver, who was sent to seize him with a guard, states, "We seized Buksha as he was leaving his house to run for the hills. I used to go on thuggee with him, and, among a thousand thugs, he is the most celebrated. I have been with him for eight years." Buksha was notorious among the thugs for his bravery, and it is said he would attack a horseman single-handed and strangle him. Many other murders are mentioned, but the particulars are not recorded.

7. *Golab Khan, alias Bussola, son of Meeah Khan.*—This man is a Mussulman, and is the adopted son of Dhurum Khan, a scoundrel who was a native officer at the Mynpooree jail, and, under pretence of going to catch thugs, headed a large gang himself, and travelled over the country with impunity, by virtue of the writ he possessed from the Mynporee magistrate. He was concerned in the murder of fourteen goseins (religious mendicants) nineteen years ago. He is notorious among all the thugs, and the approvers say he strangles a man by himself, and has done it often.

He was one of the Burwahaghat gang who murdered the camel-men in Dhunraj the banker's affair detailed in Keramut Khan's (No. 5.) history. He was also with the Akala gang in

1827, when the Subahdar Loll Singh and his family were murdered, as detailed in Dirgpaul's (No. 1.) history.

He was with the gang who murdered Amber Khan with his companions, and subsequently twelve Ganges water-carriers, as detailed in Dirgpaul's (No. 1.) history, and was again with Dirgpaul at the murder of a havildar and four companions, in the year 1826.

Several other expeditions are mentioned by the approvers, in which this man was concerned, but the particulars are not recorded.

For a great deal of the matter contained in the foregoing paper, I am indebted to the excellent report of F. C. Smith, Esq. the Governor-General's agent on the Nerbudda, and to the valuable evidence of the habits and customs of these people, recorded by Captain Sleeman, political officer at Saugor, who has been specially deputed by Lord Bentinck, to devote his time in effecting their extermination.

The zealous exertions of these two gentlemen, in this cause of humanity, are beyond all praise.

H. H. SPRY.

REMARKS ON THE SKULLS AND CHARACTER OF THE THUGS. BY MR ROBERT COX.

The Scotch phrenologists are certainly much indebted to Dr Spry for his luminous and interesting account of this extraordinary race of men, and for the pains which he has taken in preparing the skulls of seven of the executed criminals.* It may be useful to offer a few remarks on these skulls, and to compare their configuration, with the particulars mentioned in Dr Spry's paper.

Heads are divided by phrenologists into three classes: the *first* includes those in which the organs of the propensities and lower sentiments predominate much over the organs of the faculties peculiar to man; that is to say, where Amativeness, Combativeness, Destructiveness, Secretiveness, Acquisitiveness, Self-Esteem, Love of Approbation, and Cautiousness, or most of them, are larger than Benevolence, Conscientiousness, Vene-

* George Swinton, Esq., Chief Secretary to the Supreme Government in India, to whom all the reports of the thug trials were made, was induced, by the interest which he takes in Phrenology, to request Mr Smith, the agent to the Governor-General by whom the criminals were tried and sentenced, to procure from Dr Spry the skulls of some of them for the phrenologists of Scotland. Dr Spry, accordingly, was so kind as to prepare seven of the skulls, and to draw up, also at Mr Swinton's suggestion, the account now printed. The skulls and manuscript were brought to this country by Mr Swinton, who is now resident in Edinburgh. It is much to be desired that gentlemen whose official situations put it in their power to add to our knowledge of human nature, would imitate the liberality and zeal of Mr Swinton and Dr Spry.

ration, Ideality, and the organs of Reflection:—heads in the *second* class are of exactly the opposite description, and indicate a preponderance of the moral feelings and reflection;—while the *third* is composed of heads in which neither order of organs greatly predominates. A man whose head belongs to the first of these classes, is naturally endowed with base, selfish, and grovelling dispositions, and falls into criminal and vicious practices, in spite of the best education. He in whom the organs of the moral sentiments and reflective intellect predominate, is “a law unto himself,” resists temptation to evil doing, and remains uncorrupted even among associates of the most depraved dispositions. When there is little disproportion between the organs of the propensities and those of the peculiarly human faculties, the individual is much the creature of circumstances, and is good or bad according to the society in which he is trained, the ideas instilled into his mind, and the example and motives set before him. To the first class belong most of these skulls of thugs. The mass of the posterior and basilar regions is large; the coronal region is too small to enable the moral faculties to exercise sufficient restraint over the propensities; and hence the natural tendencies of the individuals were to selfish and immoral courses of action. Two of them, however, Hosein and Gunga, are superior to the other five, and belong to the third class, or that in which the character is determined by external circumstances. One peculiarity however is, that Destructiveness is not a predominant organ in any of them; and yet they were murderers. This fact, although it might appear to a superficial observer in opposition to their character, is in reality perfectly consistent with it. When Destructiveness is the predominant organ in the head of an individual, he delights in taking away life from “ruffian thirst for blood;” but the thugs murdered obviously for the sake of robbing, and under the influence of other motives, to be immediately explained; and also because they had been trained to this mode of life from their infancy. The skulls shew that combination of large organs of the animal propensities with comparatively moderate organs of the moral sentiments, which predisposes individuals to any mode of self-gratification and indulgence, without restraining them by regard to the rights and welfare of others. The thugs belong to the class of characters in which I would place the captains and crews of slave-ships, and also the more desperate among soldiers; that is to say, men who individually are not quite so prone to cruelty, that they would of themselves have embarked in a murderous enterprize unsolicited; but who, when temptation is presented to them, feel little or no compunction in yielding to it.

These skulls are of smaller size than the European average. The following is a Table of the developments and dimensions.

DEVELOPMENTS.							
ORGANS.	DEVELOPMENTS.						
	1. Utricle.	2. Saccule.	3. Ampullae.	4. Semicircular canals.	5. Vestibular apparatus.	6. Cochlea.	7. Eustachian tube.
1. Amotiveness	15	17	14	15	17	17	16
2. Philoprogenitiveness	19	17	17	14	16	16	19
3. Concentrativeness	15	14	13	13	16	16	14
4. Adhesiveness	16	15	15	16	15	15	13
5. Combustiveness	17	15	17	15	18	17	17
6. Destructiveness	16	15	15	17	16	16	16
7. Secretiveness	16	15	16	17	16	16	15
8. Acquisitiveness	16	15	16	16	16	16	15
9. Constructiveness	16	15	15	15	15	17	16
10. Self-Esteem	18	18	15	18	17	15	17
11. Love of Approbation	16	17	16	18	15	14	15
12. Cautiousness	19	18	18	18	16	17	17
13. Benevolence	12	13	14	15	13	13	14
14. Veneration	16	15	16	16	14	15	16
15. Firmness	16	18	13	16	18	14	17
16. Conscientiousness	10	13	13	16	13	12	11
17. Hope	12	13	13	16	13	13	12
18. Wonder	12	14	15	14	14	12	12
19. Ideality	12	13	15	15	15	14	12
20. Wit	12	12	14	13	12	13	14
21. Imitation	12	14	14	15	13	13	13
22. Individuality	16	17	14	16	16	16	16
23. Form	15	15	13	15	14	16	14
24. Size	14	14	14	14	16	13	14
25. Weight	14	13	13	13	13	13	14
26. Colouring	13	13	13	12	13	10	12
27. Locality	16	16	14	16	16	16	14
28. Number	14	13	14	13	12	10	10
29. Order	12	14	13	13	12	10	10
30. Eventuality	15	16	14	15	12	16	12
31. Time	13	14	14	13	13	12	11
32. Tune	15	14	15	12	13	12	12
34. Comparison	13	14	14	15	12	14	14
35. Causality	13	14	16	16	12	14	14

DIMENSIONS.							
From—	DIMENSIONS.						
Individuality to Philoprogenitiveness,	7½	7½	7	6½	7½	7	7½
Ear to Individuality,	4½	4½	4½	4½	4½	4½	4½
..... Benevolence,	4½	4½	4½	5	4½	4½	4½
..... Firmness,	5	5	4½	5½	4½	4½	5
..... Philoprogenitiveness,	4½	4	3½	3½	4½	3½	4
Destructiveness to Destructiveness,	5	4½	4½	4½	4½	5	4½
Secretiveness to Secretiveness,	5½	5	5	5½	5	5½	4½
Cautiousness to Cautiousness,	5½	5½	4½	5	4½	4½	4½
Constructiveness to Constructiveness,	4½	4	4½	4½	4½	4½	4
Ideality to Ideality,	3½	3½	3½	3½	3½	3½	3½
Mastoid process to Mastoid process,	4½	4½	4½	4½	4½	4½	4½

NOTE.—The numbers refer to the following scale:—2. Idiotcy; 4. Very small; 6. Small; 8. Rather small; 10. Moderate; 12. Rather full; 14. Full; 16. Rather large; 18. Large; 20. Very large. The dimensions are stated in inches.

Circumstances more suitable for the cultivation of the lower feelings and unfavourable for the strengthening of Benevolence and Conscientiousness, than those of the thugs, it is impossible to conceive; even Veneration and Love of Approbation, which, when rightly directed, serve to regulate the selfish feelings, are here rendered the prompters of Destructiveness and Acquisitiveness. It is not merely the size of the organs of these last two propensities that we are to regard; for in many cases the practices of the thugs are little if at all dictated by them. Dr Spry states it as his opinion—and the opinion exactly accords with my own conclusion, drawn from the examination of the skulls—that “many boys go on the roads as thugs because their fathers did, and not from any inherent ferocity of disposition.” The influence of the priests is very great in leading to the enormities detailed by Dr Spry. When the *instructors* of the people are men “not ashamed to declare openly that untruth and false-swearing are virtuous and meritorious deeds when they tend to their own advantage,” it is far from wonderful that the naturally weak morality of the *instructed* should become still more weak. Nor is it at all surprising, that the authority of men looked up to with awe, and their promises of eternal felicity, should be very influential in giving life and vigour to the animal propensities. In a letter published in the *Calcutta Literary Gazette*, and reprinted in the *Calcutta Magazine* for September 1832, (p. 508), Captain Sleeman thus alludes to some of the practices of the thugs, and the motives by which they are actuated. The correspondence between his remarks and what has already been said as to the non-predominance of Destructiveness in the heads, is very striking:—“It is an organized system of civil and religious polity” among the thugs, “to receive converts from all religions and sects, and to urge them to the murder of their fellow-creatures, under the assurance of high rewards in this world and the next; and sad experience teaches us how prone mankind have been in all ages and nations, to prey upon the lives and properties of each other, under such assurances, or under any sanction of law, human or divine, which they deem sufficient. Under a sentence of law, the executioner for a few shillings takes the lives of the fairest and most amiable of their species. Under a declaration of war, nations and families that have been living together in the strictest terms of amity, are instantly prepared to destroy each other, without the slightest feeling of compunction. When the Pope authorized the murder of the unhappy Americans by the Spaniards, they were sacrificed to Christ and the Apostles with sanguinary avidity; and when Henry the Lion of Germany, the brother-in-law of Richard Cœur de Lion of England, was put to the ban of the empire, his friends and neighbours rushed in upon his dominions

DEVELOPMENTS.							
ORGANS.	1. Dhympaul.	2. Gunga Bahun.	3. Soopher Sing.	4. Roach Ahee.	5. Kerant Khar.	6. Bulcha.	7. Eusala or Golah.
1. Amativeness	15	17	14	15	17	17	16
2. Philoprogenitiveness	19	17	17	14	16	16	19
3. Concentrativeness	15	14	13	13	16	16	14
4. Adhesiveness	16	15	15	16	15	15	13
5. Combaticiveness	17	15	17	15	18	17	17
6. Destructiveness	16	15	15	17	16	16	16
7. Secretiveness	16	15	16	17	16	16	15
8. Acquisitiveness	16	15	16	16	16	16	15
9. Constructiveness	16	15	15	15	15	17	16
10. Self-Esteem	18	18	15	18	17	15	17
11. Love of Approbation	16	17	16	18	15	14	15
12. Cautiousness	19	18	15	18	16	17	17
13. Benevolence	12	13	14	15	13	13	14
14. Veneration	16	15	16	16	14	15	16
15. Firmness	16	18	13	16	18	14	17
16. Conscientiousness	10	13	13	16	13	12	11
17. Hope	12	13	13	16	13	13	12
18. Wonder	12	14	15	14	14	12	12
19. Ideality	12	13	15	15	15	14	12
20. Wit	12	12	14	13	12	13	14
21. Imitation	12	14	14	16	13	13	13
22. Individuality	16	17	14	16	16	16	16
23. Form	15	15	13	15	14	16	14
24. Size	14	14	14	14	16	13	14
25. Weight	14	13	13	13	13	13	14
26. Colouring	13	13	13	12	13	10	12
27. Locality	16	16	14	16	16	16	14
28. Number	14	13	14	13	12	10	10
29. Order	12	14	13	13	12	10	10
30. Eventuality	15	16	14	15	12	16	12
31. Time	13	14	14	13	13	12	11
32. Tune	15	14	15	12	13	12	12
34. Comparison	13	14	14	15	12	14	14
35. Causality	13	14	15	15	12	14	14
DIMENSIONS.							
From—							
Individuality to Philoprogenitiveness,	7½	7½	7	6½	7½	7	7½
Ear to Individuality,	4½	4½	4½	4½	4½	4½	4½
..... Benevolence,	4½	4½	4½	5	4½	4½	4½
..... Firmness,	5	5	4½	5½	4½	4½	5
..... Philoprogenitiveness,	4½	4	3½	3½	4½	3½	4
Destructiveness to Destructiveness,	5	4½	4½	4½	4½	5	4½
Secretiveness to Secretiveness,	5½	5	5	5½	5	5½	4½
Cautiousness to Cautiousness,	5½	5½	4½	5	4½	4½	4½
Constructiveness to Constructiveness,	4½	4	4½	4½	4½	4½	4
Ideality to Ideality,	3½	3½	3½	3½	3½	3½	3½
Mastoid process to Mastoid process,	4½	4½	4½	4½	4½	4½	4½

NOTE.—The numbers refer to the following scale:—2. Idioty; 4. Very small; 6. Small; 8. Rather small; 10. Moderate; 12. Rather full; 14. Full; 16. Rather large; 18. Large; 20. Very large. The dimensions are stated in inches.

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with the awakened avidity of savages, and put to the sword almost every being that they could not sell at the hammer, not excepting the nuns of the convents. The page of history abounds with instances illustrative of the evil propensities of our nature under circumstances that relieve us from the necessity of respecting the lives, feelings, and possessions of our fellow-creatures, even among the most polished nations of the earth."

That Love of Approbation is a powerful stimulant to the commission of the atrocities of the thugs, is pretty obvious from what Captain Sleeman tells in the following passage, extracted from the letter just quoted. "After a man has passed through the different grades, and shewn that he has sufficient of dexterity, and of what we may call nerve or resolution, and they call 'hard-breastedness,' to strangle a victim himself, the priest, before all the gang assembled on a certain day, before they set out on their annual expeditions, presents him with the *romal* (the handkerchief with which the strangling is performed),—tells him how many of his family have signalized themselves by the use of it,—how much his friends expect from his courage and conduct;—and implores the goddess to vouchsafe her support to his laudable ambition and endeavours to distinguish himself in her service. The investiture with the *romal* is *knighthood* to these monsters; it is the highest object of their ambition; not only because the man who strangles has so much a head over and above the share which falls to him in the division of the spoil, but because it implies the recognition by his comrades of the qualities of courage, strength, and dexterity, which all are anxious to be famed for. The ceremony costs the candidate about forty rupees, and is performed by the *goroo* or high priest of the gang, who is commonly an old thug, no matter whether Mussulman or Hindoo, who has retired from service, and lives upon the contributions of his descendants or disciples." The high regard which the thugs pay to caste, proceeds chiefly from Love of Approbation, combined with Self-Esteem. Mr Smith tells us, that, "in the moment of death, even, the thug will be found scrupulously attentive to the preservation of his caste, and will plead as earnestly, or more so, to be spared the indignity of being touched by the low caste hangmen, as for the preservation of his life."

Cautiousness, which is strong, seems a powerful ally of Destructiveness in leading to the perpetration of the murders. "The maxim," says Captain Sleeman, "that '*dead men tell no tales*,' is repeated, and invariably acted upon, by these people, and they never rob a man till they have murdered him." Cautiousness, in fact, marks the whole of their proceedings. We are told by Captain Sleeman, that "the person invested with the *romal* has long used it in play before the practised eye of

his *goroo*, and has been long accustomed to see others use it in earnest; but it is still thought necessary to select for him easy victims at first, and they do not employ him indiscriminately like the others, till he has shewn his powers in the death of two or three travellers of feeble form or timid bearing." Mr Smith mentions in his report, that "they decline murdering the *chuprassies* (native runners) of government, except under peculiar circumstances, as they dread the inquiry which might result. They also seldom meddle with Europeans, for the same reason. It was only after many years of success, that they ventured, about three years ago, to murder, near Banda, an invalid sergeant. In 1823, they deliberated whether they should destroy two officers passing by *dawk*, but the question was negatived; 1st, because the *sahab log* (gentlemen) seldom carry valuables with them in *dawk* trips; 2d, because they always carry pistols; 3d, because their destruction would draw too much publicity on their proceedings." There is much cautiousness in the mode in which unsuspecting travellers are lured into their clutches. The care with which the bodies are interred is equally characteristic. The beds of rivulets are generally selected as the burying places least likely to be discovered. It will be observed from the table of developments, that Dirgpaul had the largest Cautiousness of all the seven. Dr Spry mentions that Dirgpaul was the man who cajoled a party of thirteen people; and persuaded them to march in company with the thugs. At his execution, we are farther told, "his caution prevented him from being too precipitate." His Love of Approbation is rather large. Dirgpaul's leer was probably the effect of his large Self-Esteem.

The sexual feeling, as the table shews, must have been strong in most of the sever: thugs. On this subject, Mr Spry says: "It is not to be wondered at that these vagabonds, while abroad, indulge in every carnal propensity; and it has happened more than once, that a gang has split from the leaders, quarrelling about a favourite. A knowledge of these practices coming to their wives' ears, they sometimes leave their husbands and go with other men." "Nearly all are married." Dr Paterson mentions, in the Transactions of the Phrenological Society, p. 441, that "the Hindoo cerebellum is uniformly well developed," and that the people are exceedingly jealous. "Polygamy and unnatural desires," he says, "abound."

Philoprogenitiveness is a large organ, especially in the cases of Dirgpaul and Bussola. Adhesiveness also is fully developed: Mr Smith's report contains the following passage: "The thug will lament, with unfeigned sorrow, the death of a relation or friend, and will do any thing, even to the surrender of himself to justice, to extricate his wife and children from imprisonment." "Feringeeâ, the Jemadar of thugs, avows, with what truth. I

know not, that he would have surrendered himself after the Bhilsah affair, if he had met the party of Nujeebs who had charge of his family; and he has more than once burst into a flood of tears, on Captain Sleeman's alluding to his relations, who were condemned in the Bhilsah trial, and hanged at Jubbulpoor." Dirgpaul, who has the largest Philoprogenitiveness of the whole, spared and adopted an infant belonging to a company of whom every other individual was murdered. This is a fine illustration of the independent existence of Benevolence and Philoprogenitiveness. Dr Paterson mentions that the latter organ "is uniformly very fully developed in the Hindoo. According to my observations, males and females possess it in the same proportion. It is manifested by the Hindoos in their predilection for domestic quiet; in the happiness they seem to feel when surrounded by their children; in their terms of endearment; in the spirit of their lullabies; and in their frequent and ardent embraces." (Phren. Trans. p. 441.)

The development of Individuality and Locality corresponds with the memory and power of observation which the thugs manifest. Mr Smith observes: "The extraordinary ability displayed by the thugs, in ascertaining the characters, trade, name, residence, and intentions of their victims; the adroitness with which they worm themselves into their confidence; and the strong recollection of facts which have occurred many years ago, all display, in a wonderful manner, the tact and ability of their leaders, and the scientific and lasting principles on which the association is founded." It is remarked by Dr Spry, that "the accuracy with which these men will, after a lapse of several years, point out the spot where the murdered bodies are laid, is truly surprising."

Conscientiousness is in most instances developed only in a moderate degree. In the heads of Dirgpaul and Bussola it is remarkably deficient. The only tolerable Conscientiousness is that of Hosein. The whole of Dr Spry's paper is a commentary on this; and I shall merely add, in the words of Mr Smith, that to the thugs "gratitude is unknown; and the bosom-friend and benefactor,—nay, their preservers from prison and death, as has been too often exemplified in the late trials,—are remorselessly sacrificed at the shrine of wealth." The disregard of truth among the Hindoos is notorious. Sir William Jones has been heard to say, that, in the bazaars of Calcutta, he could purchase affidavits cheaper than asparagus.

In conclusion, it may be confidently affirmed, that so far as our information extends, the heads and characters of these seven thugs exactly correspond.

ARTICLE IV.

PROFESSOR BLUMENBACH AND PHRENOLOGY.

ON 17th November 1829, Mr Combe addressed the following letter to Professor Blumenbach, Göttingen :—

“ SIR,—My nephew James Cox, who has just returned from Göttingen, has delivered to me your compliments, and mentioned that he understood you to say, that you neither admitted Phrenology to be true, nor condemned it as false ; and that you had been pleased with my Elements, which you had read, and had in consequence desired to be remembered to me as the author. Allow me to return my best thanks for this kind attention, and to express the great esteem which I entertain for your physiological works, with which I am acquainted through Dr Elliotson’s translation. At present, the third edition of my System of Phrenology is in the press. The introduction is printed off ; and as it contains a succinct view of the general principles of the new doctrine, I beg your acceptance and perusal of the copy herewith transmitted. Being firmly convinced that Phrenology is true, and that the history of its reception by the philosophers of this age will interest posterity, I confess myself to have experienced great regret that a name so distinguished as yours should be transmitted in the list of its opponents ; for, in this country, you are invariably cited as denying altogether its truth. The words put into your mouth by public fame are these : “ What of Phrenology is true is not new ; and what is new is not true.” The state of perfect neutrality in which my nephew represents you to stand, appears to me much more like your character than the attitude of hostility assigned to you by general report : but the circumstance that your opinion is referred to shews that importance is attached to it ; and I confess that I should have great pleasure in receiving a letter from yourself, expressing your real opinion on the subject—the opinion, in short, which you would wish posterity to understand you to have entertained. If you would allow me to print such a letter in the Phrenological Journal, it would be viewed with interest by the British public. Excuse the freedom which I now use ; and believe me to remain, with great respect, Sir, your most obedient and very humble servant,

(Signed) “ GEO. COMBE.”

To this letter no answer has been received ; from which circumstance it may fairly be inferred, that the representations which had reached Mr Combe were correct.

ARTICLE V.

DR SPURZHEIM'S SKULL.

THE Phrenological Society has been favoured by the Boston Phrenological Society with a cast of the skull of Dr Spurzheim. It is of great size, and as its various dimensions may be interesting to many of our readers, they are here subjoined.

	Inches.
Greatest circumference of Head (measured horizontally over Individuality, Constructiveness, Destructiveness, and Philoprogenitiveness),	22 $\frac{1}{2}$
From Occipital Spine to Individuality, over the top of the head,	13 $\frac{1}{2}$
..... Ear to Ear vertically over the top of the head,	13 $\frac{1}{2}$
..... Philoprogenitiveness to Individuality, in a straight line,	7 $\frac{1}{8}$
..... Concentrativeness to Comparison,	6 $\frac{1}{2}$
..... Ear to Philoprogenitiveness,	4 $\frac{1}{2}$
..... Individuality,	4 $\frac{1}{8}$
..... Benevolence,	5 $\frac{1}{2}$
..... Firmness,	5 $\frac{1}{2}$
..... Destructiveness to Destructiveness,	6 $\frac{1}{2}$
..... Secretiveness to Secretiveness,	6 $\frac{1}{6}$
..... Cautiousness to Cautiousness,	5 $\frac{1}{2}$
..... Ideality to Ideality,	4 $\frac{1}{8}$
..... Acquisitiveness to Acquisitiveness,	5 $\frac{1}{2}$
..... Constructiveness to Constructiveness,	4 $\frac{1}{2}$
..... Mastoid process to mastoid process,	5 $\frac{1}{2}$

ARTICLE VI.

PURSUIT OF KNOWLEDGE UNDER DIFFICULTIES—
MEMOIR OF MR JOHN SISSON.

TO THE EDITOR OF THE PHRENOLOGICAL JOURNAL.

SIR,—THE progress of a self-educated individual has always been to philosophic minds an interesting subject of contemplation. It is pleasing to observe the efforts of a man born in the lowest grade of society, struggling with poverty, and creating for himself the means by which he may overcome the obstacles to mental improvement by which he is surrounded. The history of science and literature furnishes numerous examples of this kind, but it would probably be difficult to find a better illustration than in the life of the subject of the following brief memoir. We have only to regret, that there is not positive evidence as to his cerebral organization, beyond the reminiscence of his kind

friends and patrons* ; yet the facts are worthy the notice of your intelligent readers.

JOHN SISSON, the lamented subject of the following pages, was born May 24. 1801, at the small village of Newark, near Peterborough, in Northamptonshire, and died at Glasgow in the month of November 1832. His parents were poor, but very honest and industrious,—his father working as a farmer's labourer. Of his early history I could glean but little information: his mother told me he was taught to read and write; but from the circumstance of his going to service at the age of eleven or twelve, and from other facts to be immediately mentioned, it may be assumed that his education was very limited. But his afflicted parent spoke of his moral character with a deep tone of feeling; and certainly, if one might judge by her own excellent organization, and that of other members of the family, he was naturally honest, respectful, faithful, and affectionate. His mother informed me that he was five years a farmer's servant, and laboured hard and diligently in his avocation. He afterwards went as groom and footman to Dr Whitsed, presently of Southampton Row, London, (then practising at Peterborough); and, in this his first place, the principal things that struck the worthy Doctor, were his integrity and zeal to do all things properly. Dr Whitsed told me that Sisson was particularly timid, insomuch that it was painful to witness the agitation which he experienced in undertaking any new duty. But, notwithstanding this *mauvaise honte*, there was an aptitude to learn, and he was deemed one of the best servants the Doctor ever had. I mention these particulars as incidents worth remembering in his history, that they may be contrasted with his conduct when he subsequently visited the Doctor and was received by him as a friend and companion. In the house of Dr Whitsed there resided, as his pupil in medicine, a gentleman of the name of Smith, to whom Sisson was indebted for assistance in his studies. It appears that Mr Smith perceived his strong desire for improvement, and, with a truly benevolent spirit, thought it no derogation from his respectability to give him every help in the prosecution of his designs; so that he soon acquired a very good knowledge of the English and Latin grammars, and began to read some of the best authors. Mr Smith also perfected him in writing. These lessons, however, must have been very brief, and at irregular periods, owing to the professional engagements of the teacher and the multifarious duties of a country practitioner's groom.

In the year 1821, Dr Whitsed removed from Peterborough to London, and his successor, Mr T. Walker, had a transfer of

* The reader will see in a subsequent part of the present article, that this desideratum has to a considerable extent been supplied.—ED.

the practice, and retained Sisson in his situation of groom. In a conversation with Mr Walker, I recollect that he mentioned, as a proof of Sisson's ardour for knowledge at this time, that he used to sit up until two o'clock, then go to bed, and rise again at four, paying a man to call him at that hour, so that he might go on with his studies without infringing on any part of his duty ; and, said Mr Walker, " I never had so good a servant ; my plate was never so well cleaned, nor my horse so well groomed."

Sisson must have resided with Mr Walker nearly three years, so that he was still in servitude in 1824 ; but, before leaving this situation, he used to be entrusted with the duty of compounding medicine in the laboratory, and he soon became quite expert at the business. He must, nevertheless, have been very unambitious, as he asked his master to procure him the situation of porter to a drug-house. A traveller, from a respectable house, having called upon Mr Walker soon after this application, Mr Walker mentioned his man's request, and John was ordered to call upon the gentleman forthwith. The latter was struck with some surprise on finding the young man so intelligent, and, after dismissing him with a promise of serving him, he told Mr Walker that it would be a pity to bury so much worth and talent in a drug-warehouse, and offered to procure him a situation as assistant to a surgeon. Mr Walker of course offered no objection, and the gentleman speedily got him placed with a Mr Brookes, surgeon at Ross, in Herefordshire, who treated him with very marked kindness. He was paid a salary as assistant, and was nominally apprenticed to his new master, that he might be enabled to pass the different faculties so as to practise regularly.

A letter, dated 26th July 1829, from Mr Brookes to Dr Whitsed, contains the following remarks on Sisson's character, and shews the estimation he was held in by the writer :—" As I am informed that you take great interest in his welfare, it may be agreeable to you to learn, that his assiduity and attention to my business deserve the highest encomiums. His apprenticeship expires in October, and I hope and wish that he may be able to obtain means of completing his professional studies and obtaining his diploma. I have offered to engage with him after this object has been accomplished at a liberal salary, if nothing better offers ; but I fear his having such slender pecuniary resources will be an obstacle he will find difficult to surmount. I feel much interested in his welfare, and shall be most happy to promote his advancement as far as in my power *."

* Mr Gardner, a communication from whom follows that of Mr Levison, mentions, as a proof of the respect in which Sisson was held by the patients of Mr Brookes, that " the person who bought that gentleman's practice would

By the interest of some of his friends, he obtained, through the direct instrumentality of young Lord Sandwich, a scholarship at Glasgow, of L. 20 value per annum, which, on account of his great temperance and sobriety, must have been nearly sufficient to maintain him.

Having acquired a respectable knowledge of natural history, natural philosophy, and some of the modern languages, besides being a very good Greek and Latin scholar, he spent the remaining portion of his life in a most honourable and useful manner. Being much respected, he was appointed house-surgeon to a cholera hospital, and his labours and constant attention to alleviate the sufferings of his patients were above all praise. It was now that his ardour in the profession he had chosen manifested itself. There are few of the most active practitioners who were devoted to investigate this malignant disease, that dissected more than Mr Sisson; and, as he was an excellent observer, his notes, if published, would prove a valuable contribution to its pathology. When the cholera abated he was appointed fever clerk in the Royal Infirmary, and now seemed on the way to independence; but, alas! in a very few days after he obtained this situation, his existence was terminated by a malignant fever on 14th November 1832.

I have mentioned his moral character, and the above hasty and imperfect sketch will perhaps furnish some idea of his intellectual faculties. I did not know him personally, but have seen two portraits of him; the one taken when he first went to Mr Brookes, and the other taken at Glasgow, a very short time before his death. The first presents a high moral region, with very good intellectual organs, but with moderate Self-esteem; yet it would be injudicious to draw any positive deduction from such a source. The second shews the full face, which looks more intelligent, and with a greater activity of temperament. It is very much to be regretted, that there does not exist a cast; for Dr Whitsed and his family, and Mr Walker, speak of his having had a high and capacious forehead. As an illustration of the natural superiority of his mind, I may mention, that, having visited Dr Whitsed and his family as a friend, his deportment was such that his company was highly esteemed by the very gentleman whom he served as groom, &c. Nor can I omit a still stronger instance of his intelligence and moral conduct: Either before he left Mr Brookes, or after he had commenced his studies at Glasgow, he visited his mother, and spent a month with Mr Walker; and this worthy and excellent gentleman assured me, that he was so highly pleased with his infor-

not do so till he obtained a bond to the amount of L. 1000 from Mr Sisson, that he would not practise in that neighbourhood for five years."

mation and manners, that he entrusted his practice to him for a short time, I believe a fortnight.

I have already mentioned my having called upon his poor old mother for some information; but all that I could gather was, that he was always amiable, dutiful, affectionate, and industrious; and the good old lady, in the fulness of her affections, brought me out a Bible presented to John for his good behaviour when only six years old.

The objects I had in view, in drawing up this short memoir, are the following:—*1st*, To offer a tribute of respect to the memory of a self-taught and excellent young man, in a Journal devoted to the amelioration of all classes of society;—*2d*, To illustrate the phrenological doctrine, that the human faculties are innate, and so little the result of external circumstances, that, when very strong, they break through every obstacle, and display themselves even in the most unfavourable situations;—*3d*, To excite philanthropic phrenologists to patronize, and assist in educating, individuals of humble rank, in whom they observe a cerebral configuration capable of raising its possessor to a respectable rank in science or literature, even although, as in the case of Sisson, no precocity of talent should be manifested.

Finally, I trust that as you have readers in Glasgow, some further particulars may be collected. I am, Sir, yours respectfully,
J. L. LEVISON.

With the view of obtaining further information relative to Mr Sisson, we transmitted the preceding communication to that active phrenologist Dr William Weir, Surgeon to the Glasgow Royal Infirmary. Dr Weir, who had never been personally acquainted with Mr Sisson, sent it to Mr George Gardner, surgeon, who, besides having been long intimate with Mr Sisson, seems to be well acquainted with Phrenology. To this gentleman we are indebted for the following particulars:—

TRADESTON, GLASGOW, 21st August 1833.

I have read Mr Levison's memoir of my late lamented friend Mr John Sisson, and find many of the facts to correspond with what he himself informed me of his early life, and many of the remarks to agree with what I have myself observed during the eighteen months while we were acquainted with each other, but more particularly during a period of three months, when I acted as one of the medical clerks in the Albion Street Cholera Hospital, of which he was house-surgeon. It was his intention to take the degree of Doctor in Medicine from our University,

and afterwards diplomas from the Royal College of Surgeons and from the Apothecaries' Company, London, to enable him to practise in England. In the Cholera Hospital, his attention to the patients was unremitting. Both day and night, I may say, were devoted either to the alleviation of their sufferings, or to the investigation of the pathology of the disease; and his services were so highly appreciated, that when he applied for the situation of Fever-clerk to the Royal Infirmary, he was unanimously elected by the Directors, although several young men, natives of Glasgow, and highly recommended, were candidates at the same time. The fever-house is the first scene of a clerk's duty, and he entered into his new situation with high hopes, about the end of October 1832, having been an inmate of the Cholera Hospital from the beginning of the preceding February. Here he was as attentive as formerly to the patients under his care, and as anxious to acquire a knowledge of the nature of fever as he had been to become acquainted with cholera. Indeed, it is generally believed, that it was during his long leaning over the patients, while investigating the state of their lungs by the stethoscope, that he imbibed the seeds of that disease which hurried him to a too early grave, on the 14th November 1832, being the thirteenth day of his illness. He was regretted by all who had the pleasure of his acquaintance.

Mr Levison observes, that "we have only to regret that there is not positive evidence as to his cerebral organization." I am happy that I can obviate this desideratum to a certain extent, having frequently examined his head phrenologically; but it must be kept in view that I speak only from recollection, not having noted any observations at the time. His temperament was between the nervous and the melancholic; and his high forehead and intellectual features gave him rather a *German* cast of physiognomy. His head was decidedly large, and the three great divisions were well balanced. If one was smaller than the other, it was the region of the propensities. In running over his organization, I will only particularize those organs of which I can speak with certainty. *Amativeness* large; *Adhesiveness* full; *Combativity* small; *Destructiveness* small; *Constructiveness* moderate; *Acquisitiveness* large; *Secretiveness* full; *Self-Esteem* small; *Love of Approbation* large; *Cautiousness* large; *Benevolence* large; *Veneration* moderate; *Wonder* small; *Ideality* full; *Conscientiousness* large; *Firmness* very large; *Individuality* moderate; *Order* large; *Number* small; *Tune* small; *Language* large; *Comparison* full; *Causality* large; *Imitation* full.

It may be said that, knowing his character, I have made this outline of his cerebral organization correspond with it, without being altogether certain as to facts; but I can vouch for the

general correctness of my statements. Perhaps, however, the terms made use of to indicate the size of the organs are not so accurate as those which one more skilled than I am in the tactics of Phrenology might have given. Notwithstanding, I presume that a tolerably correct idea of the superiority of his cerebral development may be drawn from my imperfect sketch.

At the classes (some of which we attended together) he was an assiduous and methodic student. He used to complain of finding a difficulty in committing individual facts to memory, such as those of Anatomy and Botany; but he had the happy art of selecting those only which bore particularly upon practice, and at these he laboured till they were fully mastered. He was an excellent English scholar, and wrote a good hand; although, as he informed me himself, he could neither write his own name, nor read without spelling every word, till he was eighteen years of age. He was also a good Latin, Greek, German, and French scholar; and when we consider that all this, besides much more, was accomplished in twelve years by his own unwearied industry, and most of it while he should have been sleeping, it is impossible to withhold from him the tribute of our admiration. He had a good address, and his manners were completely those of a gentleman. To conclude, he was an individual, who, if years had been granted him, would have been no less a benefit to society, than an ornament to the profession of which he was prosecuting the study with so much zeal and success.

ARTICLE VII.

NOTES, CHIEFLY HISTORICAL, ON THE PHILOSOPHY OF APPARITIONS.

ALTHOUGH the organs of the perceptive faculties are not usually brought into a state of full activity without the stimulus of impressions transmitted to them by the senses, yet it frequently happens, that internal causes alone,—such as an unusual influx of blood into the vessels which supply them,—or inflammation,—or the influence of a large organ of Wonder*,—excite them so much as to give origin to perceptions which are generally called into existence only by the presentment of material objects. In dreaming, for instance, the external world is inwardly represented to our minds with all the force of reality: we speak and hear as if we were in communication with actual existences.

* It is proved by a vast number of facts, that persons in whose heads the organ of Wonder is large, are liable to be visited by apparitions. How that organ produces the necessary excitement of the perceptive organs is unknown:

Spectral illusions are perfectly analogous to dreams, and seem to differ from them only in requiring a higher degree of internal excitement of those parts of the brain which take cognizance of colour, magnitude, sounds, &c. "Visions," says Dr Spurzheim, "are these internal sensations or ideas so strongly pictured forth, that, though aroused and awake, the person still refers them outwards, and cannot help considering them as realities. These internal perceptions, when transitory, are of no moment; but, when permanent, they indicate a true disease of the brain*."

The resemblance between dreams and spectral illusions has been remarked by persons subject to the visitations of the latter. A patient of the late Dr Alderson of Hull, complained "that he had troublesome dreams, and he *seemed to dream whilst awake.*" It generally or uniformly happens, too, that the figures are not less visible in the dark than in day-light, and are perceived whether the eyes be closed or open. An individual in the west of Scotland, whose case is related in the second volume of this Journal, p. 111, whenever he shut his eyes or was in darkness, saw a procession move before his mind, as distinctly as it had previously done before his eyes. In our fifth volume, a similar case is reported by Mr Levison. Pordage, in his *Divina et Vera Metaphysica*, (A. D. 1651), a work containing an account of the splendid visions with which he and his Philadelphian disciples were favoured, mentions that whether they shut their eyes or kept them open, the appearances were equally distinct, "for we saw," says he, "with *the eyes of the mind*, not with those of the body†." In former times, individuals who beheld visions, instead of ascribing their perceptions to a disordered condition of the brain, referred the impressions outwards, and had a full conviction of the presence of supernatural beings. Though it was not till the commencement of the present century that the true philosophy of apparitions began to be generally understood, there were certainly various writers, who long ago had the sagacity to perceive the real cause of spectral illusions. Of these writers, Bayle seems to have been among the earliest, and from him some of the other authors whom we are about to quote probably derived their opinions. Bayle's explanation occurs in his *Historical Dictionary*, *voce* THOMAS HOBBS, Note N, (published about the close of the seventeenth century,) from which the following is an extract.

"A man would not only be very rash, but also very extravagant, who should pretend to prove, that there never was any

the fact, however, seems indubitable. See Gall *Sur les Fonctions du Cerveau*, v. 347; Combe's *System of Phrenology*, third edition pp. 309, 320 502 and *Phrenological Journal*, i. 551.

* *Phrenology*, p. 71.

† See *Foreign Quarterly Review*, No. xi. p. 13.

person that imagined he saw a spectre; and I do not think that the most obstinate and extravagant unbelievers have maintained this. All that they say comes to this,—that the persons who have thought themselves eye-witnesses of the apparition of spirits, had a disturbed imagination. They confess, then, *that there are certain places in our brain*, that, being affected in a certain manner, *excite the image of an object which has no real existence out of ourselves*, and make the man whose brain is thus modified believe he sees, at two paces distance, a frightful spectre, a hobgoblin, a threatening phantom. The like happens in the heads of the most incredulous, either in their sleep, or in the paroxysms of a violent fever. Will they maintain after this, that it is impossible for a man awake, and not in a delirium, to receive in certain places of his brain an impression almost like that which, by the law of nature, is connected with the appearance of a phantom? “These apparitions in dreams are very frequent.”

Voltaire has some remarks to the same effect, in his Philosophical Dictionary, under the word APPARITION:—“Fantastic visions,” says he, “are very frequent in hot fevers. *This is not seeing in imagination; it is seeing in reality. The phantom exists to him who has the perception of it.* If the gift of reason were not at hand to correct these illusions, all heated imaginations would be in an almost continual transport, and it would be impossible to cure them. It is especially in that middle state, betwixt sleeping and waking, that an inflamed brain sees imaginary objects, and hears sounds which nobody utters. Fear, love, grief, remorse, are the painters who trace the pictures before unsettled imaginations. The eye which sees sparks in the night, when accidentally pressed in a certain direction, is *but a faint image of the disorders of the brain.*”

The English poet Shenstone offers an equally sagacious “Opinion of Ghosts,” in one of his essays bearing that title, and published eighty or ninety years ago. “It is remarkable,” he says, “how much the belief of ghosts and apparitions of persons departed has lost ground within these fifty years. This may perhaps be explained by the general growth of knowledge, and by the consequent decay of superstition, even in those kingdoms where it is most essentially interwoven with religion.”

“But whence comes it,” he asks, “that narratives of this kind have at any time been given by persons of veracity, of judgment, and of learning? men neither liable to be deceived themselves, nor to be suspected of an inclination to deceive others, though it were their interest; nor who could be supposed to have any interest in it, even though it were their inclination?”

“Here seems a further explanation wanting than what can be drawn from superstition.

“ I go upon a supposition that the relations themselves were false.” “ Supposing no ghost then ever appeared, is it a consequence that no man could ever imagine that he saw the figure of a person deceased? Surely those who say this, little know the force, the caprice, or the defects of the imagination.

“ Persons after a debauch of liquor, or under the influence of terror, or in the delirium of a fever, or in a fit of lunacy, or even walking in their sleep, *have had their brain as deeply impressed with chimerical representations, as they could possibly have been, had their representations struck their senses.*

“ I have mentioned but a few instances wherein *the brain is primarily affected.* Others may be given, perhaps not quite so common, where the stronger passions, either acute or chronic, have *impressed their object upon the brain,* and this in so lively a manner as to leave the visionary no room to doubt of their real presence.

“ How difficult, then, must it be to undeceive a person as to objects thus imprinted!—imprinted absolutely *with the same force as their eyes themselves could have portrayed them!*—and how many persons must there needs be, who could never be undeceived at all!

“ Some of these causes might not improbably have given rise to the notion of apparitions; and, when the notion had been once promulgated, it had a natural tendency to produce more instances.

“ The gloom of night, that was productive of terror, would be naturally productive of apparitions. The event confirmed it.

“ The passion of grief for a departed friend, of horror for a murdered enemy, of remorse for a wronged testator, of love for a mistress killed by inconstancy, of gratitude to a wife of long fidelity, of desire to be reconciled to one who died at variance, of impatience to vindicate what was falsely construed, of propensity to consult with an adviser that is lost;—the more faint, as well as the more powerful passions, when bearing relation to a person deceased, have often, I fancy, with concurrent circumstances, been sufficient to exhibit the dead to the living.

“ But, what is more, there seems no other account that is adequate to the case as I have stated it. Allow this, and you have at once a reason, why the most upright may have published a falsehood, and the most judicious confirmed an absurdity.”

“ Such appears, to me at least, to be the true existence of apparitions.

“ The reasons against any external apparition, among others that may be brought, are these that follow:

“ They are, I think, never seen by day; and darkness being the season of terror and uncertainty, and the imagination less

restrained, they are never visible to more than one person ; which had more probably been the case, were not the vision internal.

“ They have not been reported to have appeared these twenty years. What cause can be assigned, were their existence real, for so great a change as their discontinuance ?

“ The cause of superstition has lost ground for this last century ; the notion of ghosts has been, together, exploded ; a reason why the imagination should be less prone to conceive them, but not a reason why they themselves should cease.

“ Most of those who relate that these spectres have appeared to them, have been persons either deeply superstitious in other respects, of enthusiastic imaginations, or strong passions, which are the consequence ; or else have allowedly felt some perturbation at the time.”

Shenstone concludes by recommending the due government of the passions, and the strictest temperance, as the best means of avoiding the persecution of ghosts.

David Hume appears to have had a glimpse of the theory of apparitions. “ Memory and imagination,” says he, “ may mimic or copy the perceptions of the senses ; but they never can entirely reach the force and vivacity of the original sentiment. The utmost we say of them, even when they operate with greatest vigour, is, that they represent their object in so lively a manner, that we could *almost* say we feel or see it. *But, except the mind be disordered by disease or madness, they never can arrive at such a pitch of vivacity as to render these perceptions altogether undistinguishable* *.”

The well-known visions of Nicolai of Berlin, occurred in 1791, and were regarded by him as “ the consequence of a diseased state of the nerves and an irregular circulation of the blood” †.

About the year 1806, Dr Alderson ‡ wrote an essay “ to prove the reality of ghosts, and, by accounting for their appearance from natural causes, to remove those impressions of terror which are made upon the minds of youth, when apparitions are supposed to be preternatural.” This essay was read in manuscript for several years afterwards, in different places, and was published, unknown to the author, in the Edinburgh Medical and Surgical Journal, in the year 1810. Dr Alderson himself reprinted it with corrections in 1811, and appended it to an essay on the Rhus Toxicodendron, then in the press : and a separate edition was published at London in 1823, under the title of “ An Essay on Apparitions, in which their appearance is accounted for by

* Hume's Essays and Treatises. Edition 1817, il. 15.

† See Nicolai's Narrative in Phren. Journ. i. 541.

‡ This gentleman was for some years before his death an ardent phrenologist, and President of the Hull Society for Phrenological Inquiry.

causes wholly independent of preternatural agency." He shews that spectres "are perfectly natural, arising from secondary physical causes, and depending on circumstances to which all nations, all mankind, are equally liable;" and "that the cause lies not in the perturbed spirits of the departed, but in the disordered functions of the living"—in the "distempered brain" of him who beholds the apparition. He details several very interesting cases which had fallen under his own observation, some of which are quoted in the first volume of this Journal, p. 544. He repeatedly scared away the ghosts which haunted his patients, by the application of "bleeding, leeches, active purgatives," and similar remedies*.

In the year 1813, Dr John Ferriar of Manchester, published "An Essay towards a Theory of Apparitions;" in which, without taking the slightest notice of Dr Alderson's work, he gave forth, as new, the same theory, supported by ancient history, traditional stories, and cases within the range of his professional employment. From this work, which contains much curious matter, we extract the following passages:

"It is well known, that in certain diseases of the brain, such as delirium and insanity, spectral delusions take place, even during the space of many days. But it has not been generally observed, that a partial affection of the brain may exist, which renders the patient liable to such imaginary impression, either of sight or sound, without disordering his judgment or memory. From this peculiar condition of his sensorium, I conceive that the best supported stories of apparitions may be completely accounted for. When the brain is partially irritated, the patient fancies that he sees spiders crawling over his bed-clothes or person; or beholds them covering the roof and walls of his room. If the disease increases, he imagines that persons who are dead, or absent, flit around his bed; that animals crowd into his apartment; and that all these apparitions speak to him." "These impressions take place even while he is convinced of their fallacy. All this occurs sometimes without any degree of delirium. I conceive that the unaffected accounts of spectral visions should engage the attention of the philosopher as well as of the physician. Instead of regarding these stories with the horror of the vulgar, or the disdain of the sceptic, we should examine them accurately, and should ascertain their exact relation to the state of the brain, and of the external senses." "Lastly," he says unfairly, "by the key which I have furnished, the reader of history is released from the embarrassment of rejecting evidence in some of the plainest narratives, or of experiencing uneasy doubts, when the solution might be rendered perfectly

* Essay on Apparitions, pp. 21, 28, 40, 48. Longman & Co. 1823.

simple." From the extracts given above from the works of Bayle, Voltaire, Shenstone, and Nicolai, it is evident, that neither Ferriar nor Alderson is entitled to the merit of having originally furnished this "key." It had been suggested upwards of a century before, and the merit of *demonstrating* it to be the proper key belongs not to Dr Ferriar, but to Dr Alderson, if indeed it is due to either of them.

The next regular treatise on spectral illusions was that of Dr Hibbert*, who follows the opinion of Drs Alderson and Ferriar, respecting the proximate cause of the phenomena. "An apparition," says he, "is, in a strict sense, a past feeling, renovated with a degree of vividness equalling or exceeding an actual impression. If the renewed feeling should be one of vision, a form may arise perfectly complete; if of sound, distinct conversation may be heard; or if of touch, the impression may be no less complete." (P. 362). Sensations (which are the result of actual impressions) and ideas (or renovated feelings) "differ essentially in nothing but degree. Thus, the latter are *less intense, less vivid, or fainter*, than the former." (P. 15.) "When sensations and ideas," he says, "are, from some peculiar state of the sanguineous fluid, simultaneously rendered highly intense, the former arrive at a certain height of vividness, and gradually become fainter, while the latter, in an inverse ratio, increase in vividness; the result being, that recollected images of thought, vivified to the height of actual impressions, exclusively, or nearly so, constitute the states of the mind." (P. 549). This theory, so far as it relates to the blood, is at once upset by the fact, that in ghost-seers only a few of the faculties are vivified; whereas, if the quality of the blood were the circumstance on which the phenomena depend, every propensity, sentiment, and intellectual faculty, would be influenced in a similar manner.

A still more unfounded opinion receives the countenance of Dr Hibbert, and one which we are surprised that a man of his physiological knowledge should entertain: "The retina," he says, "may be shewn, when subjected to strong excitements, to be no less the organ of ideas than of sensations." (P. 291). And again: "There are grounds for suspicion, that when ideas of vision are vivified to the height of sensations, a corresponding affection of the optic nerves accompanies the illusion. A person, for instance, labouring under spectral impressions, sees the form of an acquaintance standing before him in his chamber. Every effect in this case is produced, which we might expect from the figure being impressed on the retina. The rays of light issuing from that part of the wall which the phantasm

* Sketches of the Philosophy of Apparitions; or an attempt to trace such Illusions to their physical causes. By Samuel Hibbert, M.D. Edin. 1824.

seems to obscure, are virtually intercepted. But if impressions of visions are really renewable on the retina, their delineation ought to be always remarkable for accuracy." (P. 198). Sir David Brewster also favours the same opinion, when he maintains, that "the mind's eye is actually the body's eye, and that the retina is the common tablet on which both classes of impressions (recollected images and actual sensations) are painted, and by means of which they receive their visual existence according to the same optical laws. Nor is this true," he continues, "merely in the case of spectral illusions: it holds good of all ideas recalled by the memory or created by the imagination, and may be regarded as a fundamental law in the science of pneumatology." And he goes on to speak of the optic nerve "carrying from the brain to the retina the figures of memory*," to be thence transmitted back to the brain. Nothing could be more glaringly in opposition to sound physiology and observed facts, than this theory. In the first place, the function of the eye, including the retina and optic nerve, is simply to transmit the impressions of light to the brain; and it is the latter organ alone which perceives, judges, and remembers. Such being the office of the brain, any circumstance which renders that organ, either wholly or in part, sufficiently active, so vivifies its functions as to bring ideas to an equality with actual impressions. Secondly, there is not a shadow of evidence in support of the theory that the brain sends an influence to the retina, in consequence of which an actual picture is there produced; and that this picture, being transmitted back to the brain, gives rise to an actual sensation. The very idea of this retrograde motion is absurd. Thirdly, there is satisfactory proof *that the reverse is the fact*; for did a picture exist on the retina, the apparition would partake of every motion of the eye. Dr Brewster himself seems to admit, that no motion of the apparition takes place in such circumstances; for he mentions that he instructed a lady, who was subject to the visitation of spectral illusions, "that if she should ever see such a thing, she might distinguish a genuine ghost existing externally, and seen as an external object, from one created by the mind, by merely pressing one eye or straining them both so as to see objects double; for in this case *the external object* or supposed apparition would *invariably be doubled*, while the impression on the retina created by the mind *would remain single*." † There is a passage to the same effect in one of Sir Charles Bell's essays, in the Philosophical Transactions, which, indeed, merely states what must be familiar to every one. "Let the eye," says he, "be fixed upon an illuminated object, until the retina be fatigued and in some measure

* Letters on Natural Magic, pp. 49, 50. The Third Letter contains a report and a very interesting case of spectral illusions.

† Letters on Natural Magic, p. 39.

exhausted by the image, then, closing the eyes, the figure of the object will remain present to them; and it is quite clear that nothing can change the place of this impression on the retina. But notwithstanding that the impression on the retina cannot be changed, the ideas thence arising may; for, by an exertion of the voluntary muscles of the eyeball, the body will appear to change its place, and it will, according to our feeling, assume different positions, according to the muscle which is exercised." This is what takes place when the impression is on the retina; and if spectral illusions be the consequence of such an impression, it follows that, "by an exertion of the voluntary muscles of the eyeball," the apparition "will, to our feeling, assume different positions." Now, in *not one* of the numerous cases of which we have perused the details, *did such a phenomenon occur*. In every instance, the evolutions of the spectres exactly resembled those of actual beings. Yet Sir David Brewster, in apparent contradiction of what he says in the passage last quoted from his book, tells us a few pages farther on, "that the spectres conjured up by the memory or the fancy," "appear in front of the eye, and *partake in its movements* exactly like the impressions of luminous objects after the objects themselves are withdrawn." (P. 49). This very remarkable doctrine rests, he says, on experimental evidence; but unfortunately he has considered it "out of place in a work like this," to advance that evidence, "or even to explain the manner in which the experiments themselves must be conducted."

In the appendix to Dr Hibbert's work are presented "sketches of the opinions, ancient and modern, which have been entertained on the subject of apparitions." Here abundant details are given of all sorts of absurd theories, but not a word is said respecting the notions of Bayle, Voltaire, or Shenstone. A passage, however, is quoted from an essay on apparitions, attributed to M. Meyer, a professor in the University of Halle, A. D. 1748, and embodying a theory considerably analogous to theirs. It assumes the materiality of ideas. With this we shall conclude the present article.

"I shall suppose," says the professor, "that I have lost a parent whom I have loved—whom I have seen and spoken to an infinity of times. Having perceived him often, I have consequently preserved the material figure and perception of him in the brain. For it is very possible, and reconcilable to appearances, that a material figure, like that of my deceased friend, may be preserved a long time in my brain, even after his death. By some intimate yet unknown relation, therefore, which the figure may have to my body, it may touch the optic or acoustic nerves. In the very moment, then, that my nerves are affected in the same manner that they formerly were when I saw or listened to my living friend, I shall be necessarily induced to believe that I really see or hear him as if he were present."

ARTICLE VIII.

FATALISM AND PHRENOLOGY.

It is still very frequently objected to Phrenology, that it leads to the doctrine of necessity of action, or, in the usual language, fatalism. We have never been able to perceive clearly, how the two subjects have any particular connexion. In what manner, we ask, *does* Phrenology lead to fatalism? "It ascribes to man," say the objectors, "cerebral organs of which certain innate dispositions are the necessary concomitants; innate dispositions unavoidably produce determinate actions; man, therefore, is necessarily and irresistibly impelled to act in a determinate manner—in other words, he is under the influence of fate." The argument, in short, is neither more nor less than this,—that, supposing the dispositions of man to be innate, his actions must partake of necessity. If this be a sound conclusion, all systems of philosophy which teach the innateness of the human faculties, (and such systems exist in abundance), lead to the doctrine of necessity; their position with reference to the point at issue being exactly the same as that of Phrenology. Simple and unprejudiced observation of human life is, we imagine, sufficient to prove the innateness of the faculties, and that the individuals of the race are endowed with them in different degrees: Phrenology merely confirms the results of observation, and elucidates the *causes* of perceived and indubitable phenomena. It is absurd, therefore, to object to Phrenology in particular on the score of necessity, and to allow the other systems to remain undisturbed as perfectly harmless. If the new system leads to necessity, it is impossible to avoid the conclusion that the old systems lead to it also. Christianity itself,—which teaches the innateness of human dispositions, and the inherent variety of their force among individuals,—which teaches that "the tree is known by his fruit," and "that a good man, out of the good treasure of the heart, bringeth forth good things, and an evil man, out of the evil treasure, bringeth forth evil things," (Matt. xii. 33, 35.),—Christianity itself, we say, is equally liable to the charge. The objectors ought to be aware, that if they could prove Phrenology to have in this respect an evil tendency, they would at the very same time inevitably demonstrate the evil tendency of the Christian religion. Unless they are prepared for this result, which possibly has not occurred to them, they will act wisely in quitting the field.

The whole question may be disposed of in a single sentence.

If christianity and phrenology be true, the dispositions of men are innate and unequally portioned out among individuals ; if the doctrine of necessity of action be the logical consequence of this, it cannot be a dangerous doctrine, for error alone is hurtful ; if necessity be not the logical consequence, then neither christianity nor phrenology leads to it. It is therefore of no importance, so far as phrenology is concerned, whether actions are necessary or not : the question is purely metaphysical, and must be decided on its own merits. The necessitarian, and the believer in free will, may heartily concur in admitting the truth of phrenology.

The following remarks bearing upon this subject, form part of a letter in the *Manchester Times* of 9th November 1838, in answer to the objection, brought forward in a discussion which followed one of Dr Epps's lectures, that phrenology " leads to the doctrine of fatalism, and consequently is directly opposed to Divine revelation."

" Let us now examine," says the writer, " whether the Scriptures contain any thing favourable or adverse to phrenology ; it is true they say nothing immediately concerning it, but they treat largely of man individually and men collectively. Is there any thing in Revelation which confirms the phrenological doctrine of a variety of mental endowments in different individuals ? If we examine a few passages which I shall notice, I think we shall be fully satisfied that there is. In the 25th chapter of Saint Matthew's Gospel, we find a parable recorded of a man leaving his own country, and committing to three of his servants a certain number of talents or pieces of money each ; to one five talents, which he made ten ; to another two, which he increased to four ; and to the other one, who neglected to use it : they were each accountable for what they received, and each received what it pleased their lord to give him. He with one was not accountable for five but one, and he who had five committed to his trust was accountable for more than one—namely, five : the passage clearly recognises a difference in their several abilities, as well as a difference in their responsibility ; for it is evident that the Saviour is teaching his people the duty of exercising the abilities which he has given them in the promulgation of his doctrines, &c. The 6th, 7th, and 8th verses of the 12th chapter of St. Paul's Epistle to the Romans clearly teach a difference in mental qualifications, &c. In the 1st Epistle of Saint Peter, 4th chapter, 10th and 11th verses, exactly similar teaching occurs. In Saint Paul's 1st Epistle to the Corinthians, 4th chapter, the doctrine is as clearly taught as words can teach any thing. The Church at Corinth were remarkable for the variety and power of their qualifications, (I use the word " church" in its legitimate sense, a congregation, and not a building) ; and, as was not unnatural,

their pride led them to boast one over the other, each supposing that merit was due to him for his superior abilities; the Apostle, in the 7th verse, corrects them in these remarkable and beautiful words:—"For who maketh thee to differ from another? And what hast thou that thou didst not receive? Now, if thou didst receive it, why dost thou glory as if thou hadst not received it?" Again, in the 7th chapter of the same epistle, Saint Paul, after giving the Corinthians some instruction on the subject of marriage, in the 7th verse expresses a wish that all men were, like himself, capable of living a blameless life of celibacy. "But," says he, "every man hath his proper gift of God, one after this manner, and another after that." I shall notice only one out of many more passages on the subject, the 13th chapter of Saint Matthew's Gospel, in the celebrated parable of the sower and the seed. In the 8th verse, we are told that some of the seed fell into good ground, and brought forth fruit, some an hundred fold, some sixty fold, and some thirty fold; in the 23d verse Christ gives this exposition of the passage:—"But he that received seed into the good ground, is he that heareth the word and understandeth it, which also beareth fruit, and bringeth forth some an hundred fold, some sixty, some thirty." Now, the seed is the same in all the three, and the ground is also good in the three cases; why, then, should there be such an amazing difference in the proceeds? Simply because the man who brought forth an hundred fold had a better mental and moral development than the sixty-fold one. These passages from Holy Writ, will, I conceive, be amply sufficient to prove that phrenology does not stand alone upon this important point; in fact, daily observation and experience, divine revelation, and true science, here meet in perfect harmony and join in one voice, to proclaim this so much dreaded truth."

ARTICLE IX.

WISDOM AND REASON; or HUMAN UNDERSTANDING considered with the ORGANIZATION, or with the FORM and Nature of the Solids and Fluids of the Body. How much their wrong or different Formation may affect our Wisdom, Judgment, or Reason. Some EXAMINATIONS about Wisdom; as also of our common Conduct and Learning, and the most material affairs of Human Life: with REFLECTIONS upon a Single and Married State; and of the Education of Youth in General. London, 1714. Pp. 144.

THE desolate condition in which the philosophy of mind was found by Gall and Spurzheim, must be ascribed mainly to neglect, on the part of preceding inquirers, of the connexion which

subsists between the mental faculties and organized matter. Since the time of Locke, in particular, it has been the fashion to speculate on the human mind as if it were totally independent of the material world, and governed by laws peculiar to itself. While such, however, has been the general custom of metaphysicians, there have not been wanting acute and observant men, who not only perceived the error of the usual practice, but even pointed out the direction in which substantial knowledge of mental philosophy was to be found. One of the most sagacious of these was the author of the curious work of which the title is prefixed to this article, and a copy of which was some time ago presented to the Phrenological Society by Mr W. C. Trevelyan. The subjects discussed in it have a close bearing on the doctrines of Phrenology; and the author's acuteness of observation and soundness of judgment have led him in several instances to the very threshold of Gall's discovery. His "anticipation of Phrenology," as it will probably be termed by some, makes a nearer approach to the modern system than any other that has come to our knowledge. Many of the hints thrown out are exceedingly shrewd: those on education, marriage, and diversity of opinion, are particularly worthy of attention. The work is so rare, that the title does not even appear in Watt's *Bibliotheca Britannica*. For these reasons, we subjoin, in the author's own words, and with only a slight alteration in the arrangement of some of the paragraphs, the more interesting and instructive of his remarks.

The whole design of this treatise (says he) is to shew the vast variety and difference in the organization, or the various forms of human creatures, as well as in all other things of the creation; and as there are so many degrees or different formations among men, so their inclinations, tempers, passions, and opinions, will be as various. Wisdom, in few words, I understand to be the soul's acting in a well-organized body, with just instruments, ideas or notions; which will undoubtedly tend to the benefit of society. By *ideas*, I understand the stamps, impressions, tablets, or representations of things, objects, or words, said to be made, stamped, or imprinted in the substance of the brain, whether so from common touching, or by any means or modellation of the rays of light from objects, or the forced air by sounds, or by exhalations to the smelling, or the aliment in tasting; ideas being only the effects, remains, or footsteps of things, and not any real thing or body, as some, although I think very absurdly, do suppose. As to the nature of the soul, that being out of my sphere, or beyond my reach, is what I have not entered into, but leave the definition to those who know more about it. I only consider the body and it together, while in a compound being; and have endeavoured to shew, that the just operations

of the latter upon the former are altogether owing to the perfection or exactness of the organization, although I am sensible there may be bad effects from wrong representations or ideas, without any defect in the body.

I know that treating on such subjects oftentimes lays men open to be villanously branded or stigmatized with some base name, as atheist, deist, sceptic, &c., without taking the trouble, or endeavouring to reconcile things to reason or scripture; so he who first mentioned the Antipodes, was put in the inquisition. But, alas for religion! these noisy hypocritical zealots think they have enough if they go but frequently to church; yet I wish they may not reasonably be found to be the greatest atheists, since often demonstrated by their actions; they neither believe God or devil, but make large pretensions as a cloak to their farther knavery. I wish that the actions of men's lives were regarded rather than words, since from that, I think, we can best judge of a man's thoughts; for the greatest charlatans and pretenders have the finest words or speeches.

The great and wise Creator of all things seems to have been pleased to order it so, that not any one thing, though of the same species, should every way be formed or proportioned exactly like another; and in this the Almighty seems to have shewn his most wonderful and miraculous power, by making every thing, even of the same species, to differ one from another; and this vast variety must occasion much more wonder, pleasure, and admiration, than to have had but one thing; or even for the same species of creatures to have been exactly the same, would have afforded no great satisfaction.

That the blood or fluids of animals differs, as well as the solids, seems very probable; or the different proportions of the grumous and serous, or more glutinous, salt, or thin. Yet whether to attribute the different passions and inclinations of body and mind to these, or to the solid structure of the body, or to both, I shall not pretend to determine.

But to return to the structure of the body: it seems necessarily to follow, that, if it be possible for two engines to be exactly the same, they must consequently do one and the same offices; or the nearer they come in likeness to one another, the nearer will they perform; and the greater the disproportion, the more must the difference in the performance of their offices be.

The same, then, may reasonably be said of all animals, and consequently of human creatures; so that men and women (as well as other creatures), such as brothers and sisters, &c., who come nearest in likeness to one another, are generally near in temper.

I know it may be objected, that this rule does not always hold; but it is probable they may mistake, from not considering

it rightly. As, for example, if two who seem to be like to one another, are not however near in temper, although like in face, [they]* may be very different in their bodies, each part of which differs as much as a face; but although e'en like in body too, yet the form of the head or brain, which is the principal part to be noticed, may be very much different. On this occasion, the common saying may be well applied, "He is a fool, [who] has got a knock in the cradle;" that is, by a stroke or blow when young, a depression has [been] made on the cranium or skull, so as in some measure to alter the form and figure of the brain; which hath made him a changeling.

We find this confirmed likewise in people come to years, where they have received a great wound in the head, or depression of the skull; they afterwards incline to be crazie, especially when the brain has been any way touched or affected. It may likewise be observed, that our wisdom or capacity increases with the organs, and oftentimes also decreases with them.

Nor can it be alleged that one body differs only from another in bigness or smallness, but every the most minute part seems to have something different in its form; as may be seen by the bones, and comparing the most minute parts together.

The difference of the inclinations, passions, wisdom, and folly, seems to be owing to the different figures or form of the human body or brain; although, it is true, custom may have some effect, yet not to be compared to the other. As likewise [it seems] that the difference of our opinions and reasonings may in a great measure be owing to that as well as to our ideas; for if all or any of our senses differs in any way from that of our neighbours, the same sense will in some measure convey to us a different notion, impression, or idea of the external object. It is very probable that this same difference of impressions, upon that different organization of the brain, may in a great measure excite the various passions and inclinations of the body or mind, and may very much contribute to the difference of opinion in reasoning; so that this variation of the solid structure or form of the body, as also of the blood or fluids, may be called difference of temper; and this, with interest and education, may probably be said to be the great causes of those many disagreements we so commonly find betwixt man and man.

And if we did but take time seriously to reflect and think a little on this, it would make us more cautious, and consequently much more wise, in not too rashly judging of any other man's judgment, wisdom, reason, or opinion, excepting in those things which are contrary to the diotates and great rules of morality,

* The author tells that his "absence from the press" has occasioned several errata. These we take the liberty of correcting, even where they are not included in his own list at the end of the book.—E.D.

and denied by all good men and civil societies. I can never enough wonder at the impudence and vanity of some men, (which, however, seems to be the greatest sign of ignorance), who would have all the world to believe that their reason is preferable to all mankind's. But may not one as easily, and with as much reason, endeavour to persuade the world that he has the most beautiful and handsomest or best form of body and face in it! Since it is not to be doubted that our reason and judgment is as much different, one from another, as we are in forms and faces; and it may, probably, be as easy for him to prove the one as the other; since—so many men, so many minds. Not but that we may, in a friendly manner, endeavour to represent things rightly (or according to our notions or conceptions of them) to one another; but if that will not do, it is probably the best way to decline it, since it is to be feared that they have contracted too strong a prejudice, habit, custom, or interest, if [they be] not likewise vitiate in the organization or form and nature of the solids and fluids of the body: For it seems but too apparent, that there are a vast many who are loath to change their religion or church, only from being used and habituate to that place, and from an unwillingness to leave their old acquaintance there and its customs. For if we find a man unwilling to leave an old accustomed place, or tavern, friends, company, or coffee-house, he has been used to all his life, and from whose people or companies he receives friendships, civilities and favours,—how much more must this make him adhere to the former. And these, I say, with the strength of interest, we shall find to go a great length in the hindering multitudes to change from one sect to another.

Wisdom, or the understanding itself, is not, I think, capable of being any way made better or worse, but only by an alteration of the solids or fluids of the body*; for the various objects and ideas we receive, only serve as instruments for the better conveying of our judgment to others, or to make us more capable of thinking or judging of a greater variety of things, or in such a particular way, science, or trade. Thus, then, a man of learning, and one of no learning, if equally proportioned in the solids and fluids of the body, or, exactly the same (if that were possible), are equally wise, understanding, or judicious; only that the first has greater embellishments of art, or handsomer and more convenient instruments, by which he more neatly and mo-

* "Can we change our character?" asks Voltaire. "Yes—if we change our body. A man born turbulent, violent, and inflexible, may, through falling in his old age into an apoplexy, become as a silly, weak, timid, puting child. His body is no longer the same; but so long as his nerves, his blood, and his marrow remain in the same state, his disposition will not change any more than the instinct of a wolf or a polecat."—*Philosoph. Dict. voce CHARACTER.*

dishly conveys or gives his judgment to another; or has a greater number of ideas the better to fit him for such or such a way, science or trade; and this is esteemed, according to the times, fashion, place, or country. For if two who have all right ideas, the one a great many, the other but a few, and if he who has the many comes to reason upon the few which the other has, their judgments or wisdom will be equally the same.

But if it should be alleged that the custom of receiving many new ideas, much more exercises the organization of the brain, and consequently keeps those parts more penetrable, free, or open, which might otherwise grow up, or become more indocile, hard or callous; this, in the first place, would prove the power or difference of the organization, for that then the organs or man is altered; and, secondly, it may be a very great question, whether the continual looking upon two or three objects does not keep those passages as open, free, or penetrable, as the looking upon two or three thousand; since, probably, we can look but very directly at one at a time.

Nor can it be said that a man is less wise or reasonable by his judging with wrong or biassed ideas, which he has received by the prejudice of education from parent or master: since, if these things are by them laid down for certainties, he judges accordingly; and yet Wisdom, or the Understanding, in itself, or in him, will still be found to be the same, even as much as if he judged with right ideas, although the effects of the first judgment cannot be said to be so good. Nor are languages any way capable of bettering the judgment, wisdom, or understanding; since, at best, they can make nothing but instruments, and perhaps very frequently do more prejudice than good; for they often divert men in only thinking or cavilling about words, whereas that wisdom or reason might be employed to better purpose.

This we plainly see; for pedants and schoolmasters are not men of the greatest sense, nor can we say that the most profoundly learned man is any way more wise than he who has none, or can be said to be nothing but as a science, art, or trade he has served his time to; by which, according to the mode of the place where he has learned, he may be said to convey his thoughts more handsomely, and would have been just as wise had he been put to making of shoes, only that he could not have expressed himself so modishly, or would not have had so many ideas of different sciences, subjects, or trades, to have talked upon. What is commonly taught at the university, such as logic, the common philosophy, metaphysics, with great parts of other sciences, may, with their bombast words and terms, be said to have made up a particular sort of dialect, or gibberish

language, in which these students speak, and doubt of all men's understanding who do not talk in that way.

Nor can language, history, or experience be said any way to be better, or add to wisdom or the understanding; these serving only as a greater number of ideas or instruments, by which we may more capably, quickly, or handsomely receive or understand the meaning and thoughts of another person, or the circumstances of an affair, in such a way, or in such a particular science, trade, art, or business. For his understanding or wisdom will be still the same if he has none of these; but if the organization be wrong, all the ideas in the world will not make him wise.

The next thing I shall put in question is, Whether the dead languages and hypothetical philosophy are such just ideas, or so useful to our reason and judgment, as the living languages and various customs of place and country, with experimental philosophy? I think none can deny but that the latter seems to make the truest and most useful ideas or instruments, being the most certain; so that, although wisdom or the understanding is still the same, yet, by the first, education may be biassed in his judging, or give judgment according to those wrong ideas; whereas the latter, being right, judges rightly.

This, I think, may be confirmed by many instances, both modern and ancient; as, for example, some of the wisest, most ingenious, and most politic men, we have not found to be the most profoundly learned, or masters of that universal learning so much esteemed amongst us: not to name the more ancient, or those of the more remote climates, let us but consider this present King of France, Mazarine, Colbert, Oliver Cromwell, Duke of Rohes, Shakspeare, Johnson, Butler, D'Avenant: and it may be a very great question, whether the former might have appeared so great in politics or knowledge of men of the world, had their education been more bookish; since I think no man can say he ever saw a very studious or very learned man scarce to know, or fit to live in the world, unless he come to throw it in a great measure aside: or is it possible it can be otherwise, since the bent of a man's thoughts cannot run to perfection but one way; for if his applications be divided, what he gets one way he loses the other, excepting in those studies which have an affinity, or help one another.*

Nor can we pretend that any of the most learned in languages have gone beyond the primitive fathers in their original tongues,

* The author's opinion as to the importance of a knowledge of the dead languages is identical with the views which we have repeatedly endeavoured to enforce. See, in particular, vol. iv. p. 408; vi. 538; and vii. 261, 421. It is astonishing how firmly these languages even yet keep their ground in our institutions for education.—ED.

or, indeed, who has writ better than David or Solomon, as also many others, who cannot be said to have been inspired, or ever received the Christian faith.

The Grecians and Romans always writ in their original tongues, the latter of which went to Egypt and Greece to learn the language or customs of the place (without studying the dead tongues), as we may go to France, Holland, or Italy.

Nevertheless, the Greek and Latin are more necessary to us, whose laws, physic and divinity so much depend upon those authors.

Yet I think it cannot be said or alleged that these add one grain to wisdom, reason, or human understanding; and were it possible to make a just, full, and exact translation, our judgment of it must be the same, whether with or without the language. From these, then, and such like considerations, I conceive that the greatest perfection of wisdom or the understanding, is absolutely depending upon the perfection of the organization or exactness of the human proportion (especially the brain) or the good form of the solids and fluids of the body.

For it is evident that no part of the body seems so much to affect our reason or wisdom as the head and brain being well or ill formed, which is the principal [organ]; together with the fluids being in a proper state.

For this seems to be the more noble part of the body; the seat of all the senses; the *sensorium commune*; and chief seat of wisdom and reason, or the understanding.

(To be concluded in next Number.)

ARTICLE X.

A TREATISE ON THE NATURE AND CAUSES OF DOUBT IN RELIGIOUS QUESTIONS; WITH A PARTICULAR REFERENCE TO CHRISTIANITY. London, Longman & Co. 1831. 12mo. Pp. 194.

THE object of the author of this Treatise is to prepare the minds of inquirers for the study of formal works on the Evidences of Christianity, by removing causes which either indispose for, or hinder conviction from, an examination of those evidences. The causes of religious doubt he considers under two heads, Intellectual and Moral. The intellectual are, 1st, "Misconceptions as to the nature of the proof in religious questions;" and, 2d, "Inadequate acquaintance with the facts of the Christian evidence." The moral are, 1st, "Excess in some legitimate propensities;" 2d, "Pride;" 3d, "Want of adequate

seriousness;" and, 4th, "Fear." In the Appendix, which we think the most valuable portion of the work, the author has collected a number of extracts from eminent writers, with the view of solving various popular difficulties. Materialism is one of the subjects discussed; and in none of his arguments does the author arrive at a more satisfactory conclusion.

Some years ago Phrenology was very currently objected to, on the ground that it leads to Materialism; but the objectors thought it prudent to hold their peace, as soon as they discovered that the universally received doctrine that the brain as a whole is the organ of the mind, must have exactly the same tendency in that respect, as the phrenological principle that each faculty is manifested by a cerebral part peculiar to itself. But it may be asked, What if also the *former* doctrine lead to Materialism? This question we considered at some length, in vol. i. p. 120, where we attempted to prove that, in whatever light the matter is viewed, the cry of Materialism is utterly groundless and unphilosophical. *Even were it demonstrated*, however, that Phrenology is subversive of the notion of the soul's immateriality, this would not in the slightest degree affect the question of its *immortality*. Such an assertion will perhaps startle some of our readers; but it is, we think, pretty well borne out by the arguments contained in the following extract from the Treatise under review:—

"Why may not a Materialist be a Christian?—and have not many excellent persons been needlessly alarmed about the opinions of certain foreign physiologists, and their ingenious supporters in this country? I grant, that the inculcation of any doctrine which tends to prove the soul is *necessarily extinct*, when the present organization of the matter of the human body is at end, has a bad moral tendency, and is an uncomfortable doctrine. But who, it may be asked, of the most strenuous asserters of the present dependence of the mind on organization, ever asserted that it may not be *immortal*, notwithstanding?"

"The *immateriality* and *immortality* of the soul, are two *very* different questions; but these have been confounded; and in consequence, many well-intended treatises have altogether failed in their effects upon that class of persons for whom they were chiefly designed.

"Whatever the physiologists alluded to may have thought themselves, or even insinuated; that, because the soul *seems* to terminate with the organization of the matter of the body, it ceases for ever to exist, is not at all a necessary consequence, nor do I think that all who have been treated as if they said so, have meant any thing of the kind.

"The assertion," writes Dr. Elliotson, in his Notes to Blumenbach, 'the assertion that the mind is a power of the living brain, is not an assertion that it is material; for a power or

property of matter cannot be matter; neither is it an assertion that this power cannot be something immortal, subtle, immaterial,—diffused through and connected with the brain. Nor, because we refuse to listen to a mere hypothesis, respecting spirit; are we necessarily to deny the resurrection. For if a divine revelation pronounce that there shall be another order of things, in which the mind shall exist again, we ought firmly to believe it, because neither *our experiences nor our reason can inform us what will be hereafter; and we must be senseless to start objections on a point beyond the penetration of our faculties.**

“This is, to my mind, a just and admirable statement of the case; and it is assuredly giving the arguments of some sceptical physiologists a degree of importance in a religious point of view, which they do not merit, and encouraging a notion that physiological or any other researches are hostile to Christianity, for men to write and speak of them in the illiberal manner of some well-intentioned and excellent people, who have, however, proved themselves very unequal to the subject,—and by the confusion spread by them over the whole question, applying some passages in senses which the professional delinquents never meant, and arguing as if the soul, because it now seems to depend on the organization of the living brain, cannot therefore be *immortal*, have made many more sceptics than they have convinced.

“The celebrated Dr Rush, of America, remarks, I think most justly, upon this subject, that ‘*the writers in favour of the immortality of the soul have done that truth great injury by connecting it necessarily with its immateriality.*’ The immortality of the soul depends upon the will of the Deity, and not upon the supposed properties of spirit. Matter is in its own nature as immortal as spirit. It is resolvable, by heat and moisture, into a variety of forms; but it requires the same Almighty power to annihilate, that it did to create it. I know of no arguments to prove the immortality of the soul, but such as we derive from the Christian revelation.’—*Medical Inquiries and Observations*, vol. ii., p. 15, as quoted by Elliotson, p. 77.

“All the great ends of morality and religion (writes Mr Locke), are well enough secured, without philosophical proofs of the soul’s immortality; since it is evident, that He who made us first begin to subsist here, sensible and intelligent beings, and for several years continued us in such a state, can restore us to the like state of sensibility in another world, and make us capable there to receive the retribution he has designed to men, according to their doings in this life. And, therefore, it is *not of such mighty necessity to determine one way or the other*, as some, over-zealous, *for, or against*, the immortality of the soul, have

* Blumenbach’s *Elements of Physiology*, by Dr Elliotson, 4th Edition, p. 72-75.

been forward to make the world believe.'—*Essay*, Book iv., ch. iii., sec. vi.

“ It seems to have been too much taken for granted, by writers on these questions, that the Scriptures assert the strict immateriality, as well as the certain *immortality* of the human soul ; this is a great error ! The Scriptures are plain enough on the latter point ; on the former, good men may, I am convinced, and will, more or less, always differ. A materialist *may* be an infidel, but not at all *necessarily*, as we have seen.

“ ‘ It is of no consequence in the world to any purpose of religion (remarks the profound Mr Hallet), whether the soul of man be material or immaterial. All that religion is concerned to do, is, to prove that that which now thinks in us, shall *continue* to think, and be capable of happiness or misery for ever. This religion proves, from the express promises and threatenings of the gospel. But religion is not concerned to determine of what *nature* this thinking immortal substance is.

“ ‘ For my part, I judge it to be immaterial ; but if a man should think that the soul is mere matter, endowed with the power of thought, he would not overturn any article in religion, that is of the least consequence to promote the *ends* of religion. For, while a man thinks that his soul is matter, he necessarily thinks, that God, who made matter capable of thinking, and endowed the matter of his soul in particular with the power of thought, is capable, by the same Almighty power, of preserving the matter of his soul capable of thinking for ever.’

“ I will now draw this extended note to a conclusion, with a passage from the writings of one of the least bigoted and most intellectual men that perhaps ever lived ; in which, I heartily concur. ‘ Believing, as I do, in the truth of the Christian religion, which teaches that men are accountable for their actions ; I trouble not myself with dark disquisitions concerning necessity and liberty, *matter and spirit*. Hoping, as I do, for eternal life through Jesus Christ, I am not disturbed at my inability, clearly to conceive myself, that the soul *is, or is not*, a substance distinct from the body.’ Nor *need* any one ! To ascertain this positively, is beyond our faculties. The *objections*, from experience or reason, either way, neither help *nor hinder* us.”

ARTICLE XI.

THE PHILOSOPHY OF SLEEP. By ROBERT MACNISH, Author of "The Anatomy of Drunkenness," and Member of the Faculty of Physicians and Surgeons of Glasgow. Second Edition. Glasgow: W. R. M'Phun. 1834. Pp. 336.

IN noticing (Vol. VI. p. 576) the first edition of this work, we mentioned that the author had adopted the phrenological explanation of dreaming and other phenomena connected with sleep, but that it would have been satisfactory if he had brought Phrenology more conspicuously forward. In the second edition, we are glad to perceive, no reserve whatever is manifested with respect to the science. On the contrary, the phrenological doctrines openly and undisguisedly pervade the whole work; and in the preface, Mr Macnish, with a degree of boldness and honesty which some other writers would do well to imitate, has made the following declaration of his opinions:—"The disciples of Gall assume that his system, having ascertainable facts to illustrate it, is at all times susceptible of demonstration—that nothing is taken for granted, and that the inquirer has only to make an appeal to nature to ascertain its fallacy or its truth. The science is entirely one of observation: by that it must stand or fall, and by that alone ought it to be tested. The phrenological system appears to me the only one capable of affording a rational and easy explanation of all the phenomena of mind. It is impossible to account for dreaming, idiocy, spectral illusions, monomania, and partial genius, in any other way. For these reasons, and for the much stronger one, that having studied the science for several years with a mind rather hostile than otherwise to its doctrines, and found that nature invariably vindicated their truth, I could come to no other conclusion than that of adopting them as a matter of belief, and employing them for the explanation of phenomena which they alone seem calculated to elucidate satisfactorily. The system of Gall is gaining ground rapidly among scientific men, both in Europe and America. Some of the ablest physiologists in both quarters of the globe have admitted its accordance with nature; and, at this moment, it boasts a greater number of proselytes than at any previous period of its career. The prejudices still existing against it result from ignorance of its real character. As people get better acquainted with the science, and the formidable evidence by which it is supported, they will think differently." These sentiments, circulated in a work so popular as that under review, will, we doubt not, have considerable effect in restoring gravity to the countenances of those who still amuse themselves by smil-

ing at the absurdity of a doctrine of which they are profoundly ignorant.

One great recommendation of "The Philosophy of Sleep," considered as a book intended for general perusal, is, that while containing much solid instruction, it is rendered exceedingly amusing by the varied cases and anecdotes with which it abounds. It is only by studying the phenomena detailed in cases, that general principles can be arrived at; and we therefore consider Mr Macnish's work to be one of great value, as a contribution to the philosophy of human nature. The author displays much industry, as well as judgment, in the collection of his cases; and while, on the one hand, he is obviously far from being inclined to the marvellous, on the other he candidly ascribes due weight to whatever is supported by philosophical evidence. The second edition has been enriched with many important additions; in particular, a long chapter on Spectral Illusions, one of the most interesting portions of the work, has been added. The author has adopted without scruple the phrenological explanation of these illusions, and has given a full and correct exposition of it. A vast number of illustrative cases, many of them quoted from our own pages, have been brought together. This chapter will be of great utility in restoring peace to the minds of those who are so unfortunate as to see apparitions, but are ignorant of the causes by which they are produced. The case of Miss S. L., reported by Mr Simpson in the second volume of this Journal, is cited as one which, "for singularity and interest, equals any thing of the same kind which has hitherto been recorded." Mr Macnish gives the following interesting account of a vision seen by himself.

"In March 1829, during an attack of fever, accompanied with violent action in the brain, I experienced illusions of a very peculiar kind. They did not appear except when the eyes were shut or the room perfectly dark; and this was one of the most distressing things connected with my illness; for it obliged me either to keep my eyes open or to admit more light into the chamber than they could well tolerate. I had the consciousness of shining and hideous faces grinning at me in the midst of profound darkness, from which they glared forth in horrid and diabolical relief. They were never stationary, but kept moving in the gloomy back-ground: sometimes they approached within an inch or two of my face; at other times they receded several feet or yards from it. They would frequently break into fragments, which, after floating about, would unite—portions of one face coalescing with those of another, and thus forming still more uncouth and abominable images. The only way I could get rid of these phantoms, was by admitting more light into the chamber and opening the eyes, when they instantly vanished;

but only to reappear when the room was darkened or the eyes closed. One night, when the fever was at its height, I had a splendid vision of a theatre, in the arena of which Ducrow, the celebrated equestrian, was performing. On this occasion, I had no consciousness of a dark back-ground like to that on which the monstrous images floated; but every thing was gay, bright, and beautiful. I was broad awake, my eyes were closed, and yet I saw with perfect distinctness the whole scene going on in the theatre—Ducrow performing his wonders of horsemanship—and the assembled multitude, among whom I recognised several intimate friends; in short, the whole process of the entertainment as clearly as if I were present at it. When I opened my eyes, the whole scene vanished like the enchanted palace of the necromancer; when I closed them, it as instantly returned. But, though I could thus dissipate the spectacle, I found it impossible to get rid of the accompanying music. This was the grand march in the opera of Aladdin, and was performed by the orchestra with more superb and imposing effect, and with greater loudness, than I ever heard it before; it was executed, indeed, with tremendous energy. This air I tried every effort to dissipate, by forcibly endeavouring to call other tunes to mind, but it was in vain. However completely the vision might be dispelled, the music remained in spite of every effort to banish it. During the whole of this singular state, I was perfectly aware of the illusiveness of my feelings, and, though labouring under violent headach, could not help speculating upon them, and endeavouring to trace them to their proper cause. This theatrical vision continued for about five hours; the previous delusions for a couple of days. The whole evidently proceeded from such an excited state of some parts of the brain, as I have already alluded to. *Ideality, Wonder, Form, Colour, and Size*, were all in intensely active operation; while the state of the reflecting organs was unchanged. Had the latter participated in the general excitement, to such an extent as to be unable to rectify the false impressions of the other organs, the case would have been one of pure delirium." To shew how little spectral illusions are dependent on sight, Mr Macnish adverts to the fact that the blind are frequently subject to them:—"A respected elderly gentleman," says he, "a patient of my own, who was afflicted with loss of sight, accompanied by violent headaches and severe dyspeptic symptoms, used to have the image of a black cat presented before him, as distinctly as he could have seen it before he became blind. He was troubled with various other spectral appearances, besides being subject to illusions of sound equally remarkable; for he had often the consciousness of hearing music so strongly impressed upon him, that it was with difficulty his friends could convince him it was purely ideal."

The sixteenth chapter contains a graphic description of reverie: "Reverie proceeds from an unusual quiescence of the brain, and inability of the mind to direct itself strongly to any one point: it is often the prelude of sleep. There is a defect in the *attention*, which, instead of being fixed on one subject, wanders over a thousand, and even on these is feebly and ineffectively directed. We sometimes see this while reading, or, rather, while attempting to read. We get over page after page, but the ideas take no hold whatever upon us: we are in truth ignorant of what we peruse, and the mind is either an absolute blank, or vaguely addressed to something else. This feeling every person must have occasionally noticed in taking out his watch, looking at it, and replacing it without knowing what the hour was. In like manner he may hear what is said to him, without attaching any meaning to the words, which strike his ear, yet communicate no definite idea to the sensorium. Persons in this mood may, from some ludicrous ideas flashing across them, burst into a fit of laughter during sermon or at a funeral, and thus get the reputation of being either grossly irreverent or deranged. That kind of reverie in which the mind is nearly divested of all ideas, and approximates closely to the state of sleep, I have sometimes experienced while gazing long and intently upon a river. The thoughts seemed to glide away, one by one, upon the surface of the stream, till the mind is emptied of them altogether. In this state we see the glassy volume of the water moving past us, and hear its murmur, but lose all power of fixing our attention definitively upon any subject; and either fall asleep, or are aroused by some spontaneous reaction of the mind, or by some appeal to the senses sufficiently strong to startle us from our reverie. Grave, monotonous, slowly-repeated sounds—as of a mill, a waterfall, an Æolian harp, or the voice of a dull orator, have the effect of lulling the brain into repose, and giving rise to a pleasing melancholy, and to calmness and inanity of mind. Uniform gentle motions have a tendency to produce a similar state of reverie, which is also very apt to ensue in the midst of perfect silence; hence, in walking alone in the country, where there is no sound to distract our meditations, we frequently get into this state. It is also apt to take place when we are seated without books, companions, or amusement of any kind, by the hearth on a winter evening, especially when the fire is beginning to burn out, when the candles are becoming faint for want of topping, and a dim religious light, like that filling a hermit's cell from his solitary lamp, is diffused over the apartment. This is the situation most favourable for reveries, waking dreams, and all kinds of brown study, abstraction, ennui, and hypochondria."

The author draws a well founded distinction between reverie

and abstraction, two states which are frequently confounded. In the former, a difficulty is experienced in making the mind bear strongly on any one point, while, in the latter, "its whole energies are concentrated towards a single focus, and every other circumstance is, for the time, utterly forgotten." He thinks, that persons with deficient Concentrativeness are apt to fall into reverie, and that a large development of the organ predisposes to abstraction. We believe this view to be sound. The cases of abstraction related by Mr Macnish are irresistibly ludicrous.

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

The following explanation of sleep-talking is clear and satisfactory. "Sleep-talking closely resembles somnambulism, and proceeds from similar causes. In somnambulism, those parts of the brain which are awake call the muscles of the limbs into activity; while, in sleep-talking, it is the muscles necessary for the production of speech which are animated by the waking cerebral organs. During sleep, the organ of *Language* may be active, either singly or in combination with other parts of the brain; and of this activity sleep-talking is the result. If, while we dream that we are conversing with some one, the organ of *Language* is in such a high state of activity as to rouse the muscles of speech, we are sure to talk. It often happens, however, that the cerebral parts, though sufficiently active to make us dream that we are speaking, are not excited so much as to make us actually speak. We only suppose we are carrying on a conversation, while, in reality, we are completely silent. To produce sleep-talking, therefore, the brain, in some of its functions, must be so much awake as to put into action the voluntary muscles by which speech is produced."

The chapter on drowsiness describes so excellently the effects of the lymphatic temperament, that we cannot refrain from quoting a portion of it. "There are persons who have a disposition to sleep on every occasion. They do so at all times, and in all places. They sleep after dinner; they sleep in the

theatre ; they sleep in church. It is the same to them in what situation they may be placed : sleep is the great end of their existence—their occupation—their sole employment. Morpheus is the deity at whose shrine they worship—the only god whose influence over them is omnipotent. Let them be placed in almost any circumstances, and their constitutional failing prevails. It falls upon them in the midst of mirth ; it assails them when travelling. Let them sail, or ride, or sit, or lie, or walk ; sleep overtakes them—binds their faculties in torpor, and makes them dead to all that is passing around. Such are our dull, heavy-headed, drowsy mortals, those sons and daughters of phlegm—with passions as inert as a Dutch fog, and intellects as sluggish as the movements of the hippopotamus or leviathan. No class of society is so insufferable as this. There is a torpor and obtuseness about their faculties, which render them dead to every impression. They have eyes and ears, yet they neither see nor hear ; and the most exhilarating scenes may be passing before them without once attracting their notice. It is not uncommon for persons of this stamp to fall asleep in the midst of a party to which they have been invited : Mr Mackenzie, in one of his papers, speaks of an honest farmer having done so alongside of a young lady, who was playing on the harp for his amusement. The cause of this constitutional disposition to dose upon every occasion, seems to be a certain want of activity in the brain, the result of which is, that the individual is singularly void of fire, energy, and passion. He is of a phlegmatic temperament, generally a great eater, and very destitute of imagination. Such are the general characteristics of those who are predisposed to drowsiness : the cases where such a state co-exists with intellectual energy are few in number.”

Mr Macnish's observations on the supposed prophetic power of dreams are acute and sensible, and show, that, while disposed to give due attention to well established facts, his mind is free from every thing like credulity. “ There can be no doubt,” says he, “ that many circumstances occurring in our dreams have been actually verified ; but this must be regarded as altogether the effect of chance ; and for one dream which turns out to be true, at least a thousand are false. In fact, it is only when they are of the former description, that we take any notice of them ; the latter are looked upon as mere idle vagaries, and speedily forgotten. If a man, for instance, dreams that he has gained a law-suit in which he is engaged, and if this circumstance actually takes place, there is nothing at all extraordinary in the coincidence ; his mind was full of the subject, and, in sleep, naturally resolved itself into that train of ideas in which it was most deeply interested. Or if we have a friend

engaged in war, our fears for his safety will lead us to dream of death or captivity, and we may see him pent up in a hostile prison-house, or lying dead upon the battle plain. And should these melancholy catastrophes ensue, we call our vision to memory, and, in the excited state of mind into which we are thrown, are apt to consider it as a prophetic warning, indicative of disaster."

The following remarks on the amount of sleep proper to be indulged in are of practical importance. "With regard to the necessary quantity of sleep, so much depends upon age, constitution, and employment, that it is impossible to lay down any fixed rule which will apply to all cases. Jeremy Taylor states that three hours only in the twenty-four should be devoted to sleep. Baxter extends the period to four hours, Wesley to six, Lord Coke and Sir William Jones to seven, and Sir John Sinclair to eight. With the last I am disposed to coincide. Taking the average of mankind, we shall come as nearly as possible to the truth, when we say that nearly one-third part of life ought to be spent in sleep: in some cases even more may be necessary, and in few can a much smaller portion be safely dispensed with. When a person is young, strong, and healthy, an hour or two less may be sufficient; but childhood and extreme old age require a still greater portion. No person who passes only eight hours in bed can be said to waste his time in sleep." It cannot be too forcibly inculcated, that sleep—like food, muscular exercise, and mental exertion—ought always to be in proportion to the wants and capabilities of the system. Parents whose constitutions happen to require very little sleep, ought not to restrict their children, as they sometimes do, to the quantity which suffices for themselves. Much evil results from inattention to the fact that the constitution of no one individual is to be taken as a standard of those of other men.

We would willingly quote many other passages from Mr Macnish's work, but must now desist. The specimens given will doubtless have the effect of causing many of our readers to procure the book itself. We have seldom met with one more worthy of a place in every well furnished library. It will interest equally the reader for amusement, and the philosophical thinker. In phrenological libraries it ought henceforth to be considered indispensable.

ARTICLE XII.

SKULL OF RAPHAEL.

SINCE our last Number was printed, some additional particulars, said to be from a letter written by Signor Thibby to M. Quatremere de Quincy, have appeared in the *Athenæum*. They are as follows :—

“ It is well known that the Academy of St Luke, as the academy of painting is called at Rome, has been for a century in the habit of showing a skull, which they pretend to be that of Raphael. The circumstance of the Academy’s possessing it, was explained by saying, that when Carlo Maratti employed Nardini to produce a bust of the artist for the Pantheon, he had contrived to open the tomb of the great artist, and extract the skull, to serve as a model for the sculptor’s labours. Considerable doubts, however, were cast on the authenticity of the skull, and an authentic document, discovered about two years back, clearly proved the cranium to have belonged not to Raphael, but to Don Desiderio de Adintorlo, founder of the Society of the Virtuosi of the Pantheon, in 1542. This society, in consequence, claimed the head of its founder from the Academy of St Luke, which indignantly resisted the claim, and upheld the skull in its possession to have been veritably that of Raphael. The Society of Virtuosi, after some delay and consideration, summoned the chief members of the Painting Academy to aid in a search after the tomb and remains of Raphael d’Urbino. Taking as their guide the description given by Vassari, in his Lives of Raffaele and Lorenzetto, the commission of research began their explorations by excavating the earth under the statue of the Virgin in the Pantheon. Nor was it long before they were stopped by a piece of masonry, in the form of a grave. Sinking through this for about a foot and a half, they found a void; and supposing, with justice, this to be the depository which they sought, it was opened in all solemnity before the chief magistrates and personages of Rome. When the surface was cleared, a coffin displayed itself, with a skeleton extended within, covered over with a slight coat of dust and rubbish, formed in part by the garments and the lid of the coffin, that had mouldered. It was evident that the tomb had never been opened, and, consequently, that the skull possessed and shown by the Academy of St Luke was spurious. But the dispute was forgotten in the interest and enthusiasm excited by the discovery of the true and entire remains. The first care was to gather up the dust and the skeleton, in order to their being replaced in a new mausoleum. Amid the mouldering frag-

ments of the coffin, which was of pine-wood, and adorned with paintings, were found a *stelletta* of iron, being a kind of spur, with which Raphael had been decorated by Leo X., some buttons and *fibulae*. Pieces of the argil of the Tiber showed that the waters of the river had penetrated into the tomb. The sepulchre had, nevertheless, been carefully built up, the chief cause of the good state of preservation in which the skeleton was found. On the 15th of September (1833), the surgeons proceeded to examine the skeleton, which was declared to be of the masculine sex, and of small dimensions, measuring seven palms, five ounces, and three minutes (five feet, two inches, three lines French measure). In the skull, which has been moulded, may be traced the lineaments of Raphael, as painted in his School of Athens: the neck long, the arm and breast delicate, the hollow of the right arm marked by the *apophyse*, a projection of a bone, caused by incessant working with the pencil. The limbs were stout in appearance, and, strange to say, the larynx was intact and still flexible. The Marquis Biondi, President of the Archaeological Society, enumerated the proofs and circumstances showing this to be the tomb and body of Raphael, in the presence of all the learned and celebrated in Rome. He asked, was there a doubt in any one's mind as to their identity? Not one was found to question it.—In the disposing of the remains, the will of Raphael was consulted, and his wishes again followed. They are to be replaced in a leaden coffin, and more solidly entombed in the same spot where they were found. From the 20th to the 24th, the remains were exposed to the Roman public, whose enthusiasm and tears may be imagined by those who know them. The 18th of October is fixed for the day of the great artist's second funeral, on which occasion the Pantheon was to be brilliantly illuminated."

We have no means of judging of the accuracy of these statements, not having yet learned the result of the promised investigation by a member of the Phrenological Society now resident at Rome. We shall not be surprised, however, if the skull hitherto reputed that of Raphael shall prove to have belonged to Adintorio, who founded the Society of the Virtuosi of the Pantheon. The natural tastes of the founder of such a society must have resembled those of Raphael, although, from possessing an inferior temperament, or being opposed by external circumstances, he may not have become a practical artist. If Adintorio was the man, his dispositions also must have been in various respects similar to Raphael's. He must have been amorous, benevolent, respectful, diffident, and anxious to please. Should it be fully established that the skull recently discovered is that of Raphael, we expect to find it larger than the other. There is reason to hope that a cast will be obtained.

ARTICLE XIII.

PRIZE ESSAY, AT THE GLASGOW MECHANICS' INSTITUTION, SESSION 1832-33. By WILLIAM M'KEAN. Glasgow, 1833. Pp. 32.

MILTON long ago gave it as his opinion, that "we do amiss to spend seven or eight years merely in scraping together so much miserable Latin and Greek, as might be learned otherwise easily and delightfully in one year;" that "language is but the instrument conveying to us things useful to be known;" and that "though a linguist should pride himself to have all the tongues that Babel cleft the world into, yet, if he have not studied the solid things in them as well as the words and lexicons, he were nothing so much to be esteemed a learned man as any yeoman or tradesman competently wise in his mother dialect only." And, in allusion to the same subject, Locke, not many years afterwards, was forced to exclaim, "Can any thing be more ridiculous, than that a father should waste his own money, and his son's time, in setting him to learn the Roman language, when, at the same time, he designs him for a trade, wherein he, having no use of Latin, fails not to forget that little which he brought from school, and which it is ten to one he abhors for the ill usage it procured him?" "If you ask them why they do this, they think it as strange a question as if you should ask them why they go to church. Custom serves for reason, and has, to those who take it for reason, so consecrated this method, that it is almost religiously observed by them; and they stick to it as if their children had scarce an orthodox education, unless they learned Lilly's grammar."

So religiously, indeed, has the custom been observed during the century and a half subsequent to the time when these sentences were written by Locke, that, even at this day, the most valuable portion of youth is consumed by boys in the middle and upper ranks, in ostensibly (we cannot say really) acquiring a knowledge of Latin and Greek. The public have now pretty generally become sensible of the folly of such a course; but much prejudice still remains to be overcome. With the view of contributing to the diffusion of rational notions on this department of education, a prize was offered to the students attending the Glasgow Mechanics' Institution, for the best essay on the question—"Whether it would be more advantageous to society, if *less* of the time of the generality of young men were devoted to the study of the dead languages, and *more* to the study of the laws of Nature, as developed in the sciences of Natural Philosophy and Chemistry." Mr M'Kean was the

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So religiously, indeed, has the custom been observed during the century and a half subsequent to the time when these sentences were written by Locke, that, even at this day, the most valuable portion of youth is consumed by boys in the middle and upper ranks, in ostensibly (we cannot say really) acquiring a knowledge of Latin and Greek. The public have now pretty generally become sensible of the folly of such a course; but much prejudice still remains to be overcome. With the view of contributing to the diffusion of rational notions on this department of education, a prize was offered to the students attending the Glasgow Mechanics' Institution, for the best essay on the question—"Whether it would be more advantageous to society, if *less* of the time of the generality of young men were devoted to the study of the dead languages, and *more* to the study of the laws of Nature, as developed in the sciences of Natural Philosophy and Chemistry." Mr M'Kean was the

successful candidate. His essay is temperately and intelligently written, and is, on the whole, a most creditable performance. After alluding to the prejudices with which an essay on such a subject has to contend, and the moderate utility of Latin compared with that which it possessed when all scientific and philosophical works were contained in it, he proceeds to enquire how far Greek and Latin are of service to persons pursuing the learned professions. Their utility to divines, physicians, and lawyers, he shows to be more limited than is generally imagined; and concludes that to tradesmen and merchants they must be of still less importance, and that "the generality of young men may be employed more advantageously in acquiring knowledge in other departments." He strips of plausibility the arguments generally urged in favour of classical education; and expatiates on the utility of scientific knowledge. The following passage may be taken as a sample of the essay:—

"Youth is the season for the formation of habits of thinking, and great care is necessary, that, while the mind is yet ductile, it be formed to virtue. On this account, the general spirit of ancient writers is very unfit to be imbibed, although recommended by teachers, and venerated by divines. Yet who would expect bad principles from springs whence flow the streams of knowledge, sacred and secular, at which the learned of all professions have drunk, and drunk deeply? Nevertheless, the student unwarily imbibes that martial spirit which has made the world a field of blood; a spirit, which, like the roll of the prophet, discloses lamentation and mourning and woe. In all these ancient authors, a halo of glory continually surrounds the murderer of thousands. War, horrid war, is the eternal theme. Your Cæsars, and Scipios, and Hannibals, your Catalines and Jugurthas, your Achilleuses and Hectors, are the men with whom the young are made conversant, and whose spirit they imbibe. The false glory which flashes from such characters, distorts the mental vision, and changes devastation into sublimity, and human misery into grandeur. Under this delusion, the moans of the dying swell the shouts of victory, and the cries of the orphan and shrieks of the widow are but accompaniments to the acclamations of the crowd. Thus the young mind is formed for approving war, that greatest scourge of humankind, or at least to look unmoved on its unmitigated horrors. Its crimes are hid in the dazzle of armour, its miseries are shaded by the prominence of processions, its vices are varnished with a covering of valour, and the young man drinks of the chalice which has poisoned mortal existence, and passes it undiluted to his successors."

We have received a list of the prizes offered to the students attending the Glasgow Mechanics' Institution, Session 1833-4.

It is interesting, on account of the view which it presents of the subjects with which the mechanics of Glasgow are assumed to be conversant. Gold medals are offered for models and machines, and for an essay "on the economy of fuel for steam-engines." Prizes of books are offered to the students who have made the best appearance at examinations. There is a prize for the best "Essay on the means of preserving health from the injurious effects of various trades and employments." But those which have struck us most, are the following:—By Bailie Gilmour, a gold medal, value two guineas, for the best essay "on the influence of the study of Natural Philosophy on the intellectual and moral condition of society :"—By Peter Aitken, Esq. a gold medal for the best essay "on the advantages that would result to the cause of religion and morality, if it were made a part of the duty of the clergy to instruct their flocks in the principles of physical and moral science, and to exhibit to them the connexion of these with natural theology and morality, and their coincidence with revelation."

NOTICES.

EDINBURGH.—The following Office-bearers of the Phrenological Society were elected in December last :—George Combe, *President*; George Monro, Bindon Blood, John Anderson jun., and Arthur Trevelyan, *Vice-Presidents*; James Crease, Patrick Neill, John F. Macfarlane, Lindsay Mackeray, Charles MacIaren, and Henry M. T. Witham, *Councillors*; Dr William Gregory, *Secretary*; Robert Cox, *Conservator of the Museum*; Donald Campbell, *Clerk*.

"The Edinburgh Ethical Society for the Study and Practical Application of Phrenology," has met in Clyde Street Hall every Monday evening during the winter. The following are the office-bearers :—Dr William Gregory and Robert Cox, *Presidents*; Arthur Trevelyan, James Marr, Donald Gregory, Thomas Duncan, and ——— Walker, *Councillors*; Andrew Brash, *Librarian*; Thomas Moffat, *Treasurer*; R. D. Douglas, *Secretary*.

DUNFERMLINE.—A Phrenological Society has for a considerable time existed in Dunfermline, and its proceedings have occasionally been noticed in our Journal. A correspondent, one of the members, writes, that through its instrumentality, and in consequence of the extensive circulation of phrenological books in the town, a pretty general desire for a more intimate knowledge of the science has recently been produced among the inhabitants generally, insomuch that, about a year ago, two additional societies were instituted in different parts of the town, for the purpose of studying Phrenology. The number of members attending these societies is, we learn, from thirty to forty. "Moreover," continues our correspondent, "a number of persons, who had not joined any of the societies, were known to be—if not avowedly favourable—any thing but hostile to the cause. In these circumstances, the *Dunfermline Phrenological Society*, with the view of diffusing still farther the knowledge of, and the benefits resulting from, Phrenology, in the town and suburbs, determined, in December 1833, to carry into execution what they had more than a year before resolved on, viz. to obtain a person well qualified to deliver a series of lectures on the subject. By a happy accident, they

were led to apply to Mr W. A. F. Browne, Lecturer on Physiology and Zoology to the Edinburgh Association for providing Instruction in Useful and Entertaining Sciences. Before engaging him, however, they thought it prudent to circulate a subscription paper, stating the object and number of the lectures, and the name of the lecturer; and in less than *four days*—such was the encouragement the scheme met with—all difficulty on the score of pecuniary matters had vanished; thus shewing that the estimate previously formed of the anxiety for farther knowledge of Phrenology had not been overrated. Encouraged by this success, the society forthwith entered into an engagement with Mr Browne for a course of *thirteen* lectures. The first was delivered on the 18th December last, and others have been given weekly since that time. About 230 tickets have now been sold for the course, and, in general, from 30 to 40 persons have been admitted to single lectures, so that each lecture has been attended by 280 persons. The audience is of the highest respectability, comprising most of the medical gentlemen, clergymen, writers, bankers, &c. in the town. Of the fair sex, also, there is a full proportion.—It is unnecessary to dwell here on the character of the lectures, or the merits of the lecturer. Mr Browne is already well known to the readers of the Journal for the valuable contributions he has made to it. Suffice it to say, that the lectures contain a mass of most important and useful truths, which it is desirable every individual should know, but which can only be obtained from Phrenology. They are, for the most part, composed of masculine thoughts, beautifully arranged, always elegantly and not unfrequently eloquently expressed. They are, in short, expositions of *truth*, by an able, experienced, and highly cultivated master. Of the effect which these lectures have produced on the large and attentive audiences to which they are delivered I shall not at present speak; this, I trust, will afford matter for a future and more extended contribution to the Journal.”

GREENOCK.—“We are happy to learn that a Society has been recently formed here, for promoting the study of Phrenology. The members meet every alternate Tuesday evening, to hear papers, and discuss questions connected with the science; and they are forming a Library and Museum for increasing their knowledge of the system. The opponents of this science have succeeded in surrounding it with such a cloud of prejudice, as to have deterred many from examining the evidence on which it rests; and we hail, therefore, the formation of this society as affording the best opportunity of subjecting to fair investigation a science which, if founded in nature, must be acknowledged the most important discovery of modern times. The society ranks among its members several professional gentlemen, whose knowledge of the structure of the human body, and of the anatomy of the brain, will afford great facilities to the study; and we understand that in other particulars the institution commences under circumstances favourable to the prosecution of the inquiry; and we are quite sure that all who desire to be acquainted with the economy of the human mind, will be glad to avail themselves of the opportunity thus presented to them.”—*Greenock Advertiser*, 21st November 1833.

Mr J. L. LEVISON has recently been delivering lectures on Education, considered phrenologically, at Leeds, Bradford, Halifax, Sheffield, Manchester, and Liverpool. At the two last places, we understand, two-thirds of the auditors were members of the Society of Friends. The Phrenological Society of Liverpool has elected Mr Levison an honorary member.

THE MANCHESTER PHRENOLOGICAL SOCIETY has met every Tuesday evening during winter. A course of six lectures on the Anatomy, Physiology, and Pathology of Man, was lately given by Mr Charles Miller, surgeon; and a prospectus of a course of nine lectures on Phrenology by members of the society has been issued. The first of these lectures was delivered on 4th February, and the others are to be given regularly on the subsequent Tuesday evenings. The prospectus is as follows:—

LECTURE I, By Mr George Wilson, *President*, 4th February 1834; Introductory.—LECTURE II, By Mr Richard Edmondson, 11th February;

Embracing the organs of Amativeness, Philoprogenitiveness, Inhabitiveness, Adhesiveness, Combativeness, Destructiveness.—LECTURE III, By Mr James Edmondson, 18th February; On the organs of Acquisitiveness, Secretiveness, Self-Esteem, Love of Approbation.—LECTURE IV, By Mr George Inglia, *Treasurer*, 25th February; On Cautiousness, Veneration, Hope, Conscientiousness, Firmness.—LECTURE V, By Mr Jonathan N. Rawson, *Secretary and Curator*, 4th March; On Benevolence, Ideality, Imitation, Wonder, Language.—LECTURE VI, By Mr William Edmondson, 11th March; On Constructiveness, Individuality, Form, Size, Weight, Colour, Locality, Order, Number.—LECTURE VII, By Mr George Wilson, 18th March; On Eventuality, Time, Tune, Comparison, Causality, Wit.—LECTURE VIII, By Mr Noble, 25th March; On the Five External Senses.—LECTURE XI, By Mr John Oaks, 1st April; On the Natural Languages of the Faculties, with Illustrations.

The Secretary has sent us the following particulars respecting the state and prospects of this society.

“ Since our former correspondence with the Journal, we have, until last September, been interrupted in our proceedings, as a body, by several disabilities, and most of all from the want of convenient premises in which to have our casts arranged, and to hold our meetings. At that period, however, we had an offer of very suitable rooms in the building of the Mechanics’ Institute, which we at once decided upon accepting, although our confined means, from the smallness of our number of subscribers, did not warrant the expense which these rooms necessarily caused us to incur. Subsequent circumstances proved that we had adopted the best course for forwarding the common interests of the science and the society. The immediate accession of members exceeded our anticipations, and previous to Christmas we had obtained considerable additions to our numbers. Our weekly meetings have been attended very well, not only by members, but also by visitors, whose approval of our proceedings has induced several very zealous friends of the science to join us. During our present session, we have been honoured, and much benefited, by a visit, for some days, from Mr G. M. Schwartz of Stockholm. He attended one of our meetings only; but we had constant opportunities, day and evening, during his stay, of recognizing the excellence of his philosophical character; and although we did not appreciate, in every respect, his peculiar views in regard to the organs and their functions, they have been considered highly worthy of discussion in our society, and entitled to our respect and consideration. We cannot but regret that the imperfect manner in which they were conveyed, from his speaking the English language with difficulty, renders it impracticable to arrange them in a sufficiently intelligible form, so as to communicate them for publication. We have, however, his pledge to respond to those wishes which prompted us, during his stay, to elect him a *corresponding* member of our society; and he was pleased to accept this distinction as a high compliment.

“ Since our numbers increased, we have had a new election of office-bearers, the result of which appears from the prospectus. We also, at the same time, revised our rules and regulations, or bye-laws, and determined upon a course of lectures on the science, to be given by such members as were willing to undertake them, when the annexed printed arrangement was adopted. The first, or introductory lecture, by the President, was attentively received, on Tuesday last (4th February), with evident satisfaction, by nearly one hundred ladies and gentlemen, friends of the members. We are sanguine as to the good effects which this plan is calculated to produce, in drawing the attention of the public to the subject, and anticipate increased success from its adoption.

“ We feel bound to acknowledge the services rendered to the science in this town, by the recent lectures given by Dr Epps and Mr Levison, both of whose courses were well attended. It is under suggestion in the society, to concoct a plan to be submitted to the Directors of the Mechanics’ Institution for the formation of a Phrenological class amongst the subscribers, under the direction of some member or members of our society, and we have no doubt some mode of accomplishing this desirable object will be agreed upon ere long.”

CASES OF INJURY OF THE BRAIN.—Dr Otto of Copenhagen mentions, in a letter, dated 27th October 1833, the following case. "A little boy was some time ago brought into Frederick's Hospital in this city. He had got a fracture of the skull, so that the different pieces of bone could easily be felt. He exhibited symptoms of irritation of the brain; but the most remarkable thing was, that he *sang* all the words he uttered, and when a watch was applied to his ear, in order to ascertain whether he heard or not, he went on counting for more than half an hour. Being asked in what particular part he felt pain, he pointed to the position of the organs of Tune and Number. I have this report from one of the candidates at the Hospital." Another correspondent writes (January 1834): "A friend of mine has very recently been staggered in his unbelief of Phrenology, by a startling fact in its favour, which came under his own observation, and which affords an interesting confirmation of the science, though it has long been independent of such proofs. My friend has been in the habit of occasionally visiting the Royal Infirmary (Edinburgh), with the view of witnessing the surgical operations; and during one of these visits, he saw a patient who had completely lost the power of utterance, and could not ask for any thing he wanted; though, on the medicines being placed before him, he immediately pointed to the one he wished for. When the head was opened after death, one hemisphere of the brain was found entirely diseased, and the other in a perfectly sound state, with the exception only of that part of it which is held by phrenologists to be the organ of language." We have applied for the particulars of this case, and hope to receive them in time for next number.

The Fourth Report of the Directors of THE EDINBURGH ASSOCIATION FOR PROVIDING INSTRUCTION IN USEFUL AND ENTERTAINING SCIENCES, was read at a Meeting of the Subscribers or Ticket-holders on 16th January 1834, and has since been printed. It gives an encouraging view of the prospects of the Association, and is in a great measure occupied by a commentary on "certain unfounded, disgraceful, and most unwarrantable aspersions, which have been lately directed against all concerned with these lectures, by a correspondent (Philomathes) of the *Edinburgh Advertiser*." The charges of that anonymous assailant are replied to with great spirit and effect. The following abstract is given of the pecuniary affairs of the Association since its commencement:—

TOTAL RECEIPTS FOR 1832-3.

CLASSES.	Tickets sold.	Visitors admitted at 6d. each.	Receipts.
Phrenology,	225	993	£115 16 4
Chemistry,	229	387	100 7 9
Geology,	251	142	73 2 2
Three Lectures on Education, given separately in April 1833, by Mr Combe,		242 at 1s.	12 2 0
Botany, day class,	60	33 Do.	38 5 0
Botany, evening class,	192	163	75 12 0
Three Lectures on Education, given in November 1833 (in addition to the holders of tickets to any of the other classes, who were admitted to the Lectures on Education free),		340	8 10 0
Natural Philosophy,	239	197	101 0 3
Astronomy,	298	114 at 1s.	105 19 6
Physiology,	294	166	89 11 6
	1788	2777	£720 6 6
		Paid to Lecturers, and other charges,	609 6 6
		Surplus at January 1834,	£111 0 0

The Report having been read and approved of, the following Regulations were unanimously agreed to.

" I. The name of the Institution shall be,—THE EDINBURGH ASSOCIATION FOR PROVIDING INSTRUCTION IN USEFUL AND ENTERTAINING SCIENCES.

" II. The subjects for Lectures shall be left to the judgment of the Directors for the time being.

" III. There shall be Twenty-four Directors, one-half of whom shall be annually changed, and an equal number elected by a General Meeting of the Members; and the said Directors shall, from among their own number, choose a President, Treasurer, and Secretary.

" IV. An annual payment of One Guinea shall entitle the contributor to Free Tickets for all the Lectures, to vote in the election of Directors, and to enjoy all the other privileges of an ordinary member.

" V. Individuals shall be allowed to purchase tickets for admission to one or more of the Lectures, without becoming regular members.

" VI. The funds shall be deposited in a respectable bank (at present being so lodged), in the names of the President, Treasurer, and Secretary.

" VII. After the present season, the Annual Meeting of Members for the election of Office-Bearers, and other general business, shall be held in the month of March."

Twelve new Directors were then nominated; and it was moved and agreed to, that the old Directors should elect twelve of their own number to act along with twelve of the new Directors appointed by the Meeting, as the Committee of Management for 1834.

At the request of the Directors of the Association, Mr Combe has published his three Lectures on Education, mentioned in the Table. The subjects treated of are these:—LECTURE I. Utility of Education. View of Man's position on Earth. Physical Nature prepared for him. His Faculties adapted to its constitution: Hence knowledge of that constitution necessary to his welfare. Man is guided not by Instinct but by Reason. Reason cannot act with advantage without knowledge, founded on observation and experience. Present state of Education. Languages. Origin of study of Greek and Latin. Reasons why Greek and Latin exclusively were taught at Grammar Schools. Importance of these languages overrated.—LECTURE II. Language necessary as the means of acquiring knowledge: But knowledge of objects and their relations indispensable in useful education. Prussian system of education. Education in German boarding-schools. Dr Drummond's defence of utility of scientific education to the industrious classes. Plan of Education for these classes. Abridgment of hours of labour necessary. Legitimate effects of machinery ought to be to give leisure to the people. The human race in the dawn of its existence: important discoveries are of very recent date. Objection that the people are incapable of improvement answered. Interference of the Legislature in regulating habits of the people.—LECTURE III. Education of the Female sex. Influence of Mothers on the character of their children great. Evils attendant on imperfect Female education. Mrs John Sandford's observations. Mrs Willard's remarks. Notice of the Association for providing Instruction in Useful and Entertaining Sciences. Objections to it answered. Its remarkable success.

Mr WILLIAM BALLY, the artist whose collection of miniature busts illustrative of Phrenology we noticed in vol. vii. p. 285, is engaged in modelling from nature a "mechanical brain," which, we understand, is to be made up of separate pieces, capable of being taken asunder, so as to exhibit the internal structure. Such a contrivance will be very useful to phrenologists who have not opportunities of dissecting actual brains, and will form a convenient illustration of lectures. Mr Bally has recently finished a medallion of Dr Spurzheim's head, with the organs marked.

THE MARQUIS MOSCATI several months ago read to the London Phrenological Society a curious account of his conversion to Phrenology, which was subsequently printed in the *Lancet* of 10th November 1833. He candidly confesses that he was as "stubborn as a mule," made use of "studied cavil-

ling" in the pure spirit of opposition, and for a long time resisted the evidence presented to him; at last, however, the proofs (which are detailed) became so overpowering, that he was constrained to become a phrenologist. The Marquis takes occasion to maintain, "that, although we are greatly indebted to Gall and Spurzheim for the obstinate industry, assiduous labours, and unparalleled zeal, with which they have forwarded and prompted the study of craniology and phrenology, they are unjustly styled the *inventors* of the science; for really they have only revived this branch of philosophy, which was certainly known to the best ancient philosophers. In fact, Jamblicus informs us that the disciples of Pythagoras did not admit into their schools any individual before his visage and head had been diligently examined. Plutarch, in his life of Socrates, says, that that philosopher, after having examined the head of Alcibiades, predicted that he would be raised to the highest dignity of his country. Aristotle also, in his philosophical works, has left us convincing proof of his being acquainted with this science, and Gall has often followed his opinions. Plato, in one of his divine dialogues, says, '*Ex fronte, ex capite, ex vultu, etiam in ipso oris silentio, natura loquitur.*' But, to come to an end, I will here relate the following anecdote:—From 1778 to 1782, the Marquis Mascardi was the Criminal Chief Justice of Naples. He had studied the works of La Porta and the physiology of Cabanis. Whenever a criminal was to be sentenced to death, and although the witnesses proved him to be guilty he would not confess; he ordered that he should be brought to his residence, and there he diligently examined the head; and here I give two of his judgments,—1st, '*Auditus testibus pro et contra, VISA FACIE, et EXAMINATO CAPITE, ad furcas damnamus.*' 2d, '*Auditus testibus pro et contra, reo ad denegandum obstinato, VISA FACIE, et EXAMINATO CAPITE, non ad furcas, sed ad catenas damnamus.*' On this we remark, 1st, that Gall, though not the first who taught or conjectured, was the first who fully demonstrated, the plurality of cerebral organs; 2dly, that he was the first who proved by what particular portions of the brain the different faculties are manifested; and, 3dly, that Phrenology and the old Physiognomy are far from being identical. It may be very true that the Pythagoreans, Socrates, Aristotle, Plato, and the Marquis Mascardi, looked at heads with the view of discovering the dispositions and talents of men; but where is the proof that they knew by what particular forms of head different varieties of character are indicated? It is of little consequence who discovered Phrenology, but we think that Dr Gall ought to get the honour which is really due to him.

IN No. 89 of the Edinburgh Review (December 1826), Mr Jeffrey concluded some remarks hostile to Phrenology, by saying, "If we find, at the end of a few more years, that the science is still known by name among persons of sense, we may think it our duty to look once more into its pretensions, and give ourselves another chance of conversion." Upwards of eight years have elapsed since this sentence was written, and "persons of sense," who know both the name and substance of Phrenology, are more numerous now than ever.—Will Mr Jeffrey fulfil his promise?

THE 5th Number of the French Phrenological Journal, though published four months ago, has not yet reached us.

DR ANDREW COMBE will in a few days publish "A Popular Exposition of the Structure and Functions of some of the more important Organs of the Human Body, with reference to Health and to Mental and Physical Education."

MR LEVISON'S book on "Mental Culture" was received too late to be noticed in this number. We shall give a full account of it in our next.

An article on the Life, Character, Opinions, and Cerebral Development of Rajah Rammohun Roy, is unavoidably postponed till next number. The Phrenological Society has obtained a cast of the Rajah's head, which is very large, and accurately corresponds with his character.—For our remarks on the North American Review's attack on Phrenology, prepared long ago, we have not yet been able to find room.—A notice of Fearon's "Thoughts on Materialism" is in types.

Edinburgh, 1st March 1834.

THE
PHRENOLOGICAL JOURNAL

No. XL.

ARTICLE I.

ON THE LIFE, CHARACTER, OPINIONS, AND CEREBRAL
DEVELOPMENT, OF RAJAH RAMMOHUN ROY.

It was long the fashion to ascribe diversities of national character to the influence of climate ; and even yet the theory is not wholly abandoned. Like many other theories, however, it is inconsistent with observed and established facts. Climate and other external influences may indeed, in the course of ages, alter the quality and even form of the organization, and consequently produce a change on the character ; but the extent of such changes is limited, and climate operates rather in augmenting or diminishing the general activity of the mind than in altering the relative strength of particular faculties. In the same climate, and under the influence of almost the same circumstances, great diversity of character exists ; while in very different climates, and under the most opposite circumstances, characters nearly identical are found ; and these facts unanswerably demonstrate, that it is to something else than climate that we must look for an explanation of the phenomenon. " White people (to use the words of Mr Lawrence *) have distinguished themselves in all climates ; every where preserving their superiority. Two centuries have not assimilated the Anglo-Americans to the Indian-aborigines, nor prevented them from establishing in America the freest government in the world. A Washington and a Franklin prove that the noble qualities of the race have suffered no degeneracy by crossing the Atlantic." In Ceylon may be found a very striking illustration of the trifling extent to which the mind is affected by climate ; for that island contains, under the same climate, two races whose character is as opposite as it is possible to imagine. The Cingalese, who form the chief body of the popu-

* Lectures on Physiology, &c. vol. ii. chap 8.

lation, are active, docile, ingenious, and quick in apprehension ; and as Dr Davy mentions, " are, in courtesy and polish of manners, little inferior to the most refined people of the present day.*" The Forest Vedahs, on the other hand, who inhabit the mountains toward the eastern part of the country, have, as the same author informs us, " no fixed habitation, being rather solitary animals than social, and resembling more beasts of prey, in their habits, than men." Another tribe, called the Village Vedahs, was visited by Dr Davy, and their appearance " was wild in the extreme, and completely savage." They wear no clothes, and their dwellings are made of the bark of trees. " Though living together," he says, " they seem to be ignorant of all social rites, and strangers to every circumstance that ennobles man, and distinguishes him from the brute." They appear to be without names, and to be " ignorant of every art, excepting such as hardly deserve the name, and without which they could not exist." † Mr Wilks, in his *Historical Sketches of the South of India*, vol. i. pp. 22-3, has the following pertinent observations. " The philosophy which refers exclusively to the physical influence of climate this most remarkable phenomenon of the moral world (diversity of character), is altogether insufficient to satisfy the rational inquirer. The holy spirit of liberty was cherished, in Greece and its Syrian colonies, by the same sun which warms the gross and ferocious superstition of the Mahomedan zealot : The conquerors of half the world issued from the scorching deserts of Arabia, and obtained some of their earliest triumphs over one of the most gallant nations of Europe. A remnant of the disciples of Zoroaster, flying from Mahomedan persecution, carried with them to the western coast of India the religion, the hardy habits, and athletic forms of the north of Persia ; and their posterity may at this day be contemplated in the Parsees of the English settlement at Bombay, with mental and bodily powers absolutely unimpaired after the residence of a thousand years in that burning climate. Even the passive but ill-understood character of the Hindoos, exhibiting few and unimportant shades of distinction, whether placed under the snows of Imaus or the vertical sun of the torrid zone, has, in every part of these diversified climates, been occasionally roused to achievements of valour, and deeds of desperation, not surpassed in the heroic ages of the Western world. The reflections naturally arising from these facts, are obviously sufficient to extinguish a flimsy and superficial hypothesis, which would measure the human mind by the scale of a Fahrenheit's thermometer." In short, if the brain be large, healthy, and of good quality, the mind will display itself vigo-

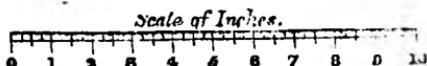
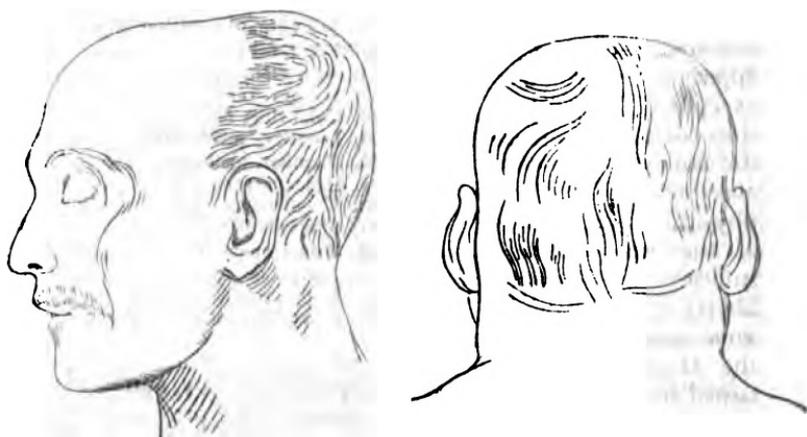
* Davy's Account of the Interior of Ceylon, p. 291.

† *Ib.* pp. 116-18.

rously in every part of the world ; and, on the other hand, if its size and quality be of an inferior description, the mental faculties will be dull and inefficient.

These remarks are a fit introduction to an account of the life of Rammohun Roy : they are confirmed in the strongest manner by the character of that distinguished Hindoo,—so different from that of his countrymen in general,—and in a more particular manner by his head, of which the Phrenological Society has been so fortunate as to obtain a cast.

The following sketches will convey to the reader an accurate general idea of the appearance of the head.



The dimensions of the cast and the cerebral development are as follows :

DIMENSIONS IN INCHES.	
<p>Greatest circumference of Head, (measuring horizontally over Individuality, Destructiveness, and Philoprogenitiveness,) 24½</p> <p>From Occipital Spine to Individuality, over the top of the Head, 15</p> <p>... Ear to Ear vertically over the top of the head, (measuring from upper margin of the meatus,) 14½</p> <p>... Philoprogenitiveness to Individuality, in a straight line, 8½</p> <p>... Concentrativeness to Comparison, 7½</p>	<p>From Ear to Philoprogenitiveness 4½</p> <p>..... Individuality, 5½</p> <p>..... Benevolence, 6½</p> <p>..... Veneration, 6½</p> <p>..... Firmness, 6½</p> <p>... Destructiveness to Destructiveness, 6½</p> <p>... Secretiveness to Secretiveness, 6½</p> <p>... Cautiousness to Cautiousness, 5½</p> <p>... Ideality to Ideality, 4½</p> <p>... Constructiveness to Constructiveness, 5½</p> <p>... Mastoid process to Mastoid process. 5½</p>

Not.—Although the hair was not entirely cut off from the posterior part of the Rajah's head before the cast was taken, it was so short as very little to obscure the form of the head. Except for about an inch backward from the right ear, it does not seem to have been more than a quarter of an inch in thickness. In stating the dimensions of the head, allowance has been made for the hair—the greatest actual circumference of the cast being 24½ inches; the distance from the occipital spine to Individuality over the top of the head, 15½; Philoprogenitiveness to Individuality, 8½; Concentrativeness to Comparison, 8; Ear to Philoprogenitiveness, 5; Ear to Firmness, 6½; Destructiveness to Destructiveness, 6½; Secretiveness to Secretiveness, 6½; and Cautiousness to Cautiousness, 5½.

DEVELOPMENT.

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

RAMMOHUN ROY was the son of Ram Kanth Roy, and was born in the district of Bordouan, or Burdwan, in the province of Bengal. The date of his birth is variously stated, 1774 and 1780. "My ancestors," he mentions in a short sketch of his life, written in autumn 1832*, "were Brahmins of a high order, and from time immemorial were devoted to the religious duties of their race, down to my fifth progenitor, who, about one hundred and forty years ago, gave up spiritual exercises for worldly pursuits and aggrandisement. His descendants have ever since followed his example." "But my maternal ancestors, being of the sacerdotal order by profession as well as by birth †, and of a family than which none holds a higher rank in that profession, have, up to the present day, uniformly adhered to a life of religious observances and devotion." Under his father's roof he received the elements of native education, and also acquired a knowledge of the Persian language: he was afterwards sent to Patna, on the Ganges, to learn Arabic; these two languages being accomplishments indispensable to those who attach themselves to the courts of Mahomedan princes. Lastly, he was sent to Benares, also on the Ganges, to obtain a knowledge of Sanscrit, the sacred

* Published in the Athenæum, No. 310, 6th October 1833.

† The general notion that all Brahmins are priests is erroneous.

language of the Hindoos. He there devoted himself to the study of that tongue, and of the theological works written in it, which contain the body of Hindoo literature, law, and religion. His masters at Patna set him to study Arabic translations of some of the writings of Aristotle and Euclid, and he derived also a considerable knowledge of the Mahomedan religion from his friends among the Mussulmans. In this way he must have acquired some notions on religion more rational than those of his countrymen in general. He was trained by his father in the doctrine of the Brahmins; a doctrine which teaches the people to regard the adoption of a particular mode of diet as their chief religious duty;—which requires them to visit the least aberration from it, (even though the conduct of the offender be in other respects pure and blameless,) not only with the severest censure, but actually with exclusion from the society of his family and friends, and with loss of caste;—and among whose votaries the rigid observance of this grand article of faith is considered so meritorious as to compensate for every moral defect, and even for the most atrocious crimes. To adopt the words of Rammohun Roy himself, “murder, theft, or perjury, though brought home to the party by a judicial sentence, so far from inducing loss of caste, is visited in their society with no peculiar mark of infamy or disgrace. A trifling present to a Brahmin, with the performance of a few idle ceremonies, are held as a sufficient atonement for all those crimes; and the delinquent is at once freed from all temporal inconvenience, as well as all dread of future retribution.”—(*Introduction to Translation of Ishopanishad*).

At a very early period the acute and reflecting mind of Rammohun Roy observed the diversities of opinion which existed around him, and that, while some of the Hindoos exalted Brahma the Creator, others gave the ascendancy to Vishnu, the Preserver; and others, again, to Siva, the Destroyer. Without disputing the authority of his father, he often sought from him information as to the reasons of his faith, but obtained no satisfaction. “When about the age of sixteen,” he says, “I composed a manuscript, calling in question the validity of the idolatrous system of the Hindoos. This, together with my known sentiments on that subject, having produced a coolness between me and my immediate kindred, I proceeded on my travels, and passed through different countries, chiefly within, but some beyond, the bounds of Hindostan, with a feeling of great aversion to the establishment of the British power in India.” He spent two or three years in Thibet, where he often excited the anger of the worshippers of the Lama by his rejection of their doctrine, that this pretended deity—a living man—was the creator and preserver of the world. “In these circumstances,” says Dr Carpen-

ter, "he experienced the soothing kindness of the female part of the family; and his gentle feeling heart lately dwelt with deep interest, at the distance of more than forty years, on the recollections of that period, which, he said, had made him always feel respect and gratitude towards the female sex, and which doubtless contributed to that unvarying and refined courtesy which marked his intercourse with them in this country *."

When he reached the age of twenty, he was recalled by his father, and restored to favour; "after which," he says, "I first saw and began to associate with Europeans, and soon after made myself tolerably acquainted with their laws and form of government. Finding them generally more intelligent, more steady and moderate in their conduct, I gave up my prejudice against them, and became inclined in their favour; feeling persuaded that their rule, though a foreign yoke, would lead most speedily and surely to the amelioration of the native inhabitants. I enjoyed the confidence of several of them even in their public capacity.—My continued controversies with the Brahmins on the subject of their idolatry and superstition, and my interference with their custom of burning widows, and other pernicious practices, revived and increased their animosity against me; and, through their influence with my family, my father was again obliged to withdraw his countenance openly, though his limited pecuniary support was still continued to me."

At the age of twenty-two, as we learn from Mr John Digby, editor of the English edition of one of his works, the *Abridgment of the Vedant*, "he commenced the study of the English language, which," says Mr Digby, "not pursuing with application, he, five years afterwards, when I became acquainted with him, could merely speak it well enough to be understood upon the most common topics of discourse, but could not write it with any degree of correctness. He was afterwards employed as Dewan, or principal native officer, in the collection of the revenues, in the district (Rungpoor) of which I was for five years collector in the East India Company's Civil Service. By perusing all my public correspondence with diligence and attention, as well as by corresponding and conversing with European gentlemen, he acquired so correct a knowledge of the English language, as to be enabled to write and speak it with considerable accuracy."

His father, Ram Kanth Roy, died about 1808, leaving him

* Biographical Sketch, published originally in the *Bristol Gazette* of 2d October 1833, and reprinted in a work from which we have derived most of the materials of this article,—*"A Review of the Labours, Opinions, and Character of Rajah Rammohun Roy; in a Discourse, on occasion of his Death, delivered in Lewin's Mead Chapel, Bristol; a Series of Illustrative Extracts from his Writings; and a Biographical Memoir: to which is subjoined an Examination of some derogatory Statements in the Asiatic Journal. By Lant Carpenter, LL. D.—London: R. Hunter, St. Paul's Church Yard, 1833."*

no part of his property; but, in the year 1811, the death of his brother, Jugmohun Roy, to whom he succeeded, rendered him completely independent. "After my father's death," says he, "I opposed the advocates of idolatry with still greater boldness. Availing myself of the art of printing, now established in India, I published various works and pamphlets against their errors, in the native and foreign languages." Among other works, he published, in Persian, with an Arabic preface, a treatise entitled, "*Against the Idolatry of all Religions.*" No one undertook to refute this book, but it raised up against him a host of enemies; and in 1814, he retired to Calcutta, where he purchased a house and garden, and applied himself to the study of the English language, both by reading and by conversation: he also acquired some knowledge of Latin, and paid much attention to the mathematics. It was, however, chiefly to religion that the energy of his mind was directed; and his talents and activity displayed themselves in his continued endeavours to reform the religion of his countrymen from the corruptions by which it was disfigured. The body of Hindoo theology is comprised in the Veda, which are writings of very high antiquity. On account of their great bulk, and the obscurity of the style in which they are composed, Vyas, a person of great celebrity in Hindoo literature, was induced, about 2000 years ago, to draw up a compendious abstract of the whole, accompanied with explanations of the more difficult passages. This digest he called the Vedant, or the Resolution of all the Veds. One portion of it respects the ritual, and another the principles of religion. It is written in the Sanscrit language. Rammohun Roy translated it into the Bengalee and Hindoostanee languages, for the benefit of his countrymen; and afterwards published an abridgment of it, for gratuitous and extensive distribution. Of this abridgment he published an English translation in 1816, the title of which represents the Vedant as "the most celebrated and revered work of Brahminical theology, establishing the unity of the Supreme Being, and that he alone is the object of propitiation and worship." Towards the close of his preface he thus writes—"My constant reflections on the inconvenient or, rather, injurious rites introduced by the peculiar practice of Hindoo idolatry, which, more than any other Pagan worship, destroys the texture of society—together with compassion for my countrymen—have compelled me to use every possible effort to awaken them from their dream of error; and by making them acquainted with the [their] scriptures, enable them to contemplate, with true devotion, the unity and omnipresence of nature's God. By taking the path which conscience and sincerity direct, I, born a Brahmin, have exposed myself to the complainings and reproaches even of some of my relations, whose prejudices are

strong, and whose temporal advantage depends on the present system. But these, however accumulated, I can tranquilly bear; trusting that a day will arrive when my humble endeavours will be viewed with justice—perhaps acknowledged with gratitude. At any rate, whatever men may say, I cannot be deprived of this consolation—my motives are acceptable to that Being who beholds in secret and compensates openly.”

After the publication of the Vedant, Rammohun Roy printed, in Bengalee and in English, some of the principal chapters of the Veds. The first of the series was published in 1816, and is entitled “A Translation of the Cena Upanishad, one of the Chapters of the Sama Veda, according to the gloss of the celebrated Shancaracharya; establishing the Unity and sole Omnipotence of the Supreme Being, and that He alone is the object of worship.” This was prefixed to a reprint of the Abridgment of the Vedant, published in London in 1817, by Mr Digby. The English preface contains a letter from Rammohun Roy to this gentleman, which shows how well he had, even at that time, overcome the difficulties of the English language. “The consequence of my long and uninterrupted researches into religious truth,” he says in this letter, “has been, that I have found the doctrines of Christ more conducive to moral principles, and better adapted for the use of rational beings, than any other which have come to my knowledge; and have also found Hindoos in general more superstitious and miserable, both in performance of their religious rites, and in their domestic concerns, than the rest of the known nations of the earth.” He then proceeds to state what he had done in order to render them “more happy and comfortable both here and hereafter;” and adds, “I, however, in the beginning of my pursuits, met with great opposition from their self-interested leaders the Brahmins, and was deserted by my nearest relations; and I consequently felt extremely melancholy. In that critical situation, the only comfort that I had, was the consoling and rational conversation of my European friends, especially those of Scotland and England.”—In the same letter he expresses his full expectation of speedily setting off for England; but says that he had been prevented from proceeding so soon as he could wish, by the spread of his views, and the inclination manifested by many to seek the truth.

It is not surprising that the interested advocates for heathen worship should have endeavoured to uphold it by imputations on the character of the Reformer; and some one did publicly charge him with “rashness, self-conceit, arrogance, and impiety.” Every member of his own family opposed him; and he experienced even the bitter alienation of his mother through the influence of the interested persons around her. He recently stated,

however, that before her death she expressed her great sorrow for what had passed, and declared her firm conviction in the unity of God, and the futility of Hindoo superstition. Dr Carpenter adds, that "in his early days, his mother was a woman of fine understanding; but, through the influence of superstitious bigotry, she had been among his most bitter opponents. He, however, manifested a warm and affectionate attachment towards her, and it was with a glistening eye that he told us she had 'repented' of her conduct towards him. Though convinced that his doctrines were true, she could not throw off the shackles of idolatrous customs. 'Rammohun,' she said to him, before she set out on her last pilgrimage to Juggernaut, where she died, you are right; but I am weak woman, and am grown too old to give up these observances, which are a comfort to me.' She maintained them with the most self-denying devotion. She would not allow a female servant to accompany her; or any other provision to be made for her comfort or even support on her journey: and when at Juggernaut, she engaged in sweeping the temple of the idol. There she spent the remainder of her life—nearly a year, if not more; and there she died."

Besides essentially contributing to the establishment and maintenance of native schools, Rammohun Roy directed his efforts, and with great success, towards the extinction of the practice of burning widows. "His enlarged and benignant spirit," says Dr Carpenter, "the tenderness and purity of his own heart, the maternal love which he had experienced, and the influences of that soothing kindness which he had received from the women of Thibet when he was separated from the endearments of home, aided to produce in his mind those sentiments of respect for woman in her domestic and social and moral relations, which entirely raised him above the narrow and degrading views entertained of the female sex by his countrymen in general; and which led him to contribute, in various ways, to the just appreciation of them, and to their protection from the sordid purposes and superstitious zeal of those who degraded them by debasing rites and practices, and condemned them to self-immolation. He regarded woman, whether considered as an intellectual or as a spiritual being, as fitted, by natural powers and capabilities, to be the companion, the friend, and the helper of man." (Discourse, p. 40.)

It has been already shewn, that, as early as 1817, he had directed his attention to the Christian religion; but he found himself greatly perplexed by the various doctrines which he found insisted upon as essential to Christianity, in the writings of Christian authors, and in conversation with those Christian teachers with whom he had communication. To enable himself to discover the real nature of the doctrines taught in Scripture, he

acquired a knowledge of the Hebrew and Greek languages, and then studied the original—the Old Testament with a Jewish rabbi, and the New with Christian divines. “After long and minute investigation,” says Mr Sandford Arnot *, “he came to the conclusion that they contained the doctrine of pure theism ; and one of his Christian instructors, the Reverend William Adam, a man of talent, learning, and piety, who went over the same ground with him, came to the same decision, and from having been a Baptist Missionary, became a Unitarian preacher. Thenceforward the Rajah gave his whole support to the views of this sect.” Becoming more and more strongly impressed with the excellence and importance of the Christian system of morality, he published, in 1830, in English, Sanscrit, and Bengalee, a series of selections, principally from the first three Gospels, which he entitled, “The Precepts of Jesus, the Guide to Peace and Happiness.” He passed by those portions of the Evangelists which have been made the basis of distinctive doctrines ; and also (except where closely interwoven with the discourses of Christ) the narratives of miracles—believing these to be little fitted to affect the convictions of his countrymen, while the preceptive part he deemed most likely “to produce the desirable effect of improving the hearts and minds of men of different persuasions and degrees of understanding.” “This simple code of religion and morality,” he says, at the close of his preface, “is so admirably calculated to elevate men’s ideas to high and liberal notions of one God, who has equally subjected all living creatures, without distinction of caste, rank, or wealth, to change, disappointment, pain, and death, and has equally admitted all to be partakers of the bountiful mercies which he has lavished over nature ; and is also so well fitted to regulate the conduct of the human race in the discharge of their various duties to God, to themselves, and to society ; that I cannot but hope the best effects from its promulgation in the present form.”

This work was published anonymously, but, as appears, without concealment, and it brought upon him some severe and unexpected animadversions in “The Friend of India.” Under the designation of “A Friend to Truth,” Rammohun Roy published an “Appeal to the Christian Public in defence of the Precepts of Jesus ;” in which he maintains that they “contain not only the essence of all that is necessary to instruct mankind in their civil duties, but also the best and the only means of obtain-

* Biographical Sketch of Rajah Rammohun Roy, published in the Athenæum, 5th October 1833. Mr Arnot was in habits of daily communication with the Rajah for years, both in India and in this country, and acted as his private secretary since his arrival in Europe as Envoy from the King of Delhi.

ing the forgiveness of our sins, the favour of God, and strength to overcome our passions and to keep his commandments."

On these anonymous publications Dr Marshman of Serampore College, published a series of animadversions, which led to a "Second Appeal" from Rammohun Roy, with his name prefixed, which is distinguished by the closeness of his reasonings, the extent and critical accuracy of his scriptural knowledge, the comprehensiveness of his investigations, the judiciousness of his arrangement, the lucid statement of his own opinions, and the acuteness, skill, and temper with which he controverts the positions of his opponents. All the publications of this controversy were soon reprinted in London. The doctrine which he maintained in it respecting God, is thus stated in the Second Appeal:—"That the Omnipotent God, who is the only proper object of religious veneration, is one and undivided in person;" and that, "in reliance on numerous promises found in the sacred writings, we ought to entertain every hope of enjoying the blessings of pardon from the merciful Father, through repentance, which is declared the only means of procuring forgiveness for our failures." The circumstance of the Rajah having adopted an interpretation of the Scriptures which, whether sound or the reverse, is certainly one which, he must have been aware, was not very likely to raise him in the esteem of the great body of the British public, is a striking proof of the independence and honesty by which, as we shall afterwards see, he was characterized.

The Second Appeal called forth another work from Dr Marshman; to which Rammohun Roy published a reply in 1822, under the title of the Final Appeal. His preceding works had been printed at the Baptist Missionary press; but the acting proprietor declined, "although in the politest manner possible," to print the Final Appeal; and Rammohun Roy purchased types, and commenced an independent printing press for this and other similar publications. The imprint is "Calcutta: printed at the Unitarian Press, Dhurmtollah." He depended chiefly on native aid; and, in consequence, the original work has many errata. In the preface, he says that this controversy had prevented other publications which he had projected for his countrymen, as well as drawn him for three years from other literary pursuits; and that it had caused much coolness towards him in the demeanour of some whose friendship he held very dear; nevertheless, that he did not wish he had pursued a different course, since, he says, "whatever may be the opinion of the world, my own conscience fully approves of my past endeavours to defend what I esteem the cause of truth." It is proper to add, that, on the side of the Trinitarians, the controversy was conducted with becoming equanimity.

"During this period," says Mr Arnot, "the whole powers of his mind were directed to the vindication of the doctrine of the unity of God. In this, he maintained, the sacred books of Hindus and Mussulmans, Jews and Christians, agreed; and that all apparent deviations from it were modern corruptions. He propagated it day and night, by word and writing, with the zeal of an apostle, and the self-devotion of a martyr. He was ever ready to maintain it against all gainsayers; from the believer in thirty-three millions of gods to the denier of one: for both extremes are common in the East. The writer remembers finding him at his Garden House, near Calcutta, one evening, about seven o'clock, closing a dispute with one of the followers of Budh, who denied the existence of a deity. The Rajah had spent the whole day in the controversy without stopping for food, rest, or refreshment, and rejoicing more in confuting one atheist than in triumphing over a hundred idolators: the credulity of the one he despised; the scepticism of the other he thought pernicious; for he was deeply impressed with the importance of religion to the virtue and happiness of mankind."

The Rajah had long felt a strong wish to visit Europe, and, as he himself expresses it, "obtain, by personal observation, a more thorough insight into its manners, customs, religion, and political institutions. I refrained, however," he adds, "from carrying this intention into effect, until the friends who coincided in my sentiments should be increased in number and strength. My expectations having been at length realized, in November 1830 I embarked for England, as the discussion of the East India Company's charter was expected to come on, by which the treatment of the natives of India, and its future government, would be determined for many years to come; and an appeal to the King in Council, against the abolition of the practice of burning Hindoo widows, was to be heard before the Privy Council; and his Majesty the Emperor of Delhi had likewise commissioned me to bring before the authorities in England, certain encroachments on his rights by the East India Company. I accordingly arrived in England in April 1831." He was accompanied by his youngest son Ram Roy, and two native servants. His arrival, says Dr Carpenter, was "at a period when the whole nation was in a state of intense excitement, in connexion with Parliamentary Reform; and, being well versed in our national history, and intimately acquainted with our political institutions and parties, he saw at once the bearings of the great measure,—which, he wrote, 'would, in its consequences, promote the welfare of England and her dependencies, nay, of the whole world.'"

The fame of Rammohun Roy had preceded him; but the official character in which he came, together with the state of

public affairs, necessarily brought him forward to public notice even more than might otherwise have been expected. His great notoriety, and his "unvarying urbanity and solicitude to avoid giving pain to any one, even to the inconsiderate and presuming, exposed him," says Dr Carpenter, "to extreme interruption and inconvenience, and at times to much vexation. Habitual caution to shun every overt act by which his Brahminical rank might be forfeited, to his own and his children's injury, and to the impairing of his hopes and means of usefulness; seems occasionally to have given to his system of conduct the air of uncertainty, if not of ambiguity. Perhaps, also, there were occasions when questions proposed, with the skill of the practised disputant, to elicit an expression which might support some pre-formed opinion respecting the Rajah's sentiments, led him, through ignorance of the real bearings of the case, to accord with that which his remarkable clearness of discrimination would have rejected at once, if the whole tendency of the inquiry had been before him; and this effect may have been aided by those nice shades in the import of words, which are, as opinions modify, continually varying in their influence. And sometimes, that disposition to acquiescence which eastern politeness requires, and which his own kindness of heart contributed to strengthen, was known to place him in circumstances, and lead him to expressions, which made his sincerity questioned. But, where he was best and fully known, the simplicity, candour, explicitness, and openness of his mind, were striking and acknowledged; and from these, together with his profound acquirements, his extensive information, his quick discrimination of character, his delicacy and honourable sentiments, his benevolent hopes and purposes for human welfare, his benignant concern for the comfort and happiness of all around him, his affectionateness and humility of disposition, his gentleness and quick sensibility, there was a charm in his presence and conversation, which made one feel love for him as well as high respect."

In Britain, the Rajah's time was devoted mainly to politics; and, as Mr Arnot mentions, "he rather shunned than courted religious controversy, which might, if indulged in, have interfered with his political views. His first respect was shown to the Unitarians; he visited all their places of worship within his reach, and cultivated the acquaintance of their most distinguished leaders. But he by no means confined his attention to one sect. He occasionally joined the congregations of persons of every persuasion, from the Roman Catholic to the Free-thinking Christian, listening to all with the same reverence or appearance of external respect. He was a most regular attendant, however, on the ministrations of the Rev. Dr A. H. Kenney, of St Olave's, Southwark, which he called his church.

His mind was too expanded to be capable of being confined within the strait waistcoat of any sect. He viewed religion as a philosopher, and had surveyed all with a critical eye. He rejected the faith of his fathers, because it was at once foolish and degrading, and esteemed the diffusion of Christianity, in a pure form, beneficial to mankind."

In his intercourse with the English, his Benevolence and Love of Approbation were conspicuously manifested; and indeed it appears that to the too great ascendancy of the latter the loss of his health is in some measure to be attributed. "As a social being," says Mr Arnot, "few possessed qualities more calculated to inspire respect and love. He was affable in his manners, cheerful and instructive in conversation, equally ready to receive or to communicate knowledge, and scrupulously attentive to the rules of society. Perhaps he rather carried politeness to a fault, and often sacrificed to etiquette both utility and personal comfort. His acquaintance being eagerly courted in Europe, he was oppressed, from the moment of his landing in England, with visitors of all ranks and classes; and often by two or three invitations to parties for every day in the week. He with difficulty stole a few hours a day for business; even the Sabbath brought him no rest; for, to please all parties, he had often to attend church two or three times, even when labouring under indisposition. In short, he wanted the courage to say 'No;' and this, it is to be feared, contributed to shorten his days. His health had been long declining from over exertion, although it was excellent in part of the years 1831 and 1832. Since his return from France in January 1833, (whither he had gone in autumn 1832), both body and mind seemed losing their tone and vigour." He was first confined to his bed on the 17th of September 1833, while residing at Bristol, where he had arrived on a visit ten days before; and never rose again from that to Friday the 27th, on the morning of which, about half-past two o'clock, he died. "For the last two or three days he appeared to have lost almost all consciousness and power of speech, and only expressed thanks for the services rendered him. He was attended in his last moments by (among others) Miss Castles, of Stapleton, Bristol, at whose residence he breathed his last; by Mr Hare, of Bedford Square, London, and his niece, (a family which had discharged the duties of hospitality towards him ever since his arrival in England, with a kindness, delicacy, and entire disinterestedness, which are honourable to the national character), and by his Indian servants, one of them a Brahmin, distantly related to him."

Mr John Bishop Estlin, who attended the Rajah during his illness, states, that some of the symptoms in its progress "led to the conclusion that his head was considerably affected,

though no pain was felt there, the stomach being the part of which he most complained." An extremely dry and glazed tongue, frequent pulse, and incessant restlessness (though without much increase of heat or local pain), are also mentioned. His indisposition experienced but a temporary check from the remedies applied: severe spasms, with paralysis of the left arm and leg, came on during the day before his death; and in the afternoon he fell into a state of stupor from which he never revived. "He repeatedly acknowledged during his illness," says Mr Estlin, "his sense of the kindness of all around him, and in strong language expressed the confidence he felt in his medical advisers." "He conversed very little during his illness, but was observed to be often engaged in prayer. He told his son and those around him that he should not recover.

"An examination of the body took place on Saturday, when the brain was found to be inflamed, containing some fluid, and covered with a kind of purulent effusion: its membrane also adhered to the skull, the result probably of previously existing disease: the thoracic and abdominal viscera were healthy. The case appeared to be one of fever, producing great prostration of the vital powers, and accompanied by inflammation of the brain, which did not exhibit, in their usual degree, the symptoms of that affection.

"The Rajah was a remarkably stout, well formed man, nearly six feet in height, with a fine handsome and expressive countenance. A cast for a bust was taken a few hours after his death."—(Carpenter, pp. 118-120.)

Application was made, through the Rev. B. T. Stannus of this city, to Dr Carpenter, with the view of procuring a copy of the cast for the Phrenological Society; and in his absence Mr Estlin politely got one forwarded to Edinburgh. He mentions, in a letter to Mr Stannus, that he was present when the cast was taken; that "the body was then quite warm;" and that the phrenologists "may feel satisfied that they have in this cast a most accurate representation of the Rajah's head." Mr Estlin adds: "He had a great deal of hair; the anterior part of the head was shaved; and the hair on the back part cut off during his illness. The depression on the crown of the head [over Veneration and Hope] is quite natural: a friend told me the Rajah had once placed his hand there, to feel the peculiar formation." In adjusting the body for the purpose of taking the cast, the shoulders happened to be drawn up, so that the thorax, as represented in the bust, wants its proper symmetry.

Notwithstanding what Mr Estlin says about the accuracy of the cast, we suspect that the artist who made it did not closely join the two halves of the mould, as there is an awkward appearance of scraping in a line passing across the head from im-

mediately before the opening of the ear, to the corresponding point on the opposite cheek, over the organs of Hope and Veneration. This may have rendered the cast from one-fourth to one-half of an inch longer than the Rajah's head. Perhaps, however, our conjecture is erroneous.

The department of the brain which is most largely developed is the posterior superior region, occupied by Firmness, Conscientiousness, Self-esteem, and Love of Approbation. The size of these four organs is indeed very extraordinary. Firmness, as the reader must have remarked in perusing the foregoing details, was prominently displayed throughout the Rajah's whole life. In the words of Dr Carpenter, "he ever manifested fortitude and unyielding firmness when any great and benevolent object required exertion, and exposed him to calumny and persecution."—(Discourse, p. 40.) His very large Conscientiousness led to that "simplicity, candour, explicitness, and openness of mind," which his intimate friends so much admired, and with which every one who has read his controversial works must have been delighted. Mr Arnot states, that "he was an ardent lover of liberty, and a fervent well-wisher to the political improvement of mankind."

Without a large Self-Esteem, as well as Firmness, he would not have been fitted to embark in the arduous work of reforming the religion of a people, or to have borne up against the persecution and contumely to which he was exposed. D'Acosta, the editor of a journal at Calcutta, quoted by Dr Carpenter (page 107), states, that "all his conversation, his actions, and his manners, evinced a powerful sentiment of individual dignity; while, in general, meanness and feebleness of mind are characteristic of the Hindoo." The force of character resulting from his large head, as well as the effect of Self-Esteem on his carriage, is here described, and is contrasted with the "meanness and feebleness of mind" characteristic of the small-headed generality of Hindoos. Had the brain of Rammohun Roy been of diminutive size, the circumstance would have done more to extinguish Phrenology than the whole amount of misrepresentation and abuse which it has been doomed to endure.

The influence of Love of Approbation appears in several traits of his character already noticed. His "want of the courage to say 'No,'" indicates in a striking manner the strength of this feeling in combination with Cautiousness; and it even appears that the fear of offending occasionally led him to give an apparent assent to opinions which he was far from holding. There can be little doubt, however, that the rules of eastern politeness* had here a powerful influence on his conduct, and that,

* In the East "there are modes of conveying a civil negative by an affirmative."—*Asiatic Journal*, Nov. 1833, p. 207.

had his manners been formed in Britain, Love of Approbation would not have carried him to such an extreme in his anxiety to please. The too great predominance of this faculty was the Rajah's chief failing, and shewed itself in his published works, as well as in private society. "The great defect of his political writings, and indeed of his character," says Mr Arnot, "was a want of firmness to say that which would be unpleasant to individuals or bodies of men. How far this might have arisen from early habit and education, or from timidity of character, from the effect of living under a despotic government, or from too great a regard to popularity, a wish to please all parties, or from a mixture of these, cannot now be determined." We are inclined to think, that, while all the circumstances here enumerated contributed to the production of this trait, the two last were by far the most influential. A writer in the Asiatic Journal affirms, doubtless with truth, that "he was exceedingly ambitious of literary fame." It is said also that "he thought more of the empty title of Rajah than of the results of the East India Bill;" in allusion to which statement Dr Carpenter expresses his belief that the Rajah cared for the acknowledgment of his title no farther "than as being connected with the claims which he came to make." With submission, we think that the truth is likely to be found between the two statements. An empty title, as those who are familiar with the varieties of human character must be aware, is not without charms even to a philosopher, if his love of distinction be strong. At the same time, we cannot believe that Rammohun Roy, while his brain was healthy, thought more of his title than of the results of the East India Bill. The statement in the Asiatic Journal, that he took no trouble in reference to the Company's charter, receives from Dr Carpenter a pointed contradiction. (Pp. 126, 127.) A writer quoted by the journalist, and who is said to have been in close and intimate communication with the Rajah in England, and "whose impartiality cannot be suspected," states that, towards the close of his life, the character of the Rajah underwent a remarkable change. "He had been an enthusiastic advocate of the Grey administration from his arrival in Europe till his departure for France in the autumn of last year. Whether it was that he imbibed some fresh light from Louis Philippe and his subjects, or that the first reformed British Parliament disappointed him, or that he had taken some personal disgust at the present ministry (the most probable of the three), he became most bitterly opposed to it. He was in the habit of inveighing against it in the strongest, I may truly say, coarsest terms; a circumstance the more remarkable, as he had hitherto been distinguished by the courtesy of his language and the studied politeness of his expressions. Even when engaged in

the warmest controversies, and in repelling personal insults, he would not formerly permit himself to use a strong epithet, or utter any reflection which could be considered in the least illiberal or ungentlemanly. During the last period of his life his manners were much changed, and the powers of his mind seemed to be decaying. Controversy of any kind, in which he formerly displayed such admirable temper and patience, now seemed to throw his mind off its balance. For reasoning, he substituted invective; and losing the power of persuasion, attributed bad motives to all who differed in opinion from him." "He latterly expressed a wish to withdraw himself from politics entirely, finding the discussions into which they led him no longer supportable with any comfort to himself. In short, his intellectual career had drawn evidently to a close, and though the termination of his natural life may be sincerely regretted by his friends, it is perhaps fortunate for his fame that Providence has decreed he should not outlive his mental faculties."*

In answer to these allegations, Dr Carpenter says, "We, who saw him in his last weeks, can allow nothing of the kind." In a conversation at Stapleton Grove, near Bristol, on the 11th of September 1833, at which the Rev. John Foster, and Dr Gerard the Principal of Bristol College, as well as Dr Carpenter himself, were, among others, present, "one and all," we are told, "admired and were delighted by the clearness, the closeness, and the acuteness of his arguments, and the beautiful tone of his mind." In a second conversation, in a party where Mr Foster was present, "the Rajah continued for three hours, standing the whole time, replying to all the inquiries and observations that were made by a number of gentlemen who surrounded him, on the moral and political state and prospects of India, and on an elucidation, at great length, of certain dogmas of the Indian philosophers. Admiring respect was, I may say, the sentiment of all present." (Carpenter, p. 127.)

On this subject of controversy, we perceive no necessity for differing from either of the parties. The *post-mortem* appearances of the brain indicated disease of considerable duration, occasioned, no doubt, principally by causes which may be gathered from Dr Carpenter's work, where they are mentioned with no reference to the point at issue; viz. "the constant and wearing strain which there had been on his powers for the last two years; some causes of harassing vexation which had recently occurred, and which affected him too painfully; and the long course of bitter hostility and arduous exertion which he had passed through before he came to England." (Carpenter, p. 128.) It is reasonable to suppose that his intellect might be obscured by such causes, and that his calmness might have left

* Asiatic Journal, November 1833, p. 212.

him during contention with persons whose interests and opinions were adverse to those which he maintained, and whose candour, it may have sometimes happened, was not equal to his own. And it is equally reasonable to believe, that, after a period of mental relaxation, and in the society of admiring friends at Bristol, his wonted equanimity and acuteness in conversation might be displayed. We have no doubt whatever that the alteration of the Rajah's character was the effect of disease in his brain. "It is the prolonged departure," says Dr Combe, "without an adequate external cause, from the state of feeling and modes of thinking usual to the individual when in health, that is the true feature of disorder in the mind *."

Let us now proceed to consider the other features of the character of Rammohun Roy. His head, as already intimated, is of extraordinary size; very few, even in Europe, being found of superior volume. This was the source of the force and dignity of character noticed above; it gave vastness to his designs, and inspired with respect the minds of those who knew him. It made him indeed, what he is termed by the Asiatic Journalist, an extraordinary man. "The mere circumstance," says that writer, "of his being able, by his own unassisted energies, to burst asunder the ceremonies in which the Hindoo intellect had been shrouded for so many centuries, would be sufficient to secure him a name †." But his brain, besides being of unusual volume, seems to have been active and of good quality. Long-continued observation has led us to consider it as a general rule, that one inherent quality characterizes the various organs composing an individual human body; in other words, that if the bones be dense and firm, and the muscles compact and vivacious, the other organs of the body partake of the excellent quality, and the brain, among the rest, is capable of vigorous action. When the expression of the countenance is animated and refined, an active and vivacious brain is seldom, if ever, wanting. The person of Rammohun Roy was one which would have induced us to infer activity and refinement of mental manifestation. D'Acosta, describing his appearance in 1818, says, "He is tall and robust; his regular features, and habitually grave countenance, assume a most pleasing appearance when he is animated." (Carpenter, p. 107.) The Asiatic Journal has the following remarks: "The person of Rammohun Roy was a very fine one. He was nearly six feet high; his limbs were robust and well-proportioned; though latterly, either through age or increase of bulk, he appeared rather unwieldy and inactive. His face was beautiful; the features large

* Observations on Mental Derangement, p. 219.

† Asiatic Journal for November 1833, p. 209.

and manly, the forehead lofty and expanded, the eyes dark and animated, the nose finely curved and of due proportion, the lips full, and the general expression of the countenance that of intelligence and benignity." (P. 208.) Mr Estlin says that he had "a fine, handsome, and expressive countenance." The muscles of the face, shoulders, and breast, as represented by the plaster-cast, indicate in some degree an active temperament.

The organs of the propensities generally are large. Without a tolerable endowment of Combativeness, as well as of Self-Esteem and Firmness, he could not have acted with the boldness and decision for which he was so remarkable. Combativeness is quite indispensable to a successful disputant and reformer,—to every one who sets himself to oppose prevailing opinions or customs; and this faculty, added to great general force of character, logical acuteness, exemplary candour, and extensive knowledge, rendered Rammohun Roy, what he is termed by the editor of the East India Gazette in allusion to the controversy arising from the Precepts of Jesus, "a most gigantic combatant in the theological field—a combatant who, we are constrained to say, has not yet met with his match here." His propensities, however, seem to have been generally under due subjection to the higher powers; and by means of his large Secretiveness and Firmness, he was able to suppress improper manifestations. With regard to various points of his character the published accounts are almost wholly silent, and we are therefore unable to judge of the degree in which several of the faculties were displayed. Amativeness is large, and though nothing direct is said about the strength of the feeling, there is little doubt that it was very considerable. His respect for the female sex, as formerly stated, was very marked, and his exertions on behalf of those of his own country, powerful and unremitting. Dr Carpenter states that the family of Mr Hare, with whom the Rajah lived for two years, bear unhesitating and unequivocal testimony "to the unvarying purity of his conduct, and the refined delicacy of his sentiments." "I had, myself," continues Dr C., "repeated opportunities of observing with what earnest respect he appreciated true delicacy in the female character: and I learn that, while he always maintained his habitual politeness to the sex, and may therefore have misled the superficial observer, he manifested a very prompt and clear discrimination as to individuals; and that he commonly expressed strong dislike, and even disgust, where they seemed to him to depart from that true modesty which is essential to its excellence." (P. 119.) The Reverend J. Scott Porter, late of London and now of Belfast, a gentleman in whose house the Rajah placed his son for the purpose of education, and whom he generally visited once a-week, mentions in a

Sermon recently published *, that "offences against the laws of morality, which are too often passed over as trivial transgressions in European society, excited the deepest horror in him. His whole manner and appearance discovered how much he shrunk from the very thought of them, when associated with the names of any for whom he had formerly felt respect. The admonitions which he addressed to his son, upon such subjects, were among the most impressive that I ever heard." In England, as we learn from the Asiatic Journal, the Rajah was an especial favourite among the ladies; "his fine person and soft expressive features, the air of deferential respect with which he treated them †, and the delicate incense of his compliment, perfumed occasionally with the fragrance of oriental poetry, in which he was well versed, made a strong impression in his favour." The same authority mentions, that he "has left in India a wife, from whom he has been separated (on what account we know not) for some years."—(Pp. 206, 208.)

Philoprogenitiveness is "rather large." The occiput, though not protuberant, is very broad. We have seen no data on which to judge of the actual manifestations of this feeling.—His large Adhesiveness accords with the affectionate disposition which Dr Carpenter ascribes to him, and the warm attachment which he displayed towards his mother.—Secretiveness, which is large, seems to have been one of the sources (the others being Love of Approbation and Cautiousness) of that "air of uncertainty, if not of ambiguity," by which his conduct was occasionally characterized. He was not inclined to make a prominent display of his thoughts. "He repeatedly told me and others," says Dr Carpenter, "that he never introduced his opinions unnecessarily; but that when the subject was introduced, he never hesitated to avow them." (P. 28.) The meagreness of the sketch of his life, which he furnished in consequence of the frequent requests of his friend Mr Gordon of Calcutta, to whom it is addressed, may be regarded as another illustration of strong Secretiveness.

Acquisitiveness is much inferior to Benevolence and Conscientiousness: it is only "rather full." "In the progress of his efforts to enlighten his countrymen," says Dr Carpenter, "he must have expended large sums of money, for he gratuitously distributed most of the works which he published for the purpose." (P. 103.) Abbé Gregoire, who published an account of him in France, about the year 1818, remarks, that "the pecuniary sacrifices he has made, shew a disinterestedness which cannot be too warmly encouraged or admired." In early life he did not scruple to maintain his heterodox opinions, at the ex-

* The Growth of the Gospel, &c.

† See, on this effect of Amativeness, our 2d vol. p. 398.

pense of being disinherited. Benevolence, it is hardly necessary to remark, was a shining feature in his character through life. It was with him a favourite maxim, and one which he wished to be inscribed on his tomb, that "THE TRUE WAY OF SERVING GOD IS TO DO GOOD TO MAN."

We now come to the consideration of the Rajah's endowment of Veneration and Wonder, the two sentiments which are most influential in forming the religious character. Veneration is the feeling of respect, and does not in any degree determine the object towards which that respect shall be directed. The faculty may be manifested in reverence for Jupiter, or the Lama of Thibet, or graven images, or the God of the Universe,—for crocodiles, or cats, or the Great Mogul, or Catholic priests, or Presbyterian ministers, or rusty coins, or a titled aristocracy, or the ornaments and furniture of a church. To those who have it disproportionately strong, the word "old" is synonymous with "venerable;" and, in their view, no institution or doctrine, however hurtful and absurd, is, if sanctioned by antiquity, to be at all meddled with. They obstinately adhere to the religious tenets instilled into them in childhood, and will not listen to arguments tending to support doctrines of a different kind. When, on the other hand, the organ of Veneration is moderate, and the intellect is acute and enlightened, the individual, unwarped by prejudice and feeling, regards only the intrinsic merits of the doctrines and institutions which prevail around him, and shapes his opinions accordingly. Such a man was Rammohun Roy. His head and history concur in shewing, that intellect, justice, and independence, had with him complete control over the sentiment of Veneration. As soon as he began to think, he intuitively perceived the absurdity of the dogmas taught by the Brahmin priests. He seems never to have venerated except in accordance with Intellect and Conscientiousness. The whole tendency of his mind was opposite to superstition. Wonder, the feeling which, when excessive, leads mankind to gloat upon, and swallow with peculiar avidity, the marvellous, the occult, the supernatural, and the astonishing,—and so tends to produce credulity,—had here but little sway. The mysterious and unintelligible had no charms for him: he submitted every thing to the test of consistency and reason. His great aim was to deliver his countrymen from the degrading idolatry in which they were engulfed, and to establish among them the belief of a Great Supreme. He was no friend of ceremonies in the worship of God. With him, adoration implied only "the elevation of the mind to the conviction of the existence of the Omnipotent Deity, as testified by His wise and wonderful works, and continual contemplation of His power as so displayed; together with a constant sense of the gratitude which we naturally owe Him, for our exist-

ence, sensation, and comfort *." He had no tendency to believe in miraculous interpositions of the Deity, where his judgment did not perceive sufficient occasion for them; and it even appears that he did not credit the miraculous origin of Christianity. His views respecting miracles are pretty obvious from a passage in the *Second Appeal*, (p. 225.) "If all assertions," he says, "were to be indiscriminately admitted as facts, merely because they are testified by numbers, how can we dispute the truth of those miracles which are said to have been performed by persons esteemed holy amongst natives of this country (India)? The very same argument, pursued by the Editor (of the '*Friend of India*'), would equally avail the Hindoos. Have they not accounts and records handed down to them, relating to the wonderful miracles stated to have been performed by their saints, such as Ugustyu, Vushistu, and Gotum; and their gods incarnate, such as Ram, Krishnu, and Nursingh; in presence of their contemporary friends and enemies, the wise and the ignorant, the select and the multitude? Could not the Hindoos quote, in support of their narrated miracles, authorities from the histories of their most inveterate enemies the Jeins, who join the Hindoos entirely in acknowledging the truth and credibility of their miraculous accounts?" "Moosulmans, on the other hand, can produce records written and testified by contemporaries of Mohummed, both friends and enemies, who are represented as eye-witnesses of the miracles ascribed to him; such as his dividing the moon into two parts, and walking in sunshine without casting a shadow. They assert, too, that several of those witnesses suffered the greatest calamities, and some even death, in defence of that religion; some before the attempts of Mohummed at conquest, others after his commencing such attempts, and others after his death." After carefully considering this passage, we find it difficult to avoid the conclusion that Rammohun Roy did not believe in the miracles of Christianity. He speaks of them, however, in respectful terms—remarking that he "has never placed the miracles related in the New Testament on a footing with the extravagant tales of his countrymen." Dr Carpenter, indeed, represents him as acknowledging, in his *Second Appeal* in defence of the Precepts of Jesus, the divine commission and wonderful works of Jesus Christ; and in doing so, quotes (though apparently without laying stress upon them) a few scattered phrases from the *Appeal*, which seem to countenance the statement: but in perusing, several months before the Rajah's death, the whole of his controversial writings relative to the "Precepts," we were strongly impressed with the idea that he had throughout studiously avoided an explicit declaration of

* These are his own words, in his *Second Defence* of the *Monotheistical System of the Veda*. Calcutta, 1817. *Transl.* p. 185.

his views regarding the person and miracles of Jesus Christ, in a way which he would not have adopted, had his conviction been that Jesus was a special messenger from God. His admiration of the moral character of the founder of Christianity, however, is every where evident. Near the beginning of the Second Appeal, he says, that "in the veracity, candour, and perfection of Jesus of Nazareth, he has happily been persuaded to place implicit confidence." Our opinion we find corroborated by the gentleman quoted in the Asiatic Journal, who remarks, that the Rajah's published works "state not what he believed, but what he considered the sacred books of different persuasions to inculcate: for example, he maintained that the most ancient Hindoo works taught pure theism; and that the Christian Scriptures, both Old and New Testament, taught the leading doctrines of the Unitarians." It appears, nevertheless, that in the conversation at Bristol, formerly alluded to, he expressed his belief in the divine authority of Christ, in the reality of his miracles, "and particularly in his resurrection, which he said was the foundation of the Christian faith, and the great fact on which he rested his own hopes of a resurrection." Drs Jerrard and Carpenter, and the Reverend Mr Foster, testify that this profession was explicitly made in their presence. (Carpenter, pp. 82-85.) Mr Arnot, however, gives in the Asiatic Journal for December 1833, a very different account of the Rajah's belief, and one which again confirms our own impression. "As I am one of the few in England," he says, in allusion to Dr Carpenter's statement, "from whom the Rajah never disguised his opinions, I do not deem it proper to incur the responsibility of asserting that which others, not knowing the truth, would resolutely and conscientiously deny. All I shall say is, that his piety was, I believe, sincere, and his religious principles, I think, highly philosophical and benevolent, though not at all corresponding with those of any sect of Christians, except in the doctrine of the unity of God. With every respect to the persons in Bristol mentioned by Dr Carpenter, I do not think any of them were long enough and sufficiently intimate with the Rajah to render their sentiments regarding his opinions of sufficient weight to be poised in the scale against those who have known him for many years." "The profession of faith which seems to have been obtained from the Rajah in his latter days, while at Bristol, residing with and surrounded by Unitarians, is a conclusive proof," continues Mr Arnot, "of the state of his mind at that period; such profession being much at variance with the opinions he had always firmly maintained so many years, while his mind was in its full vigour." (P. 290.) If these opposite statements are both to be received as correct—and there

seems to be no reason for doubting either of them,—one of two conclusions is inevitable. Either the Rajah departed, in his last days, from opinions which he had for many years steadily professed; or, the unhealthy state of his brain so far withdrew restraint from that “disposition to acquiescence, which eastern politeness requires,” and which, as Dr Carpenter mentions, “was known sometimes to place him in circumstances, and lead him to expressions, which made his sincerity questioned;” that it led him into the avowal of some of the tenets of his Bristol friends, which in reality he did not hold. Between these alternatives we must leave the reader to judge for himself.

Rammohun Roy entertained a favourable view of man’s moral dignity and capability of improvement. In the Introduction to the Translation of the Ishopanishad, published at Calcutta in 1816, he writes: “The physical powers of man are limited, and when viewed comparatively, sink into insignificance; while, in the same ratio, his moral faculties rise in our estimation, as embracing a wide sphere of action, and possessing a capability of almost boundless improvement. If the short duration of human life be contrasted with the great age of the universe, and the limited extent of bodily strength with the many objects to which there is a necessity of applying it, we must necessarily be disposed to entertain but a very humble opinion of our own nature; and nothing, perhaps, is so well calculated to restore our self-complacency, as the contemplation of our more extensive moral powers, together with the highly beneficial objects which the appropriate exercise of them may produce.”

There is a depression on the Rajah’s head over the organ of Hope; and, in the development, we have stated that organ as “rather full.” The information on this point of his character is very scanty: so far as it goes it is in harmony with the development. In the English preface to the reprint of the Abridgment of the Vedant, he says that when, in the beginning of his labours to purify the Hindoo religion, he was deserted by his relations, he “felt extremely melancholy.” D’Acosta speaks of him in 1818, as having a “habitually grave countenance,” and appearing “to have a slight disposition to melancholy.” (Carpenter, p. 107).—Wit or Mirthfulness, we may remark, is not large. Another symptom of deficient Hope, is the fact mentioned by Mr Estlin, that in his last illness, “he told his son and those around him, that he should not recover.”

Of the intellectual organs, the largest are Individuality, Language, Comparison, and Causality. His love of knowledge, talent for business, and minute acquaintance with the Scriptures, are illustrations of the strength of Individuality; and we need

not say that the great development of Language accords with his extensive literary attainments. In regard to these, Mr Arnot says, " he was acquainted more or less with ten languages : Sanscrit, Arabic, Persian, Hindustani, Bengali, English, Hebrew, Greek, Latin, and French. The two first he knew oricinally, as a scholar ; the third, fourth, fifth, and sixth he spoke and wrote fluently ; in the eighth, perhaps, his studies or reading did not extend much beyond the originals of the Christian Scriptures ; and in the latter two his knowledge was apparently more limited ; though, to show his unwearied industry, it may be noticed that he had seriously resumed the study of French in the present year. He has published works in Sanscrit, Arabic, Persian, Bengali, and English ; his most useful labour in regard to the first, is his translation of the Veds ; and his vernacular tongue, the Bengali, owes to him a well written Grammar, in the English language." He wrote and submitted to the government abroad, many papers for the improvement of its internal administration. " On this subject, by far the most valuable work he has left behind him, is his ' Remarks on the Judicial and Revenue Systems of India,' in the form of queries and replies, contained among the Minutes of Evidence laid before Parliament on the India question. He prepared besides, while in England, various able papers or essays on the working of the Supreme Court of Calcutta, against the Salt monopoly in India, &c. which have not been published." He is understood to have made diligent researches into the history of Mahomet, and to have partially written an account of the life of that remarkable man : Mr Arnot affirms, that he looked upon Mahomet, as being the abolisher of the idolatry of the ancient Arabs, as one of the greatest men that ever lived, and an eminent benefactor to mankind. About the year 1819, he engaged, along with the Rev. Mr Adam, and another Baptist Missionary, the Rev. Mr Yates, both well reputed for their oriental and classic acquirements, to translate the New Testament into Bengalee, a task which was found one of extreme difficulty. " We met," he says, " twice every week, and had for our guidance all the translations of the Bible, by different authors, which we could procure. Notwithstanding our exertions, we were obliged to leave the accurate translation of several phrases to future consideration ; and for my own part, I felt discontented with the translation adopted of several passages, though I tried frequently, when alone at home, to select more eligible expressions, and applied to native friends for their aid for that purpose. I beg to assure you, that I (though a native of this country) do not recollect having engaged myself once, during my life, in so difficult a task as the translation of the New Testament into

Bengalee."* A lesson of great value, which may be derived from this passage, is, that we in Britain ought to recollect that the same or even greater difficulties lay in the path of the authors of our own version of the Bible; and that we ought not to be too obstinate in adhering to interpretations, consistent enough, perhaps, with the knowledge and views of our ancestors, but at variance with scientific and philosophical principles discovered and established in later times.

The relevancy and acuteness of the reasonings of Rammohun Roy resulted from Causality and Comparison, combined with Language and Individuality. The organs which give geometrical talent—Form, Size, and Locality—are well developed. Number, however, is only moderate, from which we infer little arithmetical ability. On this point we have no information. Similar remarks may be applied to Order and Tune. It is not likely that he was remarkable for a love of punctilious arrangement and systematic regularity; and as nothing is said about his musical talent, it seems probable that the manifestations of Tune were not such as to attract the attention of his friends.

It is now time to conclude our account of this remarkable individual. His character is one which must be highly interesting to every student of the moral, intellectual, and religious nature of man; to the phrenologist it is peculiarly instructive, abounding, as it does, with numerous and varied illustrations of his science. We have entered considerably into detail respecting the religious views of Rammohun Roy, under the belief that such views, when adopted deliberately, conscientiously, and after due inquiry, indicate, to a considerable extent, the natural dispositions of the person by whom they are held. To the intrinsic merits of the opinions themselves, nothing which we have said has the slightest reference.

ARTICLE II.

THOUGHTS ON MATERIALISM, AND ON RELIGIOUS FESTIVALS AND SABBATHS. By HENRY BRADSHAW FEARON. London. Longman & Co. 1833. 8vo. Pp. 214.

MR FEARON boldly argues against the doctrine which teaches that man, in this world, possesses an immaterial soul *in addition* to his material organization; but, at the same time, he is

* Correspondence relative to the Prospects of Christianity, and the means of promoting its reception in India. Cambridge, New England, 1824. London, reprinted 1826. The beginning of this correspondence was the transmission of a number of questions by the Rev. Dr Ware, Professor of Divinity in Harvard College, to the Rev. W. Adam and Rammohun Roy, with the view of eliciting information on the subjects specified in the above title.

a firm believer in the existence of a future state. Immaterialism he finds to be "irreconcilable with the known facts and effects which are characteristic of living and thinking beings; besides which, it is involved in inexplicable and endless absurdities and contradictions. We therefore," says he, "turn with satisfaction to the opposite hypothesis, and persuade ourselves that it sufficiently solves all our difficulties, by admitting evidence so tangible that we may be justified in concluding that every manifestation of life, or of mind, which we see in creation, may result from one principle, simple in itself, but variously modified and organized, suitable to, and explanatory of, the circumstances, conditions, and nature of every living being." P. 33. He complains, that, in judging of passages in Scripture, too little regard is generally paid to an indispensable rule of criticism,— "that of viewing literal expressions as such, and figurative ones as figurative, and at all times allowing plain and definite passages to illustrate those which may be, from various causes, less so; bearing also in mind, as far as the Old Testament is concerned, the statement of Dr Kennicott, 'that the present English version frequently expresses *not what the translators found in their Hebrew text*, but what *they thought should have been there.*'" P. 62. After a minute and learned examination of the scriptural passages having reference to the question at issue, the author arrives at the conclusion, that "the hypothesis of an immaterial and immortal soul cannot but be reprobated; the belief of which, being opposed to divine authority, and tending to the destruction of a most valuable part of revelation, has supplied the unbeliever with some of his most potent arguments against that system." P. 124.

The first chapter contains a Historical Sketch of the Doctrine of Immaterialism; the second treats of Organization; the third is on the Scriptural Evidence respecting the Soul; the fourth relates to the Teaching of the Apostles concerning it; the fifth is a discussion regarding an Intermediate State; and the sixth is on the Resurrection. We have already, in the 9th Article of our last Number, expressed our conviction, that it is of no importance in which way this dispute about the materiality or immateriality of the soul is settled; the doctrine of a future state being wholly independent of the question. For this reason, and because an analysis of Mr Fearon's arguments, sufficiently minute to do them justice, would occupy much greater space than can be at present spared, we refrain from offering any estimate of their validity. The work itself ought to be studied by all who attach importance to the subject. It displays acuteness and research, and is rendered more interesting than usual by the circumstance that the author takes his stand upon Scripture as well as reason. A reference

on page 26 to "the invaluable discoveries of Dr Spurzheim," seems to indicate that he is a phrenologist.

The Thoughts on Materialism occupy little more than half of the volume: those on Religious Festivals and Sabbaths, which fill the other, are equally deserving of attention. It is not, however, within our province to do more than allude to them.

ARTICLE III.

1. **THOUGHTS ON THE TRUE MODE OF IMPROVING THE CONDITION OF MAN.** By CHARLES CALDWELL, M. D., Professor of the Institutes of Medicine and Clinical Practice in Transylvania University. Read to the Lexington Medical Society, and printed at its request. Lexington, U. S., 1833.
2. **THOUGHTS ON THE PATHOLOGY, PREVENTION, AND TREATMENT OF INTEMPERANCE, AS A FORM OF MENTAL DERANGEMENT.** By CHARLES CALDWELL, M. D. (In the *Transylvania Journal of Medicine* for September 1832.)

To a phrenologist who, by close observation of nature, has obtained a thorough conviction of the truth, and a tolerably clear perception of the consequences, of the discovery of the functions of the brain, those able and well-meaning men, who are zealously labouring for the improvement of mankind, in utter ignorance of the existence of that discovery or profound contempt for the principles which it has brought to light, appear in a very singular position. They realize the scriptural description of persons who have eyes yet see not, and ears but do not hear. They live within reach of irrefragable evidence of facts and principles, a knowledge of which is indispensable to the successful attainment of the objects which they are pursuing, and yet they totally disregard them. The clerical instructors of mankind, above all others, appear to stand in a strange and inconsistent attitude. They are professedly the servants of the Creator; the official organs by whom a knowledge of his will and laws is communicated to the public; and the recognised leaders of the people in all practices calculated to advance their moral, religious, and intellectual welfare. Nevertheless, when the constitution of the beings whom they are commissioned to instruct is expounded to them, and the means of improvement which it imperatively prescribes are offered to their consideration, they continue deaf and blind to the communication. The explanation of these phenomena is not difficult. The fact that men are not conscious of the operations of their own brains, has led them to believe that thought is the function of pure mind, altogether

uninfluenced by organization. They believe feeling and thought to be simply mental acts; and on this foundation their whole theories and practices are reared. Their applications for the improvement of the people belong chiefly to the department of abstraction. A few illustrations will render our meaning clear.

Intemperance in the use of spiritous liquors is one of the vices that degrade and render miserable a large portion of the operative classes in Britain: The object is to provide a remedy for the evil; and the first step towards this end is to discover its cause. The causes of intemperance, then, may be one or other of the following:

1. An innate love of intoxicating liquor, in the form of a strong craving appetite.

It is well known, that particular individuals are infected with this craving, apparently as a positive disease. We have known well-educated females, in the middle and higher ranks, the victims of it, whom no principles of religion, morality, or shame, could restrain from the immoderate use of ardent spirits. It is certain that, among men, there are numerous and unhappy examples of a similar disposition. It is also a matter of common remark, that occasionally, in the same family, some individuals are the victims of this vice, while others are entirely free from it, although all have been trained from infancy in the same manner.

According to Phrenology, this passion for intoxicating beverage may arise from the inordinate development of a particular portion of the brain, inherited from birth, and occasioned by the excessive activity of the corresponding organ in the parents of the individual.

If this be a fact; it is certainly an important and fundamental one; because, if the tendency be innate and strong, and arise from the state of the organization, all remedies which are likely to be effectual, must act upon the source of the evil. No sensible person would expect to remove a troublesome noise from the ears of another, caused by over-excitement of the auditory apparatus, by merely reading lectures to the patient against the folly and evil consequences of hearing imaginary sounds. Yet, where the tendency to drunkenness takes its rise from a particular state of the organization, moral and religious admonitions, unaccompanied by physical applications, bear very much the same relation to its cause; as a discourse does to over-excitement of the ear. According to phrenological principles, the drunkard, from this cause, is a patient, who requires physical as well as moral treatment. He must, by all means, be restrained from using intoxicating liquors, and subjected to a long course of physical training, to change the habits of his body, before any success in his reformation can be expected; and it is not to be con-

fidently relied on, even when all these measures have been applied. Repentance, promises of amendment, and other merely mental impressions, have as little abiding influence on such men, as the waves raised by the wind have on the surface of a lake; they may be strong while they last, but their endurance is brief, and their effects truly transitory.

If this principle be founded in nature, we consider it of paramount importance to be known as a law instituted by the Creator, that men may be aware not only of the treatment which their vices demand from their guardians, but of the influence on their offspring of their own irregular habits.

2. A second cause of intemperance may be extreme deficiency of food, either in quantity or quality, accompanied by hard labour. The effect of bodily labour, carried beyond the physical strength of the individual, is to exhaust the nervous system of its energy and vivacity. When toil ceases, there is a painful feeling of want and depression, attended with a craving for stimulus, which is nearly intolerable. Looking to the cause of the evil for our direction in applying a remedy to it, we would prescribe wholesome food in sufficient quantity, cleanliness, fresh air, and labour proportioned to the strength. The application of these sanative means, however, requires time, money, and a condition of mind in which the whole conduct is subjected to moral restraint. The individuals subject to this form of temptation, however, are in general sunk deep in helpless poverty, and, at the end of each day's labour, are scarcely able to provide means for purchasing the plainest food, in the most moderate quantity. Beset by the feeling of depression, and that heart-gnawing craving for stimulus and re-action which we have described, they fly, as if impelled by an irresistible infatuation, to the gin-shop, and enjoy a moment's felicity, which we verily believe to be to them inexpressibly delicious, although most transitory, and soon to be followed by suffering still more severe than that which it for the moment relieves. If this be a correct description of the cause of intemperance in a large proportion of the operative classes, it points out the means necessary to be adopted for its removal. The physical condition of the sufferers must be improved as the first step; and one means of doing so would be to teach them the real cause of the passion which impels them to drink, and to aid them in overcoming it. They should be assisted and encouraged to obtain more nutritive and abundant food, and to cleanse their persons, apparel, and habitations; and some grateful mental stimulus should be administered at the hours when the periodical indulgence is generally resorted to. While the physical causes are left untouched, sermons, and essays, and lectures against intemperance, will produce only a temporary and limited effect. They will operate

only on those individuals whose moral and intellectual powers yet retain so much strength as to be capable of maintaining an ardent struggle against the craving impulses of their physical nature; a portion small in number in such circumstances of destitution.

3. A third cause of intemperance may be a flow of exuberant spirits, arising from strong health and worldly prosperity, in persons of little education, knowledge, and mental cultivation. Our intemperate ancestors, of the higher and middle classes, were men of this description. They felt within themselves a great capacity of enjoyment; but, having few ideas, and no intellectual pursuits, they were grievously at a loss to discover in what direction they could obtain substantial pleasure. The bottle presented itself to their imaginations as the readiest and most obvious fountain of joy. They drank deep, and expanded their souls in rude and boisterous merriment. We recollect of striking examples of this species of intemperance being exhibited by the farmers of the fertile districts of Scotland, about the years 1800-1-2-3, and upwards. They had entered life expecting to maintain a hard struggle with fortune, and to obtain only daily bread in an humble way, without the least prospect of becoming rich. By the progress of the war, and the restriction of cash payments by the Bank of England, prices of agricultural produce rose to an unprecedented height, and wealth poured into their coffers in copious streams, absolutely without an effort. There is no rivalry in trade among farmers, for the prices of their commodities are affected by causes so extensive, that individuals appear to have no influence over them. They are, therefore, either all in prosperity, or all in adversity, at the same time, and cordially sympathize with each other in every turn of fortune's wheel. At the time above mentioned, the whole tenantry of large tracts of country, whose minds were so moderately cultivated, that they only knew how to read, and scarcely to write, found themselves becoming gentlemen all at once; and they gave indulgence to their mirth in frequent and long-protracted festivities. We knew of a "house-heating" among them which was supported for two nights and a day, the guests eating, drinking, and sleeping by turns, the shutters being closed, the candles burning, and the feast going forward all the time without intermission. Drunkenness in these classes has almost entirely ceased; and why? because the men have become more intelligent, and the women more refined, in consequence of a far higher education, procured by the very wealth which at first, when ill applied, deteriorated their habits.

Looking to this class of causes of intemperance, therefore, the phrenologist would recommend for its removal the institution of

seminaries for instructing in useful and entertaining knowledge every class of the community.

We have entered into these details to shew, that, though intemperance is a single vice, it may have a variety of causes; and that measures calculated to remove it ought to bear distinct reference to each of its causes, and differ according as the cause differs; and also that it is indispensable to keep in view the influence of organization on the mind, as otherwise many of our efforts will prove abortive.

It appears to us, that an excellent foundation for improving the moral and physical condition of the people, would be laid by instructing them in the constitution of their own minds and bodies, and shewing them how the organs and faculties which they possess are all capable of becoming fountains of enjoyment if rightly employed, and of intense misery if abused. If the Creator has bestowed a rational nature on man, he must have intended him to improve his condition by studies such as these; and we shall never cease to appeal to the conscience and understanding of the teachers of mankind, until they shall condescend to do justice at once to the Author of the universe and to their fellow men, by giving due attention to the order of creation. If any of them shall read these pages, we ask him how he can answer to his own mind for neglecting truths at once so obvious and so practically useful.

We have been led into these reflections by the two excellent essays by Dr Caldwell, mentioned in the title of this article. They are full of sound principles, and eloquent and just illustrations, and altogether are calculated to spread the most valuable information among the American people. We proceed to allow Dr Caldwell to speak for himself in the following extracts:

“Since the improvement in the condition of man is greatly disproportioned to the united and long-continued efforts of so many millions of individuals for the promotion of it, the failure must be owing to some powerful and deep-rooted cause: for, that he is a being highly susceptible of improvement, cannot be doubted.” “Let me invite your attention, then, to a few thoughts on this important subject.

“As respects the cause why the efforts hitherto made for the amelioration of the condition of man have proved unsuccessful, it may be easily rendered. They have been instituted on fallacious grounds. Neither has science directed nor nature sanctioned them. On the contrary, both have concurred in pronouncing them wrong, and in dissuading from their prosecution of them. That the end aimed at by them, then, should be attained, was impossible. It is an axiom in philosophy, that nothing in opposition to nature, or apart from it, shall succeed.

The authors of the efforts referred to had not a correct knowledge of the human system, the complicated machine which it was their object to improve. Of all earthly things that are highly important, men would seem to be least acquainted with themselves and their external relations. Under such circumstances, to look for human amendment as the result of their labours, is unreasonable; not to use a more condemnatory term, and pronounce it absurd. That man should be deteriorated by the ignorance and mismanagement of those who attempt to better his condition, is much more probable.

“ I have employed the phrase ‘ human system,’ as indicating the subject to be acted on, in all attempts at human amendment. And I mean by it the material fabric of man, possessed of life and its numerous attributes. To improve that, in a suitable manner, is all that can be done, and all that is requisite for the end contemplated. Let that be brought to the highest perfection of which it is susceptible, and the work will be complete. The condition of man will be as felicitous as the laws of his nature admit. I allude to his earthly condition. But the subject must be treated more circumstantially.

“ The human family is made up of individuals. Its prosperity therefore, in the aggregate, is composed of that of all its separate members. The greater the number of its members, and the more prosperous the condition of each, the higher will be the prosperity and comfort of the whole. These postulates will not be denied. The questions, therefore, to be solved in the present case are, ‘ In what does individual prosperity consist?’ and ‘ In what way can it be promoted most certainly, and in the highest degree?’ Satisfactory answers to these questions will be tantamount to directions for the best mode of improving the condition of the human race. The first of them, being simple and limited, can be briefly answered. The latter is more complicated, and must be answered in detail.

“ Apart from wealth, station, and other incidental considerations, which cannot be embraced in the present discussion, individual prosperity, when as perfect as it can be made, consists in a capacity for the highest degree of personal efficiency and rational enjoyment. In plainer terms, it is a fitness in man to be as happy in himself, and as useful to others, as the laws of his being admit. And that fitness is the result of a fair development and sound condition of all the various organs of the system; of that which constitutes man’s greatest good; a sound mind is a sound body. And to a certain extent these are inseparable. Let the corporeal condition be as here set forth, and the intellectual will correspond with it as certainly as, in any other case, the effect harmonizes with the cause.

“ I have here again spoken of the organized system, as consti

tuting the real subject of improvement. This I have done intentionally and with a precise meaning, which I wish to be distinctly understood. It is as follows: All that we practically are, and therefore all that we can do, in our present state, is the result of our organization. If well organized and in health, we are in a condition to be comfortable, prosperous and useful; but if our organization be defective or unsound, the reverse is true. To this not a single exception can be adduced, in the realities of the present, or the history of the past. Opposition to this assertion may be safely challenged. To our organization we are as exclusively indebted for the character and amount of our intellectual and moral faculties, as our physical; as positively so for the strength and activity of our reason and virtue, as of our muscles and joints. However paradoxical this may appear to some, or perhaps heterodoxical to others, a thorough knowledge of man *as he is* testifies to its truth. None doubt it but those who look at human nature through the perverting medium of theory or prejudice, and endeavour to fashion it to their own conceptions. The brain is as truly and obviously the organ of feeling, sentiment, and thought, as the glands are of secretion, and the muscles of motion. A large, healthy, well toned, and well formed brain, therefore, gives strength of intellect and soundness of virtue to the philosopher and statesman, as certainly, and directly, as large, healthy, and well formed muscles and nerves do to the arm of the blacksmith or the leg of the dancer." "All that is requisite to be learnt, therefore, to insure the highest improvement of the human race, is, how to bestow on individuals the best organization. It must not be forgotten that I mean the organization of every portion of the system. On this I say depend strength, activity, elegance, grace, beauty, genius, and moral worth, and every other excellence, corporeal and mental. To the truth of this, all times, both ancient and modern, and every other country on earth, bear testimony. Other things being equal, that community whose individuals are best organized, is most powerful, prosperous, and happy." "In referring to these points, it must not be forgotten, that the power and efficiency of every description of organized matter are increased by the proper kind and degree of excitement and exercise.

"Is any one inclined to question the ground I have assumed, and to ask me whether real human superiority does not depend more on superiority of mental constitution than of material organization? I answer no. At least we have no good reason to think so. Of 'mental constitution,' in the abstract, we know nothing. We cannot even affix to the expression an intelligible meaning. To us, therefore, it has no meaning, and might as well have no existence. Perhaps better. Its operation

on us is unfavourable to accuracy in knowledge. It palms on us sound instead of sense, and induces us to pursue a fallacious process in our efforts to improve ourselves. To discuss the difference between the mind or spirit of one individual and that of another, is to toy with words. As well might we attempt to ascertain the difference between the circumference and weight of one moonbeam and another. Each inquiry would be alike futile in its character and unsuccessful in its issue. One person differs from another in his intellect, not because his spirit is different, but because he differs in his organization." "Every difference that exists between one human being and another, arises from that alone. It must still be borne in mind, that tone or intensity makes an important element in organic efficiency. Improve organization, then, especially in certain parts to be hereafter designated, and you improve the race in every excellence: in intellect and morality as well as in animal power. Carry this improvement to the highest attainable pitch, and man is as perfect as he can be made. But that it may be rendered more certainly intelligible, and the truth or falsity of my sentiments respecting it be the more easily perceived, this subject must be considered in further detail. I shall proceed, therefore, to state, with as much succinctness and perspicuity as I can, some of the means by which the organization of man may be so changed as to improve his condition."

"But previously to suggesting any means for the attainment of this end, I must offer a brief physiological exposition.

"The human body is a very complicated apparatus. It consists of many different organs, which are again made up of other organs, each performing its specific functions. But these organs, instead of acting, every one for itself alone, act also for each other, individually and collectively, and are united in a system, by function and sympathy. The condition of one organ, therefore, whether sound or unsound, influences and modifies that of many others. If it be a principal organ it influences the whole machine. There are three great sets of organs, which, while they are intimately and indispensably connected with each other, control all the rest, and assimilate their condition, in no small degree, to their own. These are the chylipoetic organs; the blood-making and blood-circulating organs, consisting of the lungs and the heart; and the brain, spinal cord, and nerves, which, as already mentioned, are the instruments of intellect and feeling, and are essential also to voluntary motion. To the heart must be added its appendages, the bloodvessels. These three sets of organs have been said to control all the others; and this they do chiefly by mutually controlling themselves; by exercising, I mean, such a reciprocal influence, as to be all, at the same time, somewhat assimilated in condition. They are as ne-

cessary to each other, as they are to the whole. Is one of them materially deranged in its action? The two others suffer immediately, and all the rest of the system in its turn. Is the brain diseased? Its healthy influence, which is indispensable to the well-being of the two other sets of associated organs, is withheld from them, and they also fail in their action, as well as in their sound and sustaining sympathies. The chyle and blood are deteriorated. This proves a source of further injury to the brain, which, unless it be supplied with well prepared blood, is neither itself in good condition, nor capable of contributing to the health and efficiency of the other parts of the body. It cannot prepare, from a scanty and bad material, the substance, or agent, of its own influence, whatever it may be, in sufficient quantity, and of sound qualities. The general mischief arising from a primary morbid affection of either of the two other sets of controlling organs, is equally demonstrable, and depends on similar principles. But it is needless to dwell longer on this subject. To every physiologist it is already familiar. It is known to him, that out of chyle of bad qualities, or deficient in quantity, a sufficient amount of good blood cannot be prepared; that if respiration be defective, the latter fluid cannot be duly vitalized; and that if the heart be enfeebled, it cannot throw the blood with the requisite force into every part of the system.

“Of the three leading sets of organs, the functions of two are comparatively simple; the chylopoetic, and those that prepare and circulate the blood. But, as respects the brain, the reverse is true. Its functions are as numerous and diversified in kind, as they are important in their bearing and character. Besides throwing its influence on every part of the system, to sustain it in a state of common fitness for action, and performing the great work of voluntary motion, it is the immediate seat of every form of sensation, and the instrument of every intellectual faculty. The brain is not, therefore, a single organ. In the necessity of things it cannot be so. Throughout nature no single organ performs more than a single function.”

“But I must proceed in my preliminary analysis one step further. And here I am compelled to become the phrenologist. In no other capacity can I speak rationally of the human intellect. On that topic, every thing set apart from Phrenology, or in opposition to it, is to me but the language of conjecture or prejudice. I leave it therefore to the incumbents of schools and cloisters, where much of it originated.”

“The brain, instead of being single, consists of as many organs as the mind possesses of faculties; and all these are as different from each other, as a nerve of sensation is from a nerve of motion, or a nerve of taste from one of touch. If these posi-

tions are true, as all things seem to testify they are, the inferences deducible from them are peculiarly important, and, as will presently appear, have a direct bearing on the subject I am discussing.

“The organs which compose the brain, with the faculties dependent on them, are divided into three classes; the animal, the moral, and the intellectual strictly so denominated. The latter class is subdivided into the *knowing* and the *reflecting* organs; or, as they are sometimes called, the *perceptive* organs and those of *relation*. For the comfort and happiness as well as for the efficiency of man, and his usefulness as a member of society, it is requisite that these three sets of organs be well balanced in power and action. If one or two of them preponderate, especially in a high degree, some deficiency, irregularity, or impropriety of conduct will occur, to the inconvenience, injury, or ruin of the individual. In proof of this many striking examples might be cited. But the truth is already so palpable, that it would scarcely be extravagant to pronounce it self-evident. In attempting therefore to improve the condition of man, a point of peculiar moment is, to produce and maintain, in his mental powers, the requisite balance. Let each class of organs and its dependent faculties have a full measure of power, but suffer neither of them greatly to predominate over the others. Should the animal class be too feeble, the individual will be defective in practical energy; he will want general vigour and activity of character; and should it be too strong, the danger is great, that he will indulge in practices indecorous and degrading, if not vicious. He will be too much of the animal, in forgetfulness of the man. If the intellectual organs be too feeble, the individual will want both knowledge and the power to use it. If any one, two, or more of them be disproportionately strong, he will be likely to attach himself inordinately to some favourite pursuit, to the neglect of other requisite ones, or to engage in study with an ardour and intensity ruinous to health, and perhaps productive of mental derangement.* Excessive weakness in the moral organs is tantamount to too much strength in the animal, and may become a source of crime; while excessive strength and activity in some of them produce a stern and inflexible resolution, or an ungovernable enthusiasm, in relation to the objects of them, which misleads the judgment, subverts discretion, and prevents usefulness.”

“But to establish the balance of the faculties alone is not suffi-

* “It is now known that a great preponderance of one or more of the cerebral organs constitutes a strong predisposition to madness. An examination of the insane also testifies, that, in a large majority of cases, the mental faculties *first* deranged, and which often continue to be *alone* deranged, are those belonging to organs inordinately developed—inordinately I mean, in proportion to the other organs of the *same* brain.”

cient to constitute the highest degree of improvement of which the human condition is susceptible. The whole man must be balanced; the organs of his body in general, no less than his cerebral organs. Nor is this all. The due balance must be established between the other parts of his system and his brain. Neither must inordinately preponderate. Any striking defect of balance, whatever may be its nature or seat, is a constitutional evil, and must necessarily do mischief. To produce, therefore, the highest perfection of which man is susceptible, a fair equilibrium must be established in his system, and the whole rendered as powerful as may be practicable. Weak organs must be strengthened, and too vigorous ones reduced, if not actually, at least comparatively, until the requisite balance be attained. In one point, of great moment, the living body of man resembles not a little the body politic. The stronger parts of it have a prevalent tendency to oppress and injure the weaker. Hence local debility, of whatever description, is an invitation to disease, or some kind of discomfort. In every scheme, therefore, for human improvement, to prevent or remove it should be a leading object.

“Is any one inclined to ask me how this is to be done?—by what means, and in what mode of employing them, this constitutional harmony is to be established? The question is a fair one; and, were it proposed, I should be bound to reply to it. Without further preface, therefore, I shall proceed to answer it, as if it were proposed.

“It is a law of nature that the offspring resemble their parents. As relates to leading points, this is a truism familiar to every one, and is uniformly and successfully acted on, in the breeding of inferior animals. That all constitutional qualities are transmitted from parents to their children, admits not of a doubt. Apparent exceptions are only apparent, not real. Are parents perfectly sound and vigorous in body? So are their children, when they first see the light. Is the reverse true? Are the former constitutionally unsound and debilitated? The evil descends, in some degree, to the latter. Respecting intellect, the same is true. According as it is weak or strong, sound, unsound, or peculiar in the parents, so are its character and condition in the children.”

“As relates to the standing and welfare of the human race, this principle is much more extensively and powerfully operative than it is generally supposed to be. It is the reason why children born at different periods of the lives of their parents, and under the influence of different circumstances, especially different degrees of parental health and vigour, are often so unlike each other. It is also the most probable source of the very frequent and strong resemblance of twins, which receive the impress of

exactly the same parental condition. Children partake of the constitutional qualities of their parents, for the time being. Years and circumstances alter those qualities, and the offspring produced under the influence of them, thus modified, are correspondingly altered. Even the present predominance of any particular faculty of the mind in the parents, would seem to transmit that faculty to the child in greater vigour than it would be transmitted under the predominance of any other faculty. Thus, the first-born children of parents, who marry when very young, are rarely if ever equal, in either body or intellect, to those born at a subsequent period, provided the parents continue healthy."

"Very young parents are, in constitution, immature and comparatively feeble; and that constitutional imperfection descends to their early offspring. As years pass on, their being ripens, and their strength increases. As a natural effect of this, the constitutions of their children become ameliorated." "For reasons well known to phrenologists, the animal organs and faculties predominate during early life. Parents, therefore, who marry at that period, communicate in a higher degree to their first children the same unfortunate predominance, which renders them less intellectual and moral, and more sensual; less capable, as well as less ambitious, of preeminence in knowledge and virtue, and more inclined to animal indulgences." "Again. The sons of soldiers and military leaders, born during periods of war and peril, are believed to be constitutionally brave. Under such circumstances, a coward has been rarely ushered into the world. The reason would seem plain. In the parents, the organs and faculties pertaining to war, excited to inordinate action by scenes congenial to them, predominate for the time, and bravery becomes the native inheritance of their sons. Hence also the phrase 'soldier's daughter' means a heroic woman. During the early and warlike age of our frontier States, when the rifle and the tomahock were constantly employed in the work of havoc, every child was born an Indian-fighter. The cause, I say, is obvious. In the whole population, which was composed of warriors, the organs and faculties suited to the occasion bore sway, and gave to the constitution of the offspring of the community a corresponding character."

"Efforts are made to explain these and all similar events, on the single ground of education and example. But they are made in vain: or rather worse than in vain. They inculcate error. That education and example do much, is not denied. And the principles of their operation will be stated hereafter. But they cannot do every thing." "On the same principle are we to explain the fact that the children of Arabs and Tartars are

born with propensities to pillage and theft. For centuries, their progenitors have been a pilfering and a 'robber-race.'

"The first suggestion I shall offer as a means toward the improvement of our race, is the prohibition or voluntary abandonment of too early marriages. Before the parties form a compact fraught with consequences so infinitely weighty, let the constitution and education of both be matured. They will then not only transmit to their offspring a better organization, but be themselves, from the knowledge and experience they have attained, better prepared to improve it by cultivation. For I shall endeavour to make it appear that cultivation can improve it. When a skilful agriculturist wishes to amend his breed of cattle, he does not employ, for that purpose, immature animals. On the contrary, he carefully prevents their intercourse. Experience moreover teaches him not to expect fruit of the best quality from immature fruit-trees or vines. The product of such crudeness is always defective. In like manner, marriages between boarding-school girls and striplings in or just out of college, ought to be prohibited. In such cases, prohibition is a duty, no less to the parties themselves, than to their offspring and society. Marriages of the kind are rarely productive of any thing desirable. Mischiefs and unhappiness of some sort are their natural fruit. Patriotism therefore, philanthropy, and every feeling of kindness to human nature call for their prevention. Objections resting on ground not altogether dissimilar may be justly urged against young women marrying men far advanced in years. Old men should in no case contract marriages likely to prove fruitful. Age has impaired their constitutional qualities, which descending to their offspring, the practice tends to deteriorate our race. It is rare for the descendants of men far advanced in years to be distinguished for high qualities of either body or mind.

"As respects persons seriously deformed, or in any way constitutionally enfeebled—the rickety and club-footed, for instance, and those with distorted spines, or who are predisposed to insanity, scrofula, pulmonary consumption, gout, or epilepsy—all persons of this description should conscientiously abstain from matrimony. In a special manner, where both the male and female labour under a hereditary taint, they should make it a part of their duty to God and their posterity, never to be thus united. Marriage in such individuals cannot be defended on moral ground, much less on that of public usefulness. It is selfish to an extent but little short of crime. Its abandonment or prevention would tend, in a high degree, to the improvement of mankind."

"In consequence of an unfortunate cerebral organization, some persons who are reared in virtuous society, under the influence

of the best example, possess an uncontrollable propensity to vice—to lying, treachery, theft, robbery, and even murder. Instances of this description are much more numerous than they are thought to be. In case of the marriage of such individuals, the probability is strong that their offspring will inherit their constitutional infirmity. The issue indeed can scarcely be otherwise, unless it be prevented by a better organization in the other parent, or counteracted by education, of whose influence in amending mankind I shall speak hereafter. To refrain from marriage, therefore, would be in those persons a redeeming virtue. Of individuals dwarfish in stature, the same is true. All such acts of self-denial would be praiseworthy in them, inasmuch as they would tend to ameliorate the condition of man.

“Another source of human deterioration is a long series of family intermarriages. Be the *cause* what it may, both history and observation testify to the *fact*, that the issue of marriages between parties related by consanguinity always degenerate. They become enfeebled in time both mentally and corporally. This practice, which is fostered chiefly by the false pride of rank, has reduced almost to dwarfishness the nobility of several nations, especially of Portugal.”

“The last source of degeneracy I shall specify, under this head, is the marriage of the indigent; of those, I mean, who are destitute of a competent supply of wholesome food for themselves and their children. This is a fearful cause of deterioration. Reason assures us that it must be so: A sound and powerful machine cannot be constructed out of a scanty stock of damaged materials. And to the decision of reason, observation unites its testimony. A glance at the indigent of all nations furnishes incontestible proof of the fact. Monuments of far-gone degeneracy every where present themselves. Witness the large manufacturing towns of Europe. Stunted and unwholesome fare acts on mankind as it does on other forms of living matter. It injures organization and checks development. Both the vegetables of a barren soil, and the animals scantily nourished by them, are diminutive and feeble, as well as unsightly. So is man, when pinched and dispirited by poverty and its concomitants. Even the United States furnish many examples confirmatory of this, while other countries furnish a hundredfold more. Such are a few of the most prominent and fruitful sources of human degeneracy. The remedy for the evil is, abstinence from marriage in the cases referred to.

“But, in no country perhaps, and least of all in our own, are we to look for the speedy adoption, to any useful extent, of this preventive measure. People will marry and have issue, whether their figures and developments be good or bad, whether they are poor or rich, akin or aliens in blood, and whether their con-

stitutions be sound or otherwise. They will also continue to marry, in many instances, at too early a period of life, as long as subsistence for a family can be easily procured. Our only practicable remedy, therefore, consists in removing, as far as possible, the evils of improper parentage and other causes, by subsequent treatment. And this can be done by education alone, judiciously adapted, in its principles and administration, to the constitution of man.

“But by the term education I would indicate a process exceedingly different from that which is usually so denominated. I do not limit it to the mere attainments made by the youthful in seats of instruction, whether they be primary schools or academies, colleges or universities. I mean by it the training of the whole man, by a suitable course of discipline, during the greater portion of his life. It must begin in infancy and terminate only in advanced age, when the constitution has become so rigid and the habits so confirmed as to be no longer improvable. And even then great care is necessary to preserve the amount of good that has been gained. A process of education short of this is defective in its nature, and must prove alike defective in its issue.”

“Education, I say, must begin in infancy, and be administered by means of suitable impressions made on certain ruling organs of the system. The corporeal effects resulting from these, and the corresponding habits established by their continuance, constitute the only improvement to be attained, and therefore the only one to be aimed at. They form indeed the only one we should desire; because it is sufficient for all our purposes. It is moreover the only one we can conceive of, and must therefore satisfy us as reasonable beings. To talk of operating immediately on or exclusively with the mind or spirit, and improving it, is an abuse of words. When speaking thus, no one understands himself, and, of course, is understood by nobody else. We might as well talk of operating, by our schemes of education, on the inhabitants of the planet Jupiter. As already mentioned, the organs to be chiefly acted on are, the chylopoetic viscera—the lungs and heart as the arbiters of the blood—and the nerves and brain. To these may be added, the muscles and skin, which although subordinate in standing, are nevertheless instruments of great influence in a system of general discipline. In the proper management of these portions of the body does education chiefly consist.”

Dr Caldwell here expatiates on the necessity and advantage of paying strict attention to cleanliness, food, drink, purity of air, and muscular exercise. His remarks on these subjects we are compelled by our limits to omit.

“But the most important organ of the human system remains to be considered. It is the brain, of which it may be said that it

makes man what he is, whether for good or evil. If well developed and correspondingly trained, it confers on him knowledge and virtue ; and, under circumstances the reverse of these, it entails on him ignorance, and gives him a proneness to vice. According, therefore, to its native character and cultivation, it is the source of human exaltation or debasement.

“ I have already spoken of the control of the brain over the condition and destiny of the other parts of the system. And I need scarcely repeat, that it is universal and absolute. Facts familiar to all physiologists prove it so. To the performance of every function and movement of the body cerebral influence is essential. In evidence of this, destroy the connexion between the brain and any other organ or part of the system, by dividing the nerves, and the action of the separated portion ceases. Are the lungs thus separated ? Respiration is suspended. The stomach ? Digestion is paralyzed, and the food remains in the viscus unchanged. The liver, or any other gland ? Its fluid is no longer secreted. The heart, or any other muscle, voluntary or involuntary ? Its action is arrested. And the more powerful and cultivated the brain is, in all its compartments, the more abundantly will it send out its influence, and the more steadily and effectually aid in maintaining the healthy condition of the entire system. It is with the brain, then, as with the lungs, stomach, and heart. Exercise gives it strength and habits of ready and dexterous action, not merely for the purposes of its own economy, but to subserve the economy of the parts with which it is connected.” “ By inaction the organic condition of the brain suffers, and its energy and adroitness are lessened, as certainly as a muscle is weakened by the same cause. It is a law of nature, from which no portion of living matter is absolved, that a want of action enfeebles it. The converse is equally true. Appropriate action strengthens every portion of living matter. That the brain, then, may be healthy and vigorous throughout, and be instrumental in imparting a similar condition to the other parts of the system, it should be suitably exercised in each of its organs. Inaction in any one of them, except its native vigour be excessive, is prejudicial to the others. And a brain thoroughly disciplined and active in every portion of it, is more favourable, in its functions, to general health, than one that is disciplined only in part. The healthiest men, and those that attain most frequently an advanced age, have well balanced systems and active brains. Such, moreover, is the connexion between the cerebral organs, that their health and fitness for action are, to a certain extent, in common to them ; and the reverse ; the condition of one or more of them being communicated to the others by the laws of sympathy. That the brain, then, may be rendered powerful in all its organs, every one of them should be duly exercised.

“ It has been already stated, that the human brain consists of three compartments, the animal, the moral, and the intellectual ; and that to raise the mental character to the highest perfection, each of these must be large, well organized, and healthy, and that a correct balance must subsist between them. To a solid and infallible foundation for strength and activity of intellect, sound morality, and energy of character, nothing else is necessary. Skilful training, by turning to the proper account these high gifts of nature, and in that way engrafting improvement on capacity, will finish the work. Were the whole human race thus happily tempered, the condition of man would be as perfect as it could be rendered, and the state of society correspondingly prosperous. Talent and knowledge would prevail and be respected; morality and active virtue would predominate over profligacy and vice; and that every one should be happy in himself and useful to others, would be the ambition and earnest endeavour of all. This would be a millennium, brought into existence by means of education, and in conformity to the constitution of human nature. And let that state of improved being occur when it may, the perfect organization of man, more especially of his brain, will constitute its basis. Let me not be misunderstood in this assertion; in a special manner, let it not be imagined that I intend by it any irreverence toward the Christian religion. Far from it. My meaning is, that whatever agency, divine or human, may bring about, in man, the change productive of a millennial condition, that change will consist in an improved organization—an organization *made perfect*—by influence *FROM ABOVE*, if it be so ordained, and if that be the only source from which such influence can proceed—or by means of education, perfect in its principles, and suitably administered. To me the latter appears most probable; because it is most in accordance with the grounds of other changes and improvements in the great dispensation, under which we live. It is the amendment of man’s earthly condition by his own exertions; and there is no reason to believe that it is amended at present, or intended to be hereafter, in any other way. Nor ought it to be. If, possessing, as he does, the capacity and the means, man will not labour for the improvement of his nature, he is unworthy of it; nor, as I confidently believe, will he ever receive it as a gratuity.”

“ Is any one inclined to propose the question, ‘ Can the organs of the brain be *increased in size*, as well as rendered more adroit and vigorous in action, by any process of training?’ I answer, Yes, with as much certainty as the muscles of the extremities can be increased in size, provided the process be commenced in childhood. On this principle depends the perfectibility of man; I mean his susceptibility of the highest improve-

makes man what he is, whether for good or evil. If well developed and correspondingly trained, it confers on him knowledge and virtue; and, under circumstances the reverse of these, it entails on him ignorance, and gives him a proneness to vice. According, therefore, to its native character and cultivation, it is the source of human exaltation or debasement.

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ment compatible with the laws imposed on his nature. Abrogate the principle, and his case is hopeless." "As relates to augmentation and diminution, power and weakness, the brain is governed by the same laws with other portions of organic matter. I do not say that it can be increased in bulk, by exercise, as much as muscles; but it can be as certainly.

"Another principle of great importance invites our attention. Other things being equal, in proportion to the size of either compartment of the brain, is its proneness to action, and the gratification which that action bestows on the individual. Does the animal compartment preponderate? The taste for animal indulgences is keen, the pleasure derived from them intense, and the danger of lawless devotion to them great. Does the moral compartment surpass in size? A wish to comply with moral obligation constitutes the ruling passion of the party thus organized, and his chief delight is to do his duty. To him each act of well-doing is its own reward. He 'follows virtue even for virtue's sake.' This he does from *moral instinct*; without the influence of human laws, or any positive divine command. The law he obeys is that of his own constitution. He has a law in himself. The person whose intellectual department predominates, is devoted to inquiry, if not to study. He delights in knowledge, deems it a valuable possession, and devises and practises some mode of attaining it. The kind of knowledge most agreeable to him is determined by the intellectual organs most developed.

"As relates to education and the improvement it produces, these views are important and encouraging. They point out a plain and easy process by which the condition of man may be improved. If the moral and intellectual compartments of a child be small, they may be enlarged by training; and, in proportion as they grow, will its taste for knowledge and virtue increase. By maturity in years this taste will be confirmed, and, in organization and its effects, the amended condition of the adult will surpass not a little the promise of the child. By the law of inheritance heretofore referred to, the children of this individual, resembling himself in his mature condition, will be better organized than he was in his childhood. Train them and their descendants as he was trained, and organic improvement will go on in them, until in time the highest perfection of their nature shall be attained. Extend this treatment to the whole human race, and universal improvement in organization will be the issue. Then will be completed, on grounds that nothing can shake, the triumph of the intellectual and moral over the animal character of man.

"Am I asked in what way the moral compartment of the brain is to be cultivated, strengthened, and enlarged? I answer, by

all sorts of moral excitement ; inculcating moral precepts, presenting moral examples, eliciting moral sentiments, but more especially by associating with companions strictly moral, and engaging early in the moral practice of doing good. Reading the biographies of men remarkable for high and practical morality, and well written works of moral fiction, contributes materially to the same end. This course, skilfully and inflexibly pursued, will infallibly strengthen and enlarge the moral organs, and confirm those persons subjected to its influence in habits of virtue."

" But may not the brain, by suitable discipline, be amended in another very important point ? May not such a happy change be produced in it, as to efface its tendency, when it exists, to hereditary madness ? From this question no physiologist will be likely to withhold an affirmative answer. And, although he may be unwilling to speak confidently, because the experiment has never yet been fairly made, he will not deny that all analogy favours the belief. Individually, I verily believe it will be made, and prove successful. A predisposition to madness consists in faulty organization ; at least in a condition of the brain destitute of soundness. But the fault has not existed through all generations. It had a beginning ; and that beginning was the product of a series of deleterious impressions. Another series of counter-impressions, therefore, may remove the mischief. Changes thus produced, may thus be done away. Of this no reasonable doubt can be entertained. Daily occurrences convince us of its truth. Every thing indeed that bears on it testifies to that effect."

" But if the brain can be thus changed and amended by education, may not similar benefits be extended on similar principles to other organs ?—to the lungs and the chylopoetic viscera ? Unquestionably they may ; and thus may predisposition to pulmonary consumption, gout, dyspepsia, scrofula, and all the other maladies transmitted by ancestors, be removed from posterity. The enfeebled organ may be strengthened and placed on a par with the others, and thus the balance of the system be restored. But here again the preventive treatment must begin in childhood, and be steadily persevered in, if not to the close of life, at least to an advanced period in its decline. In a few generations such a procedure cannot fail to eradicate the evil. It is believed that if skilfully and perseveringly applied, the remedy is competent to the end contemplated. Thus may hereditary disease be effaced. The vices, follies, and misfortunes of ancestors will be no longer visited on an amended posterity.

" Such are my views, briefly, but I trust, intelligibly, sketched, of the true mode of permanently improving the condition of man. The scheme has in it nothing that is either abstract, visionary, or obscure. Or if it has, I am unable, by the strictest

scrutiny, to detect it. It is founded, if I mistake not, on well known laws of the human constitution. Nor is it in any degree impracticable. It requires but resolution, perseverance, and self-control, connected with intelligence in the use of means that are accessible, and the work is done. Its essence consists in this; let man be so reared, that his health may be sound, and so cultivated that his higher powers may have due supremacy over his lower; in other words, that he may be less of an animal, and more of a human being; and his standing will then be as high, and his condition as happy, as his situation and the laws of his being admit."

These extracts are from Dr Caldwell's Thoughts on the True Mode of Improving the Condition of Man. We have left room for only a few sentences respecting his Thoughts on Intemperance.

These Thoughts on Intemperance appear in an article in the Transylvania Journal of Medicine for September 1832, and are expressed in the same clear and forcible manner, as his opinions on the improvement of man. Having already stated, at the commencement of this article, our views of the principal causes of intemperance, and of the best means for their removal, we can do little more than advert to the essay of Dr Caldwell. In that excellent production, the author treats of intemperance as a form of mental derangement, which it too often is, and shews the applicability of the ordinary medical principles in its management. He dwells strongly on intemperance in eating as a prevailing vice in the United States, and traces much of disease to this habit. He affirms that one American eats on an average as much as two Swiss, or two Highlanders; and that for every reeling drunkard that disgraces his country, it contains a hundred gluttons. Children, he says justly, are warned against drinking; but they are taught, nay often hired, to over-eat themselves, and have cakes and confectionary promised to them as rewards for moral conduct; and thus civilized man is the only animal which eats from other motives than hunger! The superfluous mass of aliment thus swallowed, is toilsome and debilitating to the digestive organs; and when the latter have succeeded in their task, other parts of the body are oppressed and injured in their turn by the corresponding superabundance of chyle which is thrown in upon them.

Indulgence in tobacco is also condemned by Dr Caldwell, as the offspring of a humiliating propensity. It is an evidence of mental vacancy, and amounts to a virtual acknowledgment of deficiency in intellect or taste, on the part of those who give way to it. Tobacco is peculiarly offensive to the animal kingdom, and is relished only by three sorts of animals that Dr Caldwell

knows of; first, by the tobacco-worm, one of the filthiest and most disgusting of reptiles; secondly, by the rock goat of Africa, whose foulness of odour, and filthiness of habit, make it an object of aversion to every other creature; and lastly, by *man*, "the glory, jest, and riddle of the world." What will our dandy cigar-smokers say to this arrangement in natural history?

Dr Caldwell next endeavours to shew what kind of affection drunkenness is, what are its effects on human health, wherein consists the sot's ungovernable appetite for ardent spirits, and how the entire evil may be prevented or removed. Drunkenness consists in an affection of the brain, the spinal cord and nerves being also implicated; but chiefly in an affection of a part of the brain belonging to the animal propensities, and hence its first effects in rousing passions and animal desires.

The appetite for intoxicating liquors is regarded by Dr Caldwell as springing from morbid excitement of the organ of Alimentiveness, and he explains the augmented intensity which attends indulgence, by reference to the ordinary principle of exercise invigorating the organ. In many instances the organic excitement becomes so great, as to constitute a form of mania; and then drinking becomes an irresistible passion, and is indulged in at the sacrifice of character, family, and fortune. So long as this excitement continues, remonstrance, warning, and denunciation, avail as little in preventing drinking, as in curing fever, or repairing a broken bone; but whenever it is subdued by proper treatment, the craving also disappears. The remedies proposed by Dr Caldwell are consequently not mere moral remonstrances or arguments addressed to the intellect, but bleeding, tartar emetic, cold applications to the head, purging, and spare living. By these means the paroxysm is shortened, and by their repetition its return is prevented. The physician to the Kentucky Lunatic Asylum has found the above mode of treatment successful. The nauseating effect of the emetic is particularly beneficial in moderating cerebral action. The cold applications ought to be used only when excitement is present.

Dr Caldwell admits, however, that it is only recent and acute cases which can be speedily cured. Those of long standing are much less tractable; still a good deal may be done by withdrawing all stimulating liquors, and resorting judiciously to local or general bleeding, antimony, plain food, exercise, tepid bathing, and warm clothing. But as every form of mania is more or less periodical, and tends to return, perseverance in regimen is essential for the permanent safety of the patient.

Dr Caldwell affirms very truly, that nothing could tend more to diminish the prevalence of habitual drunkenness, than to have it deemed and proclaimed a form of madness, and dealt with accordingly. Hospitals erected for the reception of drunkards,

and authority given to confine them there and subject them to treatment, would be among the most important institutions that could be established, and would effect an immense saving of life, health, property, and reputation. Whole families are involved in permanent ruin and wretchedness from the want of such establishments. If this be considered an encroachment on personal freedom, it is so only in the same way that the confinement of thieves or the removal of nuisances are encroachments on freedom. It is the safety of society which in both instances requires the individual to be restrained.

Intemperance, like other forms of derangement, is shewn to be an affection of the brain by dissection after death, and also by its being hereditary in families, and breaking out at the same age in several individuals of the same stock; and hence Dr Caldwell infers the much greater advantage of prevention than cure. The numerous incentives to eating and drinking by which children are surrounded through the mistaken kindness of parents and friends, are so many provocatives of the future mischief, and receive fresh force every day by the various pretences under which drinking is indulged in. At one time spirits and water are taken as a whet, at another they are welcomed as a digester, at a third as a refrigerant, and at a fourth to keep out the cold. In many houses, accordingly, "the decanter, water-pitcher, and tumblers, are as constant on the side-board, as the sun in his path." From such practices what can result, in many instances, but ultimate intemperance?

Such is an outline of Dr Caldwell's nervous and eloquent essay. His views are essentially the same as those which have occasionally been thrown out in the pages of this Journal, and consequently they are "tinctured with Phrenology," a circumstance from which Dr C. anticipates reluctance to receive them. But, "however deep," he says, "may be the regret which this excites in me, it neither mortifies nor discourages me. The path I have trodden for years on this subject has been carefully explored by me in its character and bearing; I have reason, therefore, to believe that I understand it better than those who never even approached it: and my confidence in its soundness and direction is unlimited. Its course is over safe and solid ground; and it will never allure me, by faithless phantom lights, into dangerous moors, or inextricable entanglements. I know Phrenology to be true in its details as well as in its principles, and surpassingly useful in its application and effects. The Book of Nature, which is in the handwriting of the living God, and bears on every page the ineffaceable impress of his glorious signet, amply testifies to its correctness; and, notwithstanding the thousand forms of obstinate and artful opposition it has encountered, the world is already experiencing its benefits. With all

who have honestly examined it, its triumph is complete. If there be any labours in my life in which I would presume to glory, they are those which mark me as its steady adherent; and should men in after times condescend to remember my name in kindness, their chief reason for the favour will be, that I have dared to be the friend of Phrenology while most of my contemporaries have been its foes, and have never shrunk from raising my voice or employing my feeble pen in its defence, through every stage of the long, ungenerous, and embittered persecution it has been made to sustain."

We record this manly testimony with unmingled pleasure, and we consider it as both extremely valuable in itself, and highly honourable to Dr Caldwell. When we first had the good fortune to meet him in Paris, about fifteen years ago, he was only beginning to make himself acquainted with the science and its evidences, and up to that time had joined in the current ridicule of the day, and talked lightly of its pretensions and professors. But being induced to attend one of Dr Spurzheim's lectures in that city, he was astonished to see before him a calm and profound thinker and accurate observer, who, instead of indulging in flights of fancy to mislead his hearers, constantly appealed to facts in support of every statement and every opinion, and left no room whatever for imagination to come to his assistance. Thus impressed, he returned to the lecture-room with eagerness increasing in proportion as he saw the error into which ignorance had led him. He now ceased to ridicule, but while he did justice to the virtues and talents of the lecturer, he still refrained from expressing an opinion of the science until he should have fairly tested its truth. Having at length satisfied himself on this point after long and extensive observation, Dr Caldwell no longer hesitated to stand forward the able and zealous champion of the cause which he had formerly ridiculed; and we need hardly say, that the testimony of such a man outweighs in our mind that of fifty or a thousand "great believers," whose faith is nothing more than an indication of easy and good-natured credulity.

ARTICLE IV.

ON THE EDUCATION OF A CIVIL OR MECHANICAL ENGINEER.

THE following letter was written in answer to actual inquiries, and it displays so much good sense and knowledge of the subject that it may prove useful to other individuals besides him to whom it was addressed. We therefore give it a place.

Since the conversation we had on Monday morning about the most proper kinds of study for your nephew's leisure hours, I have bestowed some consideration on the subject, and have now to offer a few suggestions as to what is most eligible for a student of the profession of either a civil or a mechanical engineer.

First of all, he ought to devote a considerable portion of his time to the study of mathematics, and particularly to their practical application; for although a man ignorant of that science can find his way by natural force of mind and the aid of the practical rules, yet the same individual, had he possessed a sufficient knowledge of mathematics, would have proceeded not only systematically, but also with more confidence, and with greater certainty of the truth of the result at which he had arrived; and he would at the same time have kept clear of errors which may arise from the misapplication of formulæ. I know that some men of great eminence in the philosophical world have said that mathematics are not essential for engineers,—adducing in support of this opinion, the names of the greatest engineers in Britain, who, ignorant of this science, have carried on their extensive operations with great success. Yet there can be no doubt that if these gifted individuals had possessed more than an intuitive knowledge of mathematics, they would have been saved many a shift and circuitous experiment in the completion of their designs. While I thus recommend the study of mathematics, I think the attention of the practical man ought to be directed to the practical application of them. This is all that one employed in actual business can hope to attain; the knowledge of the more abstruse parts affording complete occupation for the whole lifetime of a more than ordinary mind. Algebra likewise ought to be acquired, as affording the most ready method of verifying all arithmetical operations. When combined with mathematics, it is easily and advantageously applied to the operations of the mechanic and engineer. It is also of great advantage in the calculations required in natural philosophy, a study on which the conducting of all great operations in a skilful manner greatly depends. In order to acquire a taste for mathematics, the best way is to propose and solve exercises, consulting Euclid as a text-book. Davidson's Practical Mathematics contains a great number of exercises. For algebra your nephew may study Bonycastle, Wood, or Euler. On natural philosophy perhaps the most simple work is Ferguson's, (Brewster's edition); next to it Desaguliers; and afterwards, when well grounded, he may read Gregory, Emmerson, or Bridge. As you say he is fond of working, perhaps he could not be better employed occasionally than in first carefully designing and calculating the parts and rules for constructing any

machine, bridge, or the like, and then making a correct model, proceeding with as much exactness and care as if he were constructing his designs on a useful scale, attending always to the proper proportions and forms of the parts, but shunning all minute and trivial nicety of workmanship as a downright waste of time farther than it is an innocent amusement. Such practical applications tend to fix the theory in the mind.

Chemical experiments, and indeed experiments of any kind, are very useful, not only on account of the knowledge acquired by means of them, and by the practice of searching books for explanations of them, but also because they communicate a watchful and observing tendency to the mind. They also induce it to speculate on subjects which would otherwise have passed altogether unobserved.

For general reading, I would recommend general science in all its branches; but particularly mineralogy, as the alphabet of all geological speculation. Any one, when taking a walk, can pick up such minerals as may be on the road-sides, and, either by asking a friend or consulting books, learn their names, and thus he will gradually become interested in every rock or alluvial deposit he may happen to pass. This, with little previous study, will afford ample matter for speculation on the present and former state of the material world; a kind of speculation apt, I admit, to run into theories by far too vague and unsupported; but if care be taken to proceed only so far as our facts will support us, we speculate on such a vast and widely collected mass of observations, as cannot, I should think, fail to give comprehensiveness to the mind, and enable it the more readily to master and draw correct conclusions from any smaller number of facts which may be laid before it. Moreover, I would recommend the study of mineralogy and geology to the attention of one intended for the profession of a civil engineer, not so much because I think either of them likely ever to be directly employed professionally, as because, in prosecuting such studies for amusement, a habit of observation is acquired, which often helps the possessor to take advantage of some appearances, and to shun others, when, but for long experience and continued observation, treasured up in the mind in such a manner that it acts like a kind of instinct, they would be either altogether overlooked, or perhaps confounded. Reading on all the branches of natural science is very necessary; for although in business the friendship and support of others is only to be permanently acquired by our being able to afford them the information and assistance they may require, yet one who is to be brought in contact with the learned, ought to be able to converse freely with them on all scientific subjects; and this power will generally procure a favourable first impression, which his depth will enable him afterwards to retain.

As to general reading, to qualify him for the literary part of his profession, I offer no remarks. You are much better qualified to direct that; but as a model for reports, drawn up in the most distinct and shrewd manner, I know none before Smeaton's as a work; whilst Mr Jardine's, if he can lay his hands on any of them, stand unrivalled for science, minute accuracy, and care. Perhaps he could not do better to begin his reading on the manner in which great works are conducted, than by consulting Smeaton's account of the Eddystone Light-house; it is written in an easy way, and is replete with information, and some anecdote.

I have been thus full in detailing my ideas on this subject to you, because, knowing you to have considered it with some attention, I thought it proper to give you my reasons for every thing I have recommended, so that it will be easy to adopt such as appear sound, and reject the others. Let me add, that much of it is mere speculation. I submit it entirely to your judgment: time is yet wanting on my part to prove the correctness or fallacy of my views.

ARTICLE V.

WISDOM AND REASON; or HUMAN UNDERSTANDING considered with the ORGANISATION, or with the Form and Nature of the Solids and Fluids of the Body. How much their wrong or different Formation may affect our Wisdom, Judgment, or Reason. Some EXAMINATIONS about Wisdom; as also of our common Conduct and Learning, and the most material affairs of Human Life. With REFLECTIONS upon a Single and Married State; and of the Education of Youth in general. London, 1714. Pp. 144.

(Concluded from page 556.)

It may not be improper (continues this curious writer) I here endeavour to give my opinion of what we commonly call *simplicity*, *folly*, or *madness*, from a vitiation of the solids or fluids. I understand it to be either natural or accidental; the first is no doubt a fault in the organization from the birth, or before. For it may no doubt suffer a wrong modulation, pressure, or vitiation, as well before born (and probably easier then) as after. And we may very well observe, I say, how much great wounds of the head affecting the brains, depressions of the skull, or knocks in the cradle, affect our Reason, Wisdom, or Judgment.

As to the accidental madness, it seems to be a vitiation and irregular motion of the fluids, which probably proceeds from an obstruction, or want of a due secretion of some particular

glands, which will necessarily occasion the too much in others ; and that no doubt will alter the nature and regular course of the fluids, and consequently occasion distortion or disorder in the solid structure or form of the brain.

Those who become delirious by depression or fracture of the skull, or by extravasated blood lying upon the meninges or brain, are cured by the trepan ; by which means the obstruction, load, or pressure, is taken away.

After the same manner we may consider, that wisdom or reason seems to grow as the body, and comes not to its perfection until the organs are perfectly formed, or the body is at its full growth ; so we generally find the reasoning faculties most clear when a man is at his full strength ; as likewise we often find them to decay as the body does, and frequently also to grow better and worse with it.

So, commonly, when a man becomes crazy in all the parts of the body, his reasoning faculties for the most part become so too, (and where there is an exception, I am apt to think that the brain and fluids may be in a good state). Nor can it be otherwise, if we consider all souls to be the same, and that it is the soul's acting with fit instruments, or a well organized body whose solids and fluids are in perfection ; which, with ideas, performs the operations called judgment and reasoning.

There are not any two things in the universe equally and exactly the same, and consequently the parts of the body or brain of every one differ as much from another, as the head or face ; which difference of parts will be more perceptible to the more nice and observing anatomist than to others. According, then, to this principal part of the body's being better or worse formed, together with the right state of the fluids (which proceeds much from the good formation of the solid parts), the great cause of our different inclinations and passions, so likewise wisdom, reason, or the understanding, will be found by this to be better or worse, more or less perfect ; for how can a machine act but according to its form or instruments, any more than the different pipes of an organ can play all the same notes ? Or probably the soul may be compared to the organist, who plays better or worse according to the goodness of his instrument or organ.

From all what is said before, then, I conclude that wisdom or reason is not any real thing, but a capacity, or the soul's acting in the greatest perfection ; which must be altogether owing to the exactness and justness of the instruments, or solids and fluids of the body ; since, if those be wrong, all the ideas or impressions in the world will never give him a capacity or make him wise. For the souls of all men are probably the same, or equally wise ; and, if so, there cannot be any other way rightly to account for the differences of their operations. For if we

were to suppose the soul of one man to be better than another, it were reasonable to believe that it should still appear to be so, whatever may happen to the organization; but, on the contrary, we see that the wisest become equally mad or foolish by accidents, or from the vitiation of the solids and fluids of the body. Nor, I believe, will any be so gross as to say, that God has given a foolish soul to a changeling: for the soul is the same, although it acts in that different manner upon that different fabric or machine.

A good organization, then, or form, and particularly that of the head or brain (the seat of all the senses) with the proper state or nature of the fluids, is the principal thing to be wished for, and not to be acquired, but probably preferable to any thing else in this world; and if there be so much owing to the perfection of the organs, how much ought we to take care of our choices, in order to have our posterity the more perfect that way! We find that this has ever been regarded among all sorts and kinds of creatures as well as vegetables; such as grafting upon a good stock, or a chip of the same block, a bird of a good nest, a dog or horse of a good kind. Yet man, who ought above all creatures to be the most careful that way, has been the most careless, especially of late, that they have so run into all manner of vice, so as to be tempted to sell, pawn, or mortgage their body and souls to the devil (for money), in order to support their most insatiable avarice and unparalleled pride and luxury; which, nevertheless, can only tend to their temporal miserable infirmities, accompanied with confusion, distraction, folly, and madness while here, and to their eternal damnation and slavery hereafter. But if such care is taken for the good kinds of all creatures and things, how much ought we to take care in the coupling and choosing of the good kinds amongst human creatures; since that is a natural gift not to be purchased by all the riches in the universe: for how much do we find dogs and horses to be valued according to their different kinds and natures; so we may observe that children generally take very much after their parents.

And although the stateliness of the kind is something to be valued, for pleasing of the eye or to look at, yet, above all, the stateliness of the mind, that is, its humility, virtue, prudence, and wisdom, is far preferable to any form of body.

Nor shall we but very rarely find that the children of a very wise and virtuous father and mother prove nevertheless very great fools and very vicious (*N. B.* that a great many very good and virtuous people are not always endowed with great prudence and wisdom). Thus we shall find something of the old proverb true,—Cat after kind; and the same may be observed in all other creatures.

So that the wise, prudent, and virtuous will always make choice of those of their own kind, as preferable to any thing else in this world; not only for the sake of posterity, with their own temporal or present satisfaction in true and real happiness, but also as being the most probable way of bringing both them and theirs to the eternal blessings of all joy and felicity.

But now, having been all along on Wisdom or Reason, I need not give any farther marks of it, being so evident to every one; nor will I pretend to determine whether a long head is more wise, or preferable to a bullet, round, or turnip-fashioned head; or the usefulness of the midwife's right setting of the infants' heads at the time of their delivery. Let it satisfy us at present that the child is come into the world as it can, and well or evil formed as it is: I shall advise, that if the mother is not very healthy and able to suckle, the parents take care and spare no cost to have a wise, virtuous, and good tempered nurse (especially the two latter properties), and to have her healthy and one of good milk. The dry nurses, or people about them during their infancy as well as afterwards, ought no doubt to be the same, that they may imprint or insinuate to them no other but good, just, and true impressions or ideas: by this I do not mean whining zealots or bigots, since they, too commonly hypocrites, are by all means to be avoided; but rather those of a large capacity, good tempered, virtuous, prudent, and wise—these being the great pillars and supports of true religion and human society.

And although all manner of care is to be taken in choosing them good and wise managers or company, to dictate, teach, explain, and give them right notions of things, yet they are to be by no means moped up or kept from their innocent childish diversions and company, which may probably be as necessary then as graver matters are at man's estate, since probably they give as right ideas. Let their childish company, too, be of the best tempered and wise to their age, as also suitable in tempers, unless the one be inclined to be vicious: but, above all, let them not be in the house or company of old or young who are inclined to be passionate, since they take much from such example, custom, or habit.

As to schooling, it were to be wished, as Mr Locke says, that there were little hieroglyphic marks or stamps to the most significant words, as of the names of things; for, by having the representations with the words, we might receive more just, equal, or exact notions of them.* As also great care ought to

* It is only in the present generation that this idea has begun to be systematically acted on by Owen, Wilderspin, and others. We have supported an amplification of it in vol. v. p. 609, vi. 423 4, and vii. 234, 254, 357, 376.
—EDITOR.

be had in giving the right meaning of words; and it is to be wished that each word had only one meaning. As to languages, it is above all to be endeavoured to understand their own paternal one rightly, and next the foreign languages, that is, those which may be the most useful to them; for one language can give us no more knowledge than another, but so far as it is more useful in such a trade, science, way, or business; so that parents ought as soon as possible to study the inclinations and capacities of their children; and, according to what they intend them, or the part they are to act in the world, they ought to give them all their notions and education, as near as is possible, and not to give them a smatter of every thing in order to make them good for nothing; or, if designed for a trade, let them begin to use their fingers or body soon, for the sooner they begin, the more agile and handy will they become.

As to the Latin tongue, by the custom and manner of our country and education, divines, lawyers, or physicians can do nothing without it; as likewise the Greek: not but that sets of men appropriate for such a language, by translations might communicate all that's necessary, and effectually enough, in the common language; but that, say they, would make our mysterious businesses too common, or too plain; yet if it were not for such like reasons, all the world must allow that the dead languages cannot otherwise be so useful as the living. But since it is necessary, according to the customs and education of Europe, to learn the Latin or Greek, it seems very probable, however, that there might be found much more easy ways for the teaching of it than we commonly have in schools; which should rather be, after having learned nouns and verbs, by the expounding of good diverting authors, than by themes and rules; and rather by making schools the places of diversion than of terror; by having daily plays for the boys both to act and speak in the best Latin, each according to his capacity; their punishment should be by the advice of their master, but so as rather to come from the derision or castigation of their fellow companions than otherwise,—the master's business being as a judge to sentence or determine justice upon their complaints, and to contrive for them plays and speeches that may be diverting. From hence it will follow, that the master should be a wise, prudent, virtuous, and facetious man, who should frequently converse with them, even in the schools, upon different subjects, letting them converse or tell any little innocent tales or stories among themselves; he assisting them when they spoke wrong Latin: or even, sometimes [it might be of advantage] for them to play at children's plays, as questions and commands, &c. as by this means the language would easily be learned, and become familiar to them as any other; after which, if they think fit, they might study its rules and criticisms more strictly.

As to the University learning, I have already hinted something of the usefulness of it in the foregoing sheets: I shall only add here, that it were probably much more to our advantage we had the experimental philosophy more taught and improved there, than to trouble ourselves with the Aristotelian or Cartesian notions; and in place of our logics and metaphysics, to apply ourselves more to the mathematics,—since algebra, the doctrine of true and equal proportions, might be of more use in reasoning; as also mechanics: and I doubt not but that it would be of great use if some of the best artists were planted, or had a public place in the seminary or university, for students to see the practice as well as know the theory of mechanics. And although Physiognomy is but little regarded, and out of use, yet I doubt not but there may be more in it than what we commonly imagine. It was much studied by the ancients, who were no fools; and I doubt not but that it might be a great introduction to the knowledge of mankind in general; this, with the knowledge of ourselves, being the most necessary study of any in this world. And if so, why ought we not to have schools, teaching us the knowledge of men and of the world, as well as of ourselves, by shewing us the different natures, kinds, and degrees (by lively examples) of hypocrisy, virtue and vice? this being a study the most necessary in human life, and yet the most neglected, especially with us.

But let me stop here, lest I have said too much, and that, either by the more knowing or more foolish, or the more invidious or evil-natured critics, I should be looked upon as one full of ostentation, folly, and vanity, to pretend to give my private opinion to the world of the most weighty affairs of human life; and I may probably get the parting blow from one or both of the disputants and fighters, or thanks from neither, as those who go to separate quarrels. But as to this part, I must run the risk; and to the first I shall conclude, with the most ingenious Monsieur Pascal, that all mankind have their particular vanities, which are so fixed into the heart of every man, that a chimney-sweeper, a kennel-raker, or a cleaner of shoes, brag, and will have their admirers; and so will the philosophers themselves, or even those who write against it, have the vanity to wish that the world may think they have writ well upon it; and as he says, so even I may have that vanity; so likewise those who read it: then, as before, let us conclude with the wise man—*Vanity of Vanities, and all is vanity and vexation of spirit.*

ARTICLE VI.

INJURIES OF THE BRAIN NOT ALWAYS ATTENDED BY
MANIFEST DISORDERS OF MIND.—ANALOGY BETWEEN
SUCH INJURIES, AND THOSE OF OTHER ORGANS.

CASES occasionally present themselves, in which, after a severe injury or loss of a portion of the brain, the patient continues perfectly collected, and answers rationally any question which may be put to him. From these facts, it is often triumphantly inferred that the phrenological views of the faculties of the mind being manifested by different portions of the brain cannot possibly be true, otherwise some striking mental deficiency would always be apparent after accidents of this nature.

Those who rely on such objections forget that the brain is double, and that one side may be injured without destroying the function of the other, just as one eye may be lost without the person becoming blind in both; and they also overlook the fact, that there is not a single organ of the human body, in which extensive disease has not taken place, in some rare instances, without exciting disturbances in the corresponding function, sufficient to have been observable during life even to a careful inquirer. In one case which fell under the notice of Dr Abercrombie, and on which he lays considerable stress, the left side of the brain was almost entirely disorganized, and yet the lady was well enough to spend the evening preceding her death at a party in a friend's house. The same thing happens with the liver. It has been found almost wholly disorganized where no striking biliary disorder was observable during life. Even the lungs, which sustain so important a part in the animal economy, are sometimes diseased to an extraordinary extent without any remarkable disturbance of respiration. In the number for July 1833 of our able contemporary the Glasgow Medical Journal, it is mentioned that in a patient at the Stirling Dispensary, six pounds of fluid were found in the right cavity of the chest, compressing the corresponding lung into "a mere membrane" "a fourth of an inch in thickness;" and yet, that during life, "breathing, although a very little hurried, appeared to be fully and freely performed, and the man had no symptom which indicated, in the most remote degree, the existence of thoracic disease," p. 254. Dr Ferrier also describes a case of pleurisy attended with effusion into the chest and pericardium and causing death, but in which there was "no cough, no difficulty in breathing, nor pain in his breast;" and Dr Ferrier "could not find from the most careful inquiry, that he had ever made such complaints." (Mackintosh's Practice of Physic, vol. i. p. 367.)

Our opponents infer from cases of diseased brain, that that organ cannot be necessary for the manifestations of mind. By a similar mode of reasoning, therefore, we ought to infer from the above facts, that the liver is not required for the secretion of bile, nor the lungs for the function of respiration. In the one instance as in the other, we have the function *apparently* unaffected by extensive organic disease, and consequently the same inferences ought to be drawn from both. In reality, however, it is only by means of Phrenology, that the phenomena relative to the brain admit of explanation at all. If the brain were not composed of two halves, one of which can continue to act, although the other is injured, it would be impossible to believe it to be really the organ of mind. Whereas, if we admit the organs of the brain to be double, we can as easily explain why the mind is not palpably disturbed when only one side is hurt; as we can explain why we continue to see with one eye, or hear with one ear, after the other is destroyed. If, on the contrary, we possessed only one eye instead of two, and a single brain instead of one composed of two similar halves, it would be very difficult to conceive how vision could continue unimpaired when half of that eye was diseased, or the mind remain sound, when half of its organ was gone. The difficulty, therefore, lies entirely on the side of the objectors, and does not affect the phrenologist.

There is, however, another ground of fallacy which must be kept in mind. In disease we are apt to affirm that the mind is unimpaired, merely because the patient is calm and collected, and answers a question with readiness. But we would ask, is there no difference between being able to answer a common question, and being able for those vigorous mental efforts required for treating successfully an abstract or difficult subject? are we not all conscious of possessing different degrees of mental power even at different periods of the same day, although even when at the lowest ebb we are still reasonable beings? and is the mind to be considered *unimpaired*, when its organ is no longer able for the clear thinking and vigorous emotions in which it formerly delighted? So far as we have ever observed, there are no instances of extensive lesion of the brain in which *all* the mental powers continue to be exercised *with undiminished energy*. On the contrary, there is scarcely any cerebral affection which does not impair or alter in some degree the condition of the mind. Even a common cold in the head reduces the powers of thinking for a time; and the true statement ought to be, that all injuries of the brain are not attended with marked aberration or weakness of mind, or delirium: but it is a gratuitous delusion to maintain on that account, that all the faculties remain in their original strength. In the case of the lungs

again, it is quite credible that the patient may not have been sensible of any shortness of breathing in walking leisurely about the wards of an hospital, where no great exertion is needed; but if he had been made to ascend a hill, or to engage in labour requiring full respiration, the deficiency would have become obvious enough. In the one case there was sufficient mind for common-place purposes, just as in the other there was breath enough for moderate exertion; but had either patient been called upon for an effort to which any person in ordinary health would be perfectly equal, he would assuredly have been found wanting. It is true, that when one side is rendered inefficient from disease, the other takes on increased action to make up for the loss; but it rarely if ever happens, that the increase thus produced goes sufficiently far to compensate entirely for what is subtracted.

ARTICLE VI.

THE NORTH AMERICAN REVIEW, No. 80. JULY 1833. ARTICLE "PHRENOLOGY."

THIS article in the North American Review is intended as a refutation of Phrenology. The reviewer assures us that it was not without much deliberation that he resolved to meddle at all with the subject; seeing that "the probability that any individual, at all acquainted with physiology or mental philosophy, can seriously believe it, is so small, that the question seems to be hardly worth arguing." Proceeding in the spirit of hostility and prejudice thus displayed at the outset, he finds that "the cry of persecution and interested opposition," raised by the phrenologists, plainly shews them to be quacks;—altogether forgetting that the "cry" is merely defensive, and raised for the purpose of meeting an argument of their opponents, viz. that the opposition which the doctrine has met with forms a presumption against its truth. The object of the "cry" is simply to neutralize such sagacious reasonings as Mr Jeffrey's,—that "the fact that, after seventeen years' preaching in its favour, the doctrine is far more generally rejected than believed, might seem to afford pretty conclusive evidence against the possibility of its truth." (Edin. Rev. No. 58, p. 296.) After various misrepresentations, arising partly from ignorance, and partly, to all appearance, from perversity, the Reviewer goes on to discuss the question, What is phrenology? but instead of answering it in the words of the phrenologists themselves, he fabricates the following propositions, and represents them to be the principles of Phrenology.

First, "The human brain consists of a number of *separate* portions, of which the general figure may be considered that as of a cone, the apex of which is situated somewhere about the medulla oblongata, and the base at the surface of the brain."

Second, "That the liability of any individual of the human race to be the subject of those affections which are commonly considered and treated of as mental, or of certain modes and varieties of them, is in direct proportion to the relative development of these portions of the brain."

The first of these propositions, so far as we are aware, has never been maintained by any phrenologist. No one has pretended, as the reviewer afterwards affirms, that "there are natural divisions in the brain;" or has ever spoken of "the separate nature of the cerebral portions," or said that "the fact of their existence depends on anatomy." These "natural divisions" were originally invented by Dr Barclay, who argued against their existence as a phrenological doctrine. Thereafter, the subject was taken up by Mr Stone, and to him the American critic appears to be deeply indebted for the arguments now brought forward. Those who wish to study this question, will find an answer to Dr Barclay in the Transactions of the Phrenological Society, pp. 397, 406, and Combe's System of Phrenology, page 624; and we refer the admirers of Mr Stone to a flagellation of that gentleman in the third number of the London Medical and Surgical Journal.

The reviewer's second proposition also misrepresents us materially, inasmuch as it leaves out of view the quality of the organs, to which, as well as to their size, phrenologists strictly attend. To this Proposition the reviewer devotes four pages, of which the substance is, that "the difficulty, in OUR view of the matter with phrenology, is the utter absence of any evidence in favour of it!" None are so blind as those who will not see.

It appears, that in turning over the leaves of some phrenological book, our critic happened to light on a discussion about "slow but powerful action" of the cerebral organs; "rapid and feeble action, and so forth." And he immediately jumps to the conclusion that the phrenologists, considering that "muscles are fibrous organs," and observing that "the brain exhibits, in certain circumstances, a fibrous appearance," have, "with the reasoning of Fluellen," ascribed to the brain motions resembling those of the muscles! "Nobody," says he, "ever witnessed any thing of the kind in the case of the brain, any more than in that of the hair and nails, which have something of a fibrous appearance." Either gross inattention or wilful dishonesty is here manifested. When the action of the liver, stomach, or kidneys, is spoken of, what do educated men understand by that expression? Not mechanical motion, certainly; but the performance

of the functions of the organ—digestion or secretion. And, in like manner, when the brain is said to act, neither more nor less is meant than that *its functions are performed*.

The reviewer tries to shew the impossibility of discovering the relative size of the different portions of the brain. The fallacy of his arguments will be rendered obvious by applying them to other parts of the body—such as the face. For the sake of convenience, we shall throw the discussion into the shape of a dialogue between the Reviewer and a Phrenologist, the former being made to speak of the face and its constituent parts, instead of the brain and its regions and organs. The reviewer's own words shall be quoted, so far as this is practicable; but where mention is made in the Review, of the organs of Destructiveness, Veneration, and Tune, for example, the cheeks, the chin, and the nose, are spoken of in the dialogue. We shall put into the reviewer's mouth no argument or opinion that is not clearly discoverable in what he has written.

Phrenologist.—Did you observe that gentleman who has just left us? His chin is of enormous size; while, on the other hand, his nose and under lip are the smallest I have ever seen.

Reviewer.—The gentleman sat directly opposite me for nearly half an hour, but I am certain that his visage presented nothing remarkable. I cannot admit the truth of your observations. Have you any proof that his chin is large, and that his nose and lip are small? It is impossible for you to put your finger on any part of the face, and to say with certainty, This is the chin, or this the cheek. “Demonstrate the fact anatomically.” Where are the natural divisions between the cheeks and the chin? and what structural difference enables you to distinguish them?

Phren.—I do not pretend to have discovered any natural divisions such as those you speak of; nor has it hitherto appeared that any difference in their structure exists. I admit also that there is no boundary between the nose and the cheeks. Nevertheless, every one who is familiar with faces, knows what parts are the cheeks, the nose, and the chin. The part which I now touch with my finger is the chin.

Rev.—“No such thing. We deny it, and maintain that at least half of the portion in question belongs to the cheek, and who shall gainsay us?” “If, indeed, it could be shewn that the margin of the chin is bounded by an artery, a particular fold of the skin, or the like, one might ascertain when it encroached on the domain of the cheek; but this is not pretended.”

Phren.—It is true, as I have already admitted, that no palpable boundary exists; yet the great majority of mankind would be unanimous in pronouncing the chin of that gentleman to be

large and his nose small. And few would be disposed to quarrel with their judgment. A statuary, portrait-painter, or other artist, who had specially directed his attention to the sizes and forms of chins and noses, would even be able to perceive differences not obvious at first sight to common observers. Another illustration may be given. A horse belonging to a neighbour of mine has the reputation of possessing an unusually large chest, with a very small abdomen; and no man of common sense thinks of controverting the prevalent belief. Were the owner to solicit your admiration of the animal's figure, of course your spirit of contradiction would instantly be roused. "No such thing," you would say: "It is impossible that a person ignorant, as you are, of the anatomy of the horse, can tell what is the thorax and what the abdomen. Can you demonstrate the fact anatomically in a living horse?" And if the owner, smiling at your question, should clap his hand upon the horse, and say, "Here is his chest," you would no doubt instantly salute him with, "We deny it, and maintain that at least half of the portion in question belongs to the abdomen; and who shall gainsay us? Unless you can shew us a streak upon the horse's skin, dividing the chest from the belly, your words have no meaning." Do you think that he would be convinced by such reasoning? Again, if a friend should point to a man standing upon the declivity of a certain hill, you might say, "What hill? We indeed see a man and a hill; the man, however, is standing not on it but on the plain: we maintain that at least one-half of what you call the hill belongs to the plain; and who shall gainsay us? Unless you can shew us some ditch or wall marking the commencement of the hill, it is impossible to say of any particular spot, this is hill or this is plain." Depend upon it, your logic would only excite the mirth of the bystanders. Or take the case of the prismatic spectrum: Who would be convinced that it is composed of one colour instead of seven, by finding himself unable to meet your challenge to him to trace the boundaries of the colours with mathematical precision? Or what geologist would doubt the different nature of two species of rock lying in contact, because he might fail to point out the exact line of separation between them?

Rev.—Notwithstanding your illustrations, which may all be very fine, I am still fully satisfied that it is impossible to know whether a chin be large or the reverse. "Large and small being relative terms, we must set about examining different faces to settle an average or standard."

Phren.—This won't do: "the size of chins or noses," as you yourself correctly represent us to teach, "is not to be estimated by the chins or noses of other men, but by the remaining parts of the same face. The chin is large in comparison to the

nose, mouth, eyes, and cheeks, which are small." If the size of these were doubled, the chin would then be of no immoderate size. As part of a giant's face, its magnitude would not attract attention.

Rev.—"This attempt to escape from the difficulties of an average standard we take to be utterly futile. There is no escape at all. Chins, of course, compared with other parts of the same face, are necessarily large or small. Thus, if we judge from the faces of the phrenological plaster-busts, the right cheek on any man's face is always larger than his upper lip."

Phren.—"The reverse certainly very seldom happens. But proceed with your argument.

Rev.—"The question, in any particular case, is not whether the cheek is absolutely large compared to the upper lip, but how the excess of the former over the normal standard compares with the excess or deficiency of the latter in regard to the same standard. There is no such thing as getting along without such a standard, or understanding a relation in one of its terms."

Phren.—"Your assertion is not remarkably luminous, but, so far as I comprehend it, seems perfectly correct. By continually looking at faces, we soon almost intuitively form a notion of what may be termed a standard of the face; that is to say, we become familiar with the proportion which different parts of the face usually bear to each other: and, when we look at a particular face, whatever its size may be, a single glance suffices to inform us whether the cheeks or chin be large or small. It is not absolute but relative size that we regard in seeking for the indications of predominant faculties. If a child has what people in general would call a well-formed face, the chin is not said to be either large or small; but suppose that, in course of time, the cheeks, nose, lips, eyes, and forehead of the child increase in the usual manner, but that the chin remains *in statu quo*—this identical chin, which formerly was neither a large chin nor a small chin, would now be unanimously pronounced small. So also the chin upon the bust of Benjamin Franklin, though not a large chin, while in its present position, would be an exceedingly great one if transferred to the bust of Pope or Voltaire. Again, we may with propriety say that an individual has large arms and small legs, although the absolute size of the legs be much greater than that of the arms. But although, for the purpose of ascertaining predominant dispositions and talents, we must attend to the relative sizes of the cerebral organs, I would not have you to understand that absolute size is to be disregarded. Though a passionate man with a small head is not less a passionate man than he whose head is twice as large but possesses the same configuration; yet the anger of the former is that of a child or an idiot, and excites laughter rather than fear, while the anger of the latter is the tremendous wrath of a Bruce or a Cromwell*. Sir Walter Scott's description of king Robert Bruce will give

* See on this subject our 4th volume, p. 59.

you some idea of the effects of a large brain. It occurs in the first canto of the *Lord of the Isles* :—

“ Proud was his tone but calm, his eye
Had that compelling dignity,
His mien that bearing haught and high,
Which common spirits fear ;
Needed nor word nor signal, mere
Nod, wink, and laughter all were o'er ;
Upon each other back they bore,
And gazed like startled deer.”

A large organ of Love of Approbation, in a head of great general size, gives origin to the ambition of a Bonaparte ; while a large development of the organ in a small head, produces frivolous vanity, like that of the Hindoos, whose heads, as Lady Irwin says, “ are toy-shops, filled with trifling wares.”

Rev.—“ The only philosophical mode of ascertaining whether chins and noses be large or small, is by means of the faciometer. Measure the diameter of the chins and noses fairly, express them in numbers, and enter them in tables. We had some little experience in this way some years since, and we wish nothing worse to the doctrine of such chin-observers as you, than that you should follow this practice over a few of the faces of your acquaintances. Your doctrine will never abide inches and decimals ; that you may lay your account with.” “ Till the records of some such experiments are produced, you ought not to be surprised if plain and unambitious believers in weights and measures occasionally shew some restiveness under the positive and perpetual dogmatism about the results of experience, and the great array of facts. What is the use of the whole of them, if they do not enable one to answer a plain man's plain question, what is the average size in men of the part of the face called the chin ?”

Phren.—Your assertion that my doctrine will never abide inches and decimals, reminds me of a demonstration of that very assertion by Mr Stone. That skilful mathematician found, by dint of inches and decimals, that in the face of Hare the murderer, “ the proportion of the chin to the size of the face is as 1 to 2.319. The proportion of the nose to ditto is as 1 to 2.555. The proportion of the upper lip to ditto is as 1 to 3*.” These statements import that of Hare's face, the chin constitutes within a small fraction of one-half,—it is as 1 to 2½ ; the nose constitutes very nearly another half, for it is as 1 to 2½ ; and the upper lip is exactly one-third : so that the size of these three parts was unanswerably proved, by “ inches and decimals,” to exceed that of the whole face ; and the cheeks, eyes, and lower lip have

* See Observations on the Phrenological Development of Burke, Hare, &c. ; by Thomas Stone, Esq. p. 21. The author applies his decimals to Destructiveness, Benevolence, and Conscientiousness, for which we have here substituted the chin, &c. These three organs he makes out to be larger than Hare's entire head.

no size whatever ! Truly, by *such* a demonstration, every truster to experience must feel himself put to silence. Inches and decimals of this sort they cannot pretend to “ abide.”

Rev.—Though I do not see—or at least will not acknowledge that I see—the slightest force in what you say, let us suppose for a moment that men in the habit of looking at faces are able to recognise the chin and nose, and may judge soundly of the size of these organs without the aid of inches and decimals. The truth of such a supposition, however, cannot avail you as a phrenologist: for even granting that the boundaries of the nose and chin cannot be accurately pointed out, they are undoubtedly much more definite than those of what you are pleased to name the cerebral organs. “ There is an extravasation of the organ of Destructiveness. By no means, say we, it is in the organ of Secretiveness, which happens to be much developed in consequence of the miserly propensities of the individual.* And who can confute this? You yourselves admit that the enormous development of one organ may cause it to occupy the place of a neighbouring one; and since you do not pretend to shew any boundaries, can any quackery be more enormous than that which appeals to experiment for the proof of the development of an organ, which may, for aught the experimenter knows, be either the organ in question, or some other organ ?”

Phren.—It is not more difficult for one accustomed to observe heads and faces, to estimate the size of the organ of Cautionness or Philoprogenitiveness, for example, than to discover whether a chin is large or small; and any argument shewing the former estimation to be impossible, must prove the latter to be impossible also. This, alone, sufficiently demonstrates that your logic has no solid foundation. Of some of the cerebral organs it is no doubt somewhat difficult to ascertain the development; but *difficult* and *impossible* are words of very different meaning. In general, those who have followed the directions given by Dr Gall for the examination of the organs, will bear testimony to the truth of what I say. “ It is necessary, in the first place,” says Gall, “ to become familiar with the ordinary or middling degree of the development of the organs. Careful inspection of a great number of heads, and study of their usual forms, lead to the acquisition of that knowledge. Every opportunity must then be embraced of gaining an accurate idea of the extraordinary development of the various parts of the brain, and of the prominences which they cause on the exterior surface of the head. The observer must examine the heads of the most eminent poets, mathematicians, mechanics, musicians, persons who are passionately fond of travelling, &c. &c.” “ The fore-

* These are the words of one who takes credit for having examined Phrenology !

head, bald heads, and skulls, do not require to be touched; inspection sufficiently enables the experienced observer to judge of the degree of development of the brain in general, and of certain regions or parts in particular. The student will do well to begin by attending to the different volumes of heads in general; then to apply himself to learning the different developments of the frontal, occipital, and lateral regions, and the top of the head; and finally, to study the subdivisions of all these regions." "The greater part of my auditors," continues Dr Gall, "after being instructed in this method, hit upon the organs at the first glance or touch. But," says he very justly, "there are individuals whose eyes and hands are so miserably served by the brain, that it is impossible for them to be convinced of the reality of forms the most distinct. *Non omnes omnia possumus.*"*

When a single organ happens to be very large, and the surrounding organs small, the former causes on the skull a protuberance existing as certainly, and bounded as definitely, as a hill in the midst of a plain. When several contiguous organs are large, the region in which they are situated is broad and prominent. It is much easier than you seem to believe, for "the experimenter" to tell whether an organ be "the organ in question, or some other organ;" since, although "the enormous development of one organ" may cause it to push a neighbouring one a little out of its usual position—(we do not admit, what you falsely put into our mouths, that it "may cause it to occupy the place of that neighbouring one,") this is of very rare occurrence, and happens only when the "neighbouring one" is comparatively deficient: the enormous development of the large organ is then indicated by a distinct elevation on the skull, the base of which elevation constitutes a boundary as obvious as that between a plain and a hill. A mere verbal argument on this subject is, however, far less influential with objectors such as you, than if it were enforced by a good selection of skulls. There would then, I think, be little difficulty in convincing you—though perhaps it might not be very easy to make you acknowledge the conviction—that, in pointing out the boundaries of the organs, a close approximation may be made to the truth, and that their size may be discriminated in a manner sufficient for every practical purpose. Phrenologists have, on innumerable occasions, and in the most public manner, inferred dispositions from the appearance of heads, and if a cast were sent in succession to two skilful phrenologists, they would, without the slightest communication with each other, arrive at the same conclusions. This plainly enough shews that their proceedings are regulated by definite and intelligible principles. Quacks could do nothing of the kind. You must either endow us with supernatural power, or admit the truth of our science. Some of the less fundamen-

* Sur les Fonctions du Cerveau, iii. 221-3.

tal details—the outworks as they may be termed—may be ill-founded, for in what science is not this the case? but no one has ever attempted to dislodge us from the position assumed when we say, “Here is a head of a certain size and form, belonging to an individual whose dispositions and talents you know: every head having the same appearance, be that appearance caused by cerebral cones, or cylinders, or cubes, is, *cæteris paribus*, uniformly accompanied by the same mental qualities.”

Rev.—You claim for Gall and Spurzheim the merit of having made important anatomical discoveries. “For our own part, WE cannot be satisfied of the reality and undoubted claim of the great apostles of Phrenology to more than one discovery, and that is the swelling in the spinal marrow of the calf.”

Phren.—There are doubtless many truths besides the anatomical discoveries of Gall and Spurzheim, of which “WE cannot be satisfied.” I may notice, however, that Reil, probably as high an authority as “WE,” declared, “I have seen in the anatomical demonstrations of the brain made by Gall, more than I thought that a man could discover in his whole life.”* Dr Elliotson, a physiologist of high rank, says of Gall and Spurzheim, that “anatomy must acknowledge them among its greatest benefactors.”† Cloquet, a celebrated French anatomist, has copied, in his splendid work entitled “Anatomie de l’Homme,” almost every one of the plates of the human brain contained in Gall and Spurzheim’s great work—plates of which Dr Gordon said, in the 40th Number of the Edinburgh Review, “there is not one of these figures which accords with nature.” Dr Mackintosh, also, in the third edition of his Principles of Pathology and Practice of Physic (vol. ii. p. 4), speaks of Gall and Spurzheim as “distinguished anatomists and physiologists,” and acknowledges that “science owes a great deal to the labours of the gentlemen who have been engaged in phrenological inquiry.”

Rev. “These anatomical discoveries may be real, and of vast importance; but they do not touch the question, which is, whether the phrenological organs can be demonstrated to exist separately in the brain by any mode or form of dissection or maceration.”

Phren.—It is absurd to rant thus about the organs existing *separately*. The notion, I repeat, is the sheer production of antiphrenological brains. Moreover, you will find it difficult to point out in any treatise on phrenology an attempt to prove the plurality of cerebral organs by anatomy. Dr Spurzheim has written: “Anatomical investigations alone are not sufficient to

* Bischoff’s *Darstellung der Gallischen Gehirnd und Schadel-Lehre*. Berlin, 1806.

† Notes to Translation of Blumenbach’s Physiology.

shew the difference of the nervous masses, and they alone cannot be relied on. *Physiology and pathology must be called upon as better means of deciding the question.*" And Dr Gall has devoted a section of his work on the Functions of the Brain (tome iii. pp. 141-6), to the elucidation of this truth.

[Want of space prevents us from inserting our reply to some additional arguments and misrepresentations of the Reviewer; but as a full answer is understood to have been published in America by Dr Caldwell, the circumstance is of little moment. The critic's ignorance or perversity have, we trust, been made sufficiently manifest. The foregoing reply was written soon after the publication of the Review, but has hitherto been withheld, in order to leave room for articles of more general interest.]

ARTICLE VIII.

MENTAL CULTURE; OR THE MEANS OF DEVELOPING THE HUMAN FACULTIES. By J. L. LEVISON. London. Jackson and Walford. 1833. 12mo. Pp. 300.

THIS Work consists of fourteen chapters, seven of which are devoted to an exposition of the functions of the cerebral organs, and the remainder to the mode in which the different faculties ought to be trained. Phrenology is throughout, and without reserve, assumed as the true ground-work of the philosophy of education. Mr Levison's style is neither so accurate nor so precise as we should have liked to see it, and it is rather deficient in method; but the work exhibits not a few indications of good-feeling and philanthropy, and contains some useful practical suggestions. Want of space prevents us from giving any thing like an analysis of its contents; but this is the less to be regretted, as the author's ideas seem, in many instances, borrowed from Dr Spurzheim. We can merely extract a few of the more instructive passages.

The following observations on the treatment of passionate children are well worthy of attention:—"Passionate children should invariably be treated with kindness, which should shew itself in an uniform good-nature, tempered with a dignified firmness of manner. The anger of a child ought never to be excited; but it would be highly prejudicial to its moral health to let any misbehaviour pass unnoticed: the great impropriety of giving way to passion should be constantly impressed upon the attention of the child, and with an untiring patience we should watch the pupil to prevent it doing so. There is much probability that, in spite of the most strenuous care, the passionate child may occasionally relapse, and shew paroxysms of anger; but if the master does not lose his own equanimity, it is most

likely that, by the age of ten or twelve years, a child would no longer exhibit an animal irritability: the lessons of moral resistance which had been constantly inculcated must exert some influence over the character, and in some measure soften the temper of even the naturally ferocious. This might not actually be so in every instance; yet, as a general rule, it appears that a child thus trained will not manifest the feeling of an ungovernable anger, but merely much greater energy in manner, and more vehemence in expressing his thoughts: we do not expect by this plan of education to eradicate a single one of the feelings, only to be enabled to restrain them from any excess or abused activity.

“How contrary are the results when the passionate child is treated with anger or moroseness! If it is cuffed, or shaken, or beaten, there is then excited a greater predisposition to irritability, and every repetition of the feeling renders the individual more liable to become its slave: as in the case of a festering wound, touch it ever so lightly (whilst it is suppurating), and some pain is sure to be experienced; so when once there is a diseased action in the destructive propensity (Anger), such a morbid condition ultimately supervenes, that the person affected can scarcely be approached without exciting his bad temper.

“It is, then, an error in mental discipline to use coercive measures in a case like the above; for however we may apparently subdue the passionate child by such means, it will subsequently appear that we have been only deluding ourselves: all that we have done has had a greater tendency to debase the being, as our violent manner of correction excited to activity the *secretive* propensity which is contiguous; and therefore by this irrational mode of culture an angry child is metamorphosed into a cunning, sly, bad-tempered one,—a torment to himself and to all with whom he associates.”

Many parents stand in need of such hints as the following: “If a naturally quarrelsome child require such constant care and such application of negative means to restrain constitutional impetuosity, what can we say of those stupid and thoughtless parents, who encourage the feeling for the sake of the temporary pleasure of seeing the daring postures of defiance, which their approbation induces in the little fellow? ‘Bend your fist, Johnny, and fight that gentleman;—run at him;—give him a good blow!’ And if the poor child obeys, the foolish parents laugh and applaud him; but such an act of levity may so far influence the character of a child as to render him a pugnacious, insolent, and disagreeable man.” Again: “If the parent or nurse smiles at the *innocent tricks* (as they are miscalled) of sly children, they in a manner encourage the propensity. Sometimes, however, there is an attempt to veil the approbation by

pretending to disapprove the action; but the lurking smile which may be seen peeping from the remote chamber of the eye, gives a negative to the would-be reproof, and thus renders the conduct doubly pernicious, inasmuch as the child has a presentiment that his parent has acted under the influence of a similar feeling to that which he pretended to condemn."

The misery produced by over-stimulating Love of Approbation is thus set forth: "By appealing to this feeling so constantly, there is excited a greater intensity of function, and therefore such appeals may with propriety be said to sow the seeds of sorrow, disappointment, and immorality. In the first instance, whenever the feeling becomes so active as to engross all the thoughts of a child, it is sure to be often unintentionally pained by non-gratification; and even in more advanced years, the poor vain being is frequently heart-sickened at the fancied neglect of those from whom it anticipated approbation."

We regret our inability to speak favourably of the phrenological portion of Mr Levison's treatise. It is far from being calculated to convey accurate notions concerning the mental faculties, or the evidence on which Phrenology rests. Facts as well as doctrines are occasionally misstated; a fault which it is the duty of every writer on controverted subjects like Phrenology to avoid with peculiar care.

ARTICLE IX.

CYCLOPEDIA OF PRACTICAL MEDICINE—DR PRICHARD AND PHRENOLOGY.

IN an article on Temperament, in the Cyclopædia of Practical Medicine (Part XXI. April 1834), Dr Prichard takes occasion to introduce the subject of Phrenology, and to express his conviction that its doctrines are untrue. He begins by stating, that nearly all that has been advanced of late by English writers against the science, was brought forward many years since, in the most forcible manner, by the Edinburgh Reviewer; and he complains that "*similar objections are still frequently repeated, THOUGH MOST PERSONS HAVE BECOME, OR MIGHT HAVE BECOME, AWARE OF THEIR INCONCLUSIVENESS.*" It is pleasant to find an able opponent like Dr Prichard thus doing justice upon his coadjutors, and declaring that *their* arguments go for nothing. We only fear that his successors will repay him in kind, and affirm, with equal truth, that his objections are not less inconclusive than those which he so properly and unreservedly condemns.

Dr Prichard tells us that, unlike many philosophical theories which can neither be proved nor refuted, "*Phrenology certainly admits of proof or disproof, and would obtain it if the measurements of a sufficient number of heads, and those belonging to persons of marked qualities of mind, could be accurately and indisputably known.*" Substituting the word "developments" for "measurements" this proposition is perfectly accurate; and accordingly, when we read it, we expected it to be followed by a statement of proofs or disproofs, drawn from this as the only authentic source recognised by Dr Prichard and the phrenologists, viz. *the comparison of actual developments with actual mental character.* But, strange to say, Dr Prichard no sooner points out the road which ought to be followed, than he suddenly wheels about, and walks away in an opposite direction, as quietly as if he had never known how the end he had in view was to be attained!

The direct course of inquiry above referred to, seems not to be congenial to the minds of antiphrenologists in general, for one and all of them carefully avoid it. Instead of pursuing it, Dr Prichard goes back twenty-six years, to the report of the Committee of the National Institute of France, against Gall and Spurzheim's anatomical discoveries, as a serious stumbling-block; and tells us, that Ackermann, Hartmann, and Rudolphi, agree with that report in denying the justice of Gall and Spurzheim's anatomical claims. We answer, as we have done before (for Dr Prichard does not assume the merit of inventing a NEW objection), that, even granting Gall to have erred in the anatomy, the phrenological doctrines *may* nevertheless be true; since it is well known that the foundation of the new science was firmly laid several years before Gall began his investigations into the *structure* of the brain; and that it rests almost entirely upon *physiological* evidence. But, in reality, so far from the most important facts discovered by Gall and Spurzheim in the anatomy of the brain being now denied or proved to be false, the exposition of its structure, as given by them, is essentially that received by the majority of continental anatomists; and, in Cloquet's splendid anatomical publication, almost every one of the original plates of Gall and Spurzheim is copied. No doubt, errors have since been discovered and corrected, and additional light has been thrown upon the subject, then confessedly in its infancy; but it is rather too much, on that account, to cast suspicion on the whole anatomical discoveries of Gall and Spurzheim*. As to Rudolphi's evidence, we have already, in this Journal (vol. i.

* Dr Prichard seems at one time to have had a higher respect for Gall and Spurzheim's anatomical labours than he now entertains. In speaking of these gentlemen in his work on *Nervous Diseases*, he says, "Although I entertain a high respect for the latter, as well on account of his known qualities as his talents, and the services he has rendered to anatomy and physiology, I must take

p. 592), shewn how far it is deserving of confidence, and doubt whether, on perusing our analysis of it, even Dr Prichard would be disposed to exempt it from the fate of that which he has already denounced as "inconclusive." The value of Ackermann's authority may be estimated from the fact, that he founds one of his chief arguments against Phrenology on the position that the existence and activity of an organ are inseparable—that if an organ exist, it must be continually performing its functions*.

Dr Prichard quotes from Jacobi a long and specious argument to prove that Gall's appropriation of particular functions to certain parts of the brain cannot be correct, because insects and reptiles exist which possess similar instincts, without the corresponding cerebral organs,—which, he says, could not be if the two were really related to each other, as Phrenology affirms. According to our view, the way to throw light on a difficult subject is, not to involve it in additional complications, but rather to separate every thing extraneous from the main proposition, that the truth of the latter may be fairly tested. Thus, when it is said that in man the feeling of the love of offspring bears a relation in intensity to the size of a particular portion of the brain, it is certainly easier to obtain evidence of the fact, by directly comparing the strength of the feeling with the size of the part in a great number of human beings, than by entering on a long dissertation about the instincts of reptiles, which are alleged to have no brains at all, and about whose appetites and feelings almost nothing is known. The former is the mode of investigation pursued by the phrenologists, and acknowledged by Dr Prichard to be the best; but, nevertheless, he adopts the latter, and voluntarily encumbers himself with difficulties and obscurities foreign to his subject, and thus naturally enough arrives at unsound and contradictory conclusions.

But even supposing his mode of proceeding to be correct, his inferences are not warranted by the facts. For in reality the same organ undergoes such modifications in different tribes of animals, that not unfrequently its identity can be established only by proving the similarity of function,—so that it is unsafe to infer from external appearance alone, that any given organ possessed by one tribe does not exist in another. Look, for example, at the organs of respiration. Dr Prichard might deny that in man the lungs are the organs by which the blood is

the liberty of doubting altogether that part of his system which refers to craniocopy." We should like to know whether the respect *then* felt for Dr Spurzheim's anatomical and physiological services was the result of a verification of them by Dr Prichard; and if so, by what means he has been convinced of his own error in entertaining it? If it was not such a result, Dr Prichard must have formerly admitted Dr Spurzheim's merits on doubtful evidence; and if so, may he not now be denying them on equally untenable grounds?

* See Gall sur les Fonctions du Cerveau, i. 201.

oxygenated, because fishes and reptiles have a similar function *without any lungs* (for in reality they have none); but will any one say that the want of a strict analogy destroys the *direct fact* of the use of the lungs in man being to oxygenate the blood? We know, on the contrary, that fishes have no lungs because they live not in the air but in water, and that in them the blood undergoes the requisite oxygenation in passing through the gills, which are expressly adapted for the purpose; while in insects, the same process is carried on over the whole surface of the body, which also is intentionally modified to execute this office.

Here, then, we have a proof of similar functions being performed by organs corresponding in their objects, although so modified in appearance as to have almost no resemblance either in structure or in local situation. Again, on Dr Prichard's principle, it may be denied that in man the stomach is necessary for digestion, because some of the lowest of the animal kingdom have neither stomach nor intestines, but receive their food into a hollow cavity, from which it is again ejected when the nourishment has been withdrawn from it. But we ask, does this want of a human stomach in a zoophite, warrant the conclusion that in man the stomach cannot serve for digestion?

To give the slightest force to his reasoning, then, Dr Prichard must shew, by incontrovertible evidence,—1st, That modifications, analogous to the above, do not and cannot occur in the *nervous system* as well as the respiratory and digestive organs of animals; and, 2dly, That the functions alleged to be identical are so in reality. As he has done neither, it would be a waste of time to pursue this argument farther. We cannot help remarking, however, that the objection *applies not less to the received doctrine, that the brain, as a whole, is the organ of the mental faculties, than to phrenology*. Indeed Dr Prichard himself must have had, while stating it, some suspicion of its irrelevancy; for, at its close, he admits once more that “*the phrenologist need not go beyond the human species, in order to establish his doctrines on the basis of experience*”; but then this experience must be uniform and unquestionable.” This is sound doctrine, and well delivered by Dr Prichard: but why, we would ask, does he forsake the human species and go to reptiles and insects, in order to disprove phrenology? His only apology must be his gratuitous belief, that experience is not “uniform and unquestionable;” for, wonderful to relate, he says, that even the *phrenologists do not pretend* that the main principle of the system holds throughout: “they are aware,” says he, “of numerous and striking exceptions, the evidence of which, however, they elude, by asserting that when a certain portion of the cranium and brain is greatly developed, while the faculty there

lodge has never been remarkably distinguished, it nevertheless existed by nature, though the innate talent, through the want of cultivation, has failed to be displayed; the predominant organic power bestowed by nature was never discovered by the owner, though, according to the fundamental principle of the doctrine, the natural preponderance of talent and propensity is alone sufficient to determine the habitudes of the individual, and communicates of itself a strong impulse to particular pursuits. When, again, a strongly marked propensity or decided talent has been manifested without the corresponding amplitude of structure, it is, in like manner, pleaded that, by sedulous exercise and cultivation, a natural deficiency has been overcome. But should it even be admitted that some few exceptions to general observations may be thus accounted for and allowed not to overthrow the whole system, this concession can no longer be claimed if the exceptions are numerous."

Dr Prichard is much more generous than we are disposed to be in conceding so much. Not only do we deny the existence of "the numerous and striking exceptions" to which he alludes, but we never had the fortune to meet with a single phrenologist who was "aware of their existence." It seems to have been otherwise with Dr Prichard; and as truth is our common object, we shall be most thankful if he will inform us where either the exceptions or the phrenologists who meet with them are to be found. In justice to his own character as a medical philosopher as well as to the science which he has attacked, he is bound, AND WE NOW CALL UPON HIM, to support his averment by substantial evidence, and thus at once to put an end to the delusion under which, according to him, we and so many of our countrymen are labouring.

If the evidence which Dr Prichard *has produced* be a fair sample of that which he *has in store*, we fear he will have little to boast of. To prove his position, he says that, "if, for example, we should examine a hundred monomaniacs, in all of whom certain feelings and propensities have been developed, even to morbid excess, and it should be discovered by a person competent to form a judgment on the subject, that no evidence displays itself in the cranioscopy of so many individuals tending to support the doctrine, we should hold that it ought, in all fairness, to be abandoned. Some hundreds, and even thousands, of such persons have passed a part of their lives under the inspection of M. Esquirol, who possesses most extensive resources for elucidating almost every subject connected with the history of mental diseases, and has neglected no inquiry which could further the attainment of that object. The result of his observation will be allowed to be of some weight on the decision of this question, in which the appeal is principally to facts of the pre-

cise description of those with which he has been chiefly conversant. At his establishment at Ivry, he has a large assemblage of crania and casts from the heads of lunatics, collected by him during the long course of his attendance at the Salpêtrière, and at the Royal Hospital at Charenton, which is under his superintendence. While inspecting this collection, the writer of the present article was assured by M. Esquirol, that the testimony of his experience is entirely adverse to the doctrine of the phrenologists: it has convinced him that there is no foundation whatever in facts for the system of correspondences which they lay down between certain measurements of the heads and the existence of particular mental endowments. This observation of M. Esquirol was made in the presence of M. Metivié, physician to the Salpêtrière, and received his assent and confirmation."

We readily join with Dr Prichard's conclusion, that if, in a hundred monomaniacs, in all of whom certain feelings and propensities have previously been so prominently developed as to induce disease, no evidence tending to support the doctrine can be "*discovered by a person competent to form a judgment on the subject,*" it ought, in all fairness, to be abandoned for ever. But if Dr Prichard believes that the intelligent and benevolent Esquirol is that person, and if his collection of crania and casts be the hostile evidence which is relied on, this only proves, in a forcible manner, that Dr Prichard is himself not competent to judge, or that he has not taken time either to examine the collection of crania, or to ascertain the competency of Esquirol and Metivié to decide on the merits of the question on which they volunteered an opinion. We, too, can say, that "while inspecting this collection," "we were assured by M. Esquirol, that the testimony of his experience is entirely adverse to the doctrine of the phrenologists;" and that, on the same occasion, Metivié repeated the assurance of his master. But when we asked for the exhibition of a proof, what was the result? Metivié took up one of the lunatic skulls, on the exterior of which were two considerable depressions, to which there was nothing corresponding internally; and nevertheless, said he with triumph, Gall affirms that the outer surface of the skull represents faithfully the form of the inner! We asked if he considered the skull to be *dissected*. He answered that it was. We then asked if he was aware that Gall expressly limited his proposition to *healthy* skulls, and declared that, in disease, great aberrations of thickness and form might exist, without any necessary relation to the form of the brain? Metivié looked utterly incredulous, and asked "what right Gall had to make any exceptions!?" To this strange question it could only be answered, that Gall *made* nothing; but only recorded what he saw existing in nature; and that, accord-

ingly, when he stated that the rule did not hold in disease, he merely gave expression to a truth in natural history, discoverable by observation alone. But no mortal before Metivié would thence argue that a healthy nose, for example, was not of a shape called Roman, simply because another nose, *in a state of disease*, had a greater resemblance to a Dutch cauliflower. Gall observed the want of conformity caused by disease between the two tables of the skull, and wisely inferred that, on account of that source of error, *proofs* must be sought for only in the state of health, and in so far gave evidence of his accuracy and honesty; whereas Metivié, by his total ignorance of this, and even of the first principles of Phrenology, only proved his own incompetency to judge in the matter to which his testimony was applied.

So far from the evidence which these six hundred skulls and casts afford being really adverse to Phrenology, the fact is so much the reverse, that we would willingly peril the whole science on the very experiment which Dr Prichard proposes. We would even admit Messrs Esquirol and Metivié to be the sole judges, provided they would previously prove to the satisfaction of impartial persons, their "competency" to decide on the form and phrenological indications of the skulls, by each accurately pointing out the situations and natural size of the cerebral organs, in any three skulls in the collection. But we expect, in return for this concession, that if they fail in the preliminary attempt, and prove themselves ignorant both of the doctrine and its practice, Dr Prichard will in turn admit that their opinion is valueless on account of that incompetency. We know it to be a fact, that when we visited Ivry in September 1831, they were in the state of ignorance above represented, and that, nevertheless, they then gave the same unhesitating testimony against Phrenology which Dr Prichard says they gave to him. But we had the means of estimating its real worth, which he had not; and hence the error into which he has fallen. In the mean time, we would ask Dr Prichard, whether the ready reception of Esquirol's adverse opinion thus weakly supported, in opposition to that of Georget, Voisin, Falret, Elliotson, Connolly, Caldwell, Barlow, and a host of others, supported by evidence which only requires careful scrutiny to be universally admitted, does not look a little like that unphilosophical attribute called *Prejudice*?

Dr Spurzheim used to expatiate on the interest and value of Esquirol's collection, and express a hope that it would one day be given to the public; and we ourselves have ever viewed it in the same light. It was when following Esquirol's Clinique that we first became thoroughly satisfied of the truth of Phrenology. When, therefore, on a more recent occasion, Esquirol told us

that he knew the history of most of the individuals to whom the skulls had belonged, we entreated him not to deprive the public of such an opportunity of obtaining accurate information on a deeply interesting subject, and if he could not go into detail, to publish at least a catalogue raisonnée of the collection. He spoke so despondingly, however, of being able to complete his work on insanity, then in the press, that we had little hope of his ever executing his intention of describing the cases which refer to the skulls. But not to lose what little hope we had, we urged his and our friend M. Royer, incessantly to remind him of his purpose, and to excite him to its fulfilment by every means in his power. M. Royer being not less impressed than ourselves with the value of the collection, stated that he had already urged, and would persist in urging, the subject on M. Esquirol's attention; but, to our great regret, our friend is now numbered with the dead, and the prospect of the collection being made available to science is now more remote than ever.

If the testimony afforded by these skulls be adverse to phrenology, it says something, at least, for the candour and love of truth of Dr Spurzheim and the phrenologists, that they should be so anxious to have it produced and verified. Truth alone is consistent with itself, and the phrenologists know that if their science be true, the evidence to be derived from the collection must be favourable to their views, whether the collection itself have been made by a friend or by an opponent. And accordingly M. Georget, whose talents are admitted, whose opportunities of observation were long equally extensive with those of Esquirol (seeing that they were for some years derived from the same cases in the same hospital), and who was equally conversant with the history of many of the individual skulls, has avowed to the world his deep and well founded conviction of the reality and importance of phrenology;—a result which could scarcely have happened, except from the force of truth, considering that he is the nephew of Esquirol, was brought up under his professional auspices, and was naturally inclined to receive his tenets in preference to those of any other authority. Voisin and Falret, also young and able writers, educated essentially in the same school, and with the full knowledge of the nature of Esquirol's collection, have not hesitated to publish their belief in the truth of Gall's doctrine. Are these facts, then, entitled to so little weight in Dr Prichard's estimation, that he unhesitatingly overlooks them, and attaches his faith to the alleged experience of Esquirol and Metivié? We repeat that we are ready to peril the whole doctrine on the real bearing of Esquirol's collection as given by persons competent to decide, and that we ask no greater boon to the science, than to have the specimens

and their history made accessible to the public, and their bearings accurately tested.

We regret that we have been forced into this discussion about the value of Esquirol's phrenological opinions; because we can never forget the advantages which we enjoyed in being admitted to his instructive clinical lectures on insanity at the Salpêtrière, and the very high respect which we felt for the talent, zeal, unwearied interest, and conciliating kindness, which characterized his whole conduct towards the unhappy inmates of that vast establishment. His visits and lectures were not only valuable professional, but highly important moral lessons. No one could attend them for a season, and witness their effects in soothing misery, alleviating wretchedness, and inspiring hope into the sinking heart, without being improved in his own moral feelings, and impressed with a higher sense of the dignity of the profession. Neither can we forget the personal kindness and attention with which, on a more recent occasion, he conducted us through the hospital at Charenton and his splendid private establishment at Ivry, and dedicated three hours to the gratification of our curiosity in regard to the details. Gratitude for these advantages and acts of kindness would have effectually prevented us from dragging forward opinions which we think he has inconsiderately emitted, and which, so far as we know, he has never obtruded. But when we find a physician of Dr Prichard's reputation strenuously founding on them in a work of high authority and wide circulation, and which exercises great influence over the opinions of the rising generation, and thus may become the means of retarding the progress of the greatest discovery of the age, we can no longer allow personal considerations to stand in the way of their entire refutation. But we have endeavoured to expose the fallacy of Dr Prichard's arguments, and the erroneousness of M. Esquirol's opinion, without failing in that respect which is due to both of them as men of science and men of sense; and trust that in this effort we have not been unsuccessful.

ARTICLE XI.

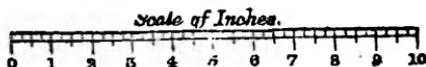
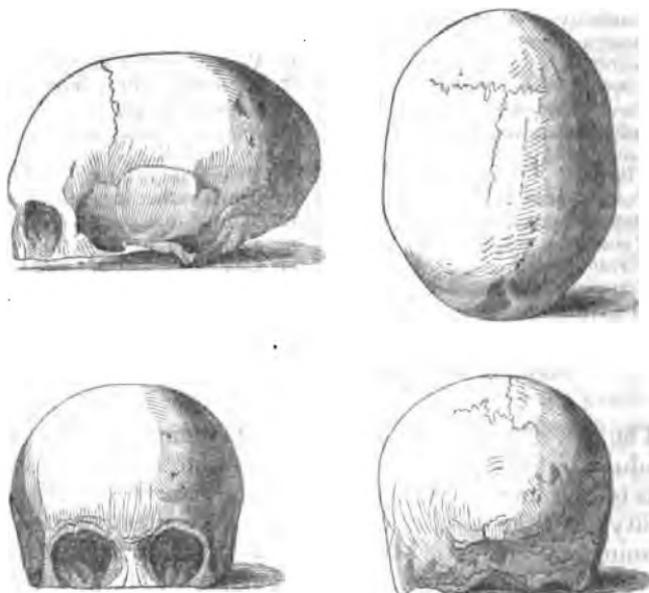
OBSERVATIONS ON THE SKULL OF ROBERT BURNS.

ROBERT BURNS, the Scottish poet, died at Dumfries on the 21st of July 1796, in the 37th year of his age, and, on the 26th of the same month, was interred in St Michael's Church-Yard. Eighteen years afterwards, a mausoleum was erected to his memory, by subscription, in that cemetery; and, on the 19th of September 1815, his remains were privately exhumed and trans-

ferred to the vault attached to it. Mrs Burns, the poet's widow, having died on 26th March 1834, the vault was opened for the purpose of depositing her remains beside those of her husband ; and the gentlemen who took charge of the proceedings, being aware of the anxiety which had long been generally felt to obtain a cast of the poet's skull, resolved to avail themselves of the opportunity to gratify this desire. The consent of the relatives having been obtained, Mr M'Diarmid, the Editor of the *Dumfries Courier*, went with several other gentlemen to the vault, and successfully effected their purpose.

These gentlemen deserve much credit for the skilful manner in which they accomplished their purpose. Some of the newspapers have raised a silly cry against them as sacrilegious resurrectionists, but the more rational portion of the press has defended them as meritorious labourers in the cause of science and truth. The phrenologists feel greatly indebted to them.

FOUR VIEWS OF THE SKULL OF BURNS.



I. DIMENSIONS OF THE SKULL.

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

II. DEVELOPMENT OF THE ORGANS.

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

The scale of the organs indicates their relative proportions to each other ;—2 is Idiocy—10 Moderate—14 Full—18 Large—and 20 Very Large.

The cast of a skull does not shew the temperament of the individual, but the portraits of Burns indicate the bilious and nervous temperaments, the sources of strength, activity, and susceptibility ; and the descriptions given by his contemporaries, of his beaming and energetic eye, and the rapidity and impetuosity of his manifestations, establish the inference that his brain was active and susceptible.

Size in the brain, other conditions being equal, is the measure of mental power. The skull of Burns indicates a large brain. The length is eight, and the greatest breadth nearly six inches. The circumference is 22½ inches. These measurements exceed the average of Scotch living heads, including the integuments, for which four-eighths of an inch may be allowed.

The brain of Burns, therefore, possessed the two elements of power and activity.

The portions of the brain which manifest the animal propensities; are uncommonly large, indicating strong passions, and great energy in action under their influence. The group of organs manifesting the domestic affections, (Amativeness, Philoprogenitiveness, and Adhesiveness,) is large; Philoprogenitiveness uncommonly so for a male head.

The organs of Combativeness and Destructiveness are large; bespeaking great heat of temper, impatience, and liability to irritation.

Secretiveness and Cautiousness are both large, and would confer considerable power of restraint, where he felt restraint to be necessary.

Acquisitiveness, Self-Esteem, and Love of Approbation, are also in ample endowment, although the first is less than the other two; these feelings give the love of property, a high consideration of self, and desire of the esteem of others. The first quality will not be so readily conceded to Burns as the second and third, which, indeed, were much stronger; but the phrenologist records what is presented by nature, in full confidence that the manifestations, when the character is correctly understood, will be found to correspond with the development, and he states that the brain indicates considerable love of property.

The organs of the moral sentiments are also largely developed. Ideality, Wonder, Imitation, and Benevolence, are the largest. Veneration also is large. Conscientiousness, Firmness, and Hope, are full.

The Knowing organs, or those of perceptive intellect, are large; and the organs of Reflection are also considerable, but less than the former. Causality is larger than Comparison, and Wit is less than either.

The Skull indicates the combination of strong animal passions with equally powerful moral emotions. If the natural morality had been less, the endowment of the propensities is sufficient to have constituted a character of the most desperate description. The combination as it exists, bespeaks a mind extremely subject to contending emotions,—capable of great good, or great evil,—and encompassed with vast difficulties in preserving a steady, even, onward course of practical morality.

In the combination of very large Philoprogenitiveness and Adhesiveness, with very large Benevolence and large Ideality, we find the elements of that exquisite tenderness and refinement, which Burns so frequently manifested, even when at the worst stage of his career. In the combination of great Combativeness, Destructiveness, and Self-Esteem, we find the fundamental qualities which inspired "Scots wha hae wi' Wallace bled," and similar productions.

The combination of large Secretiveness, Imitation, and the perceptive organs, gives the elements of his dramatic talent and humour. The skull indicates a decided talent for humour, but less for wit. The public are apt to confound the talents for wit and humour. The metaphysicians, however, have distinguished them, and in the phrenological works their different elements are pointed out. Burns possessed the talent for satire; Destructiveness, added to the combination which gives humour, produces it.

An unskilful observer looking at the forehead, might suppose it to be moderate in size; but when the dimensions of the anterior lobe, in both length and breadth, are attended to, the intellectual organs will be recognised to have been large. The anterior lobe projects so much, that it gives an appearance of narrowness to the forehead, which is not real. This is the cause, also, why Benevolence appears to lie farther back than usual. An anterior lobe of this magnitude, indicates great intellectual power. The combination of large perceptive and reflecting organs, (Causality predominant), with large Concentrativeness and large organs of the feelings, gives that sagacity and vigorous common sense, for which Burns was distinguished.

The skull rises high above Causality, and spreads wide in the region of Ideality; the strength of his moral feelings lay in that region.

The combination of large organs of the animal propensities with large Cautiousness and only full Hope, together with the unfavourable circumstances in which he was placed, account for the melancholy and internal unhappiness with which Burns was so frequently afflicted. This melancholy was rendered still deeper by bad health.

The combination of Acquisitiveness, Cautiousness, Self-Esteem, Love of Approbation, and Conscientiousness, is the source of his keen feelings in regard to pecuniary independence. The great power of his animal propensities would give him strong temptations to waste; but the combination just mentioned would impose a powerful restraint. The head indicates the elements of an economical character, and it is known that he died free from debt, notwithstanding the smallness of his salary.

No phrenologist can look upon this head, and consider the circumstances in which Burns was placed, without vivid feelings of regret. Burns must have walked the earth with a consciousness of great superiority over his associates in the station in which he was placed; of powers calculated for a far higher sphere than that which he was able to reach, and of passions which he could with difficulty restrain, but which it was fatal to indulge. If he had been placed from infancy in the higher ranks of life, liberally educated, and employed in pursuits corresponding to his

powers, the inferior portion of his nature would have lost part of its energy, while his better qualities would probably have assumed a decided and permanent superiority.

In our next Number, we shall examine more fully the character and cerebral development of Burns.

NOTICES.

EDINBURGH.—The Proceedings of the Phrenological Society and of the Edinburgh Ethical Society for the Study and Practical Application of Phrenology, for the last winter session, will be given in our next publication.

GLASGOW.—Last winter Dr Robert Hunter, Professor of Anatomy in the Andersonian University, delivered a course of twenty lectures on Phrenology. He also treated of it briefly in his popular course on Anatomy and Physiology.

DUNFERMLINE.—In last number we noticed the gratifying success of Mr W. A. F. Browne's Lectures on Phrenology in Dunfermline. The course was concluded on 19th March. The total number of tickets sold was 260, and there was besides a regular attendance of from twenty-five to forty visitors at each lecture. The auditors consisted generally of the most respectable, influential, and intelligent individuals in the town, and the course gave the highest satisfaction. The effect of these lectures is very apparent. A great change has taken place in the public mind at Dunfermline on the subject of Phrenology. Among the converts are several of the clergy and medical men in the town. Perhaps the most important result, however, of Mr Browne's lectures, is the great and increasing eagerness which has arisen for minute knowledge of the science. At the last quarterly meeting of the members of one of the public libraries, the Librarian stated that a supply of phrenological books was much wanted, as the calls for them were so numerous that the few already in the library were quite insufficient to meet the demand.

On 20th March, the day after the concluding lecture, a public dinner was given to Mr Browne by the Dunfermline Phrenological Society and a number of other gentlemen, in testimony of their respect for his character, and gratitude for the very valuable instruction which he had communicated. Mr J. Beveridge acted as chairman, and Mr George Roger as croupier. After giving the usual preliminary toasts, and "The memories of Drs Gall and Spurzheim," the chairman proposed the toast of the evening—"Health, long life and success to Mr Browne, and thanks to him for his exertions in the cause of Phrenology." Mr Browne replied in his usual elegant and forcible style, and concluded by giving "Prosperity to the Dunfermline Phrenological Society." Various other toasts were drunk; among which were, "The universal diffusion of Phrenology," "George Combe, Esq.," "The Edinburgh and all other Phrenological Societies," "The Opponents of Phrenology," "The Conductors of the Phrenological Journal," "The universal ascendancy of Truth," and "The Cause of Education." These toasts were introduced by neat and appropriate speeches from the Croupier, Mr D. Young, Mr A. Stevenson, Mr J. Gall, Mr J. Hutton, the Reverend Messrs Young and Cuthbertson, &c. The Dunfermline Phrenological Society has farther testified its respect for Mr Browne, by presenting to him a handsome pair of silver callipers.

We are happy to add, that Mr Browne has just been appointed medical attendant to the Montrose Lunatic Asylum. This, we believe, is the first occasion on which a phrenologist has been called to fill such a situation in Scotland. Mr Browne's phrenological opinions were urged against him, but he was elected by an overwhelming majority of votes. There were four candidates, three of whom had one, two, and four votes respectively, while Mr Browne had twenty-two. His knowledge of insanity is extensive, and well

qualifies him for his new duties. We hope he will favour us with reports of such remarkable cases illustrative of Phrenology as may fall under his observation in the Montrose Asylum.

GREENOCK.—On 18th February 1834, the number of members of the Greenock Phrenological Society was twenty-eight. The meetings are held once a fortnight, and had till that time been occupied with discussions on the objections that have been raised to the system, and expositions of the functions of particular cerebral organs, illustrated by cases falling under the observation of individual members. A phrenological library has been formed, but little progress has yet been made in the formation of a museum. A course of seven lectures on Phrenology was delivered, by invitation of the Society, in the West Blackhall Street Chapel, Greenock, on 28th April and following evenings, by Dr Robert Hunter, Professor of Anatomy in the Andersonian University, Glasgow. The course embraced “a Short History of Phrenology, and an explanation of its fundamental principles; a Survey of the Nervous System, and the Functions of its different parts; an Exposition of the situation and sphere of action of the different Phrenological Organs, and a Demonstration of the application and importance of Phrenology to the Education of Man.” These lectures were completely successful. Upwards of a hundred auditors attended the first, and the number regularly increased till the last, at which about 240 persons were present.

ALYTH.—A Phrenological Society has just been started, by twelve young men, in the village of Alyth, Perthshire. They have procured a supply of Phrenological books; and Mr Fenton, surgeon in Alyth, has engaged to give them a course of lectures on anatomy and chemistry, and to aid them in their phrenological studies. This is one of many examples of the increasing appetite for knowledge, which the industrious classes in Scotland are displaying.

WARWICK.—In the beginning of March last, a Phrenological Society was instituted in Warwick. It now consists of sixteen members, and we are particularly gratified to learn that the President's chair is occupied by Dr John Conolly, late Professor of Medicine in the London University, one of the editors of the *Cyclopædia of Practical Medicine*, and author of a well known and excellent treatise on Insanity. In the latter work, published several years ago, Dr Conolly declared that “the facts alluded to in it, many of the phenomena of disease, and the observation of all mankind, seemed to him to prove that the first principles of Phrenology are founded in nature;” and that he “could see nothing which merits the praise of being philosophical in the real or affected contempt professed by so many anatomists and physiologists for the science.” Subsequent observation and reflection have strengthened this opinion, and it is creditable to Dr Conolly that he now more boldly than ever stands forward to avow his belief. The names of the members of the Society, so far as we have learned them, are—the Reverend J. A. Morris, M. A., Warwick; the Reverend Henry Harris, B. A.; Warwick; John Twamley, Esq., Warwick; Mr Edward Dearle, Professor of Music, Warwick; Mr Owen W. Williams, M. R. C. S. L., Leamington; Mr Egerton A. Jennings, F. L. S., M. R. C. S. L., Leamington; Mr William D. Watson, M. R. C. S. Fdin., Warwick (Secretary); and Mr William Rider, artist, Leamington. A large collection of casts has been ordered from Edinburgh.

TAUNTON.—“Mr COX commenced a course of lectures on Phrenology at Taunton last week, which has excited much interest.”—*Exeter and Plymouth Gazette of 8th March 1834.*

PAUPER LUNATIC ASYLUM AT HANWELL.—The *Athenæum* of 3d May 1834 contains a very interesting account of this Asylum, furnished, as the editor mentions in a note, by “a friend, who was led accidentally, the other day, to visit the asylum; and who is anxious to give publicity to the system of management observed in it, and the admirable results of that system.” We shall copy the article in our next number, and have only room to mention here, that the institution is conducted by the superintendent, Dr Ellis, on *phrenological principles*. It is gratifying to find an unphrenological writer

calling attention to the "admirable results" of such a system of management. Hanwell is in the neighbourhood of London.

We understand that casts of the skull of Dr SPURZHEIM and the head of РАММОНУН РОУ, are on sale by Messrs Luke O'Neil and Son of this city.

DR VIMONT's Treatise on Human and Comparative Phrenology is now, we presume, completed. We are in possession of nearly the whole of the plates, but the second volume of the letter-press has not yet reached Edinburgh. As soon as it arrives, we shall endeavour to give an abstract of its contents, and to do justice to the high merits of the author. For accuracy and beauty the engravings are unrivalled.

NEW PHRENOLOGICAL CAST.—We have received from Mr William Bally, artist in Manchester, a copy of the phrenological illustration invented by him, and noticed in our last number under the denomination of a "Mechanical Brain." It is a very ingenious contrivance, and will be of great use to students of phrenology and lecturers. The cast, in its complete state, represents the head of a youth about fifteen years of age. The skull and integuments are removable in two halves, and the brain is then seen enveloped by the dura mater. The brain is divided into several pieces, which are taken out separately; and finally, the base of the skull, on which the brain rests, is seen. The frontal lobe may be removed, and that of an idiot substituted for it. Of course the anatomical details are not perfectly accurate, but, on the whole, the cast is calculated to give a very good general idea of the interior of the head, and the relations of the external and internal parts. We strongly recommend it to phrenologists and phrenological societies. The price is ten shillings. The cast may be seen at Mr Bally's Rooms, adjoining Gauthorp's Buildings, Oxford Street, Manchester.

The last number of the *Journal of the Phrenological Society of Paris* which has yet reached us, is No. 4. The work ought to be forwarded regularly in exchange for the copies of ours sent to Paris. A friend has shewn us No. 7, recently published. It contains a sketch of the life of Dr Spurzheim, the letters of Mr Capen and Dr M'Kibbin announcing his death, and Dr M'Kibbin's notes of the post mortem examination, all translated from the 35th and 36th numbers of this journal. The translator animadverts strongly upon Dr Jackson's report of the medical treatment and dissection. The remaining contents of the French Journal are—a Biographico-Phrenological Notice of John Adrian Bigonnet, by Dr Corbière; Analysis of Spurzheim on Education, by Dr Sarlandière; and Analysis of No. 5 of our own journal, by M. Berbrugger. In a future publication we shall notice it at greater length.

The following works are in our hands for review, but the urgent demands upon our space force us to delay noticing them till next number:—

The Teacher: or Moral Influences employed in the Instruction of the Young. Intended chiefly to assist young teachers in organizing and conducting their schools. By Jacob Abbott, Principal of Mount Vernon School. Revised by the Rev. Charles Mayo, L.L. D. London: Seeley and Sons. 1834. 12mo, pp. 328.

Necessity of Popular Education, as a National Object; with Hints on the Treatment of Criminals, and observations on Homicidal Insanity. By James Simpson, Advocate. Edinburgh: Adam and Charles Black, 1834. 12mo, pp. 402.

The Principles of Physiology applied to the Preservation of Health, and to the improvement of Physical and Mental Education. By Andrew Combe, M.D. Fellow of the Royal College of Physicians of Edinburgh. Edinburgh: Adam and Charles Black. 12mo, pp. 320.

The Book of Aphorisms. By a Modern Pythagorean. Glasgow: W. R. M'Phun. 12mo, pp. 224.

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