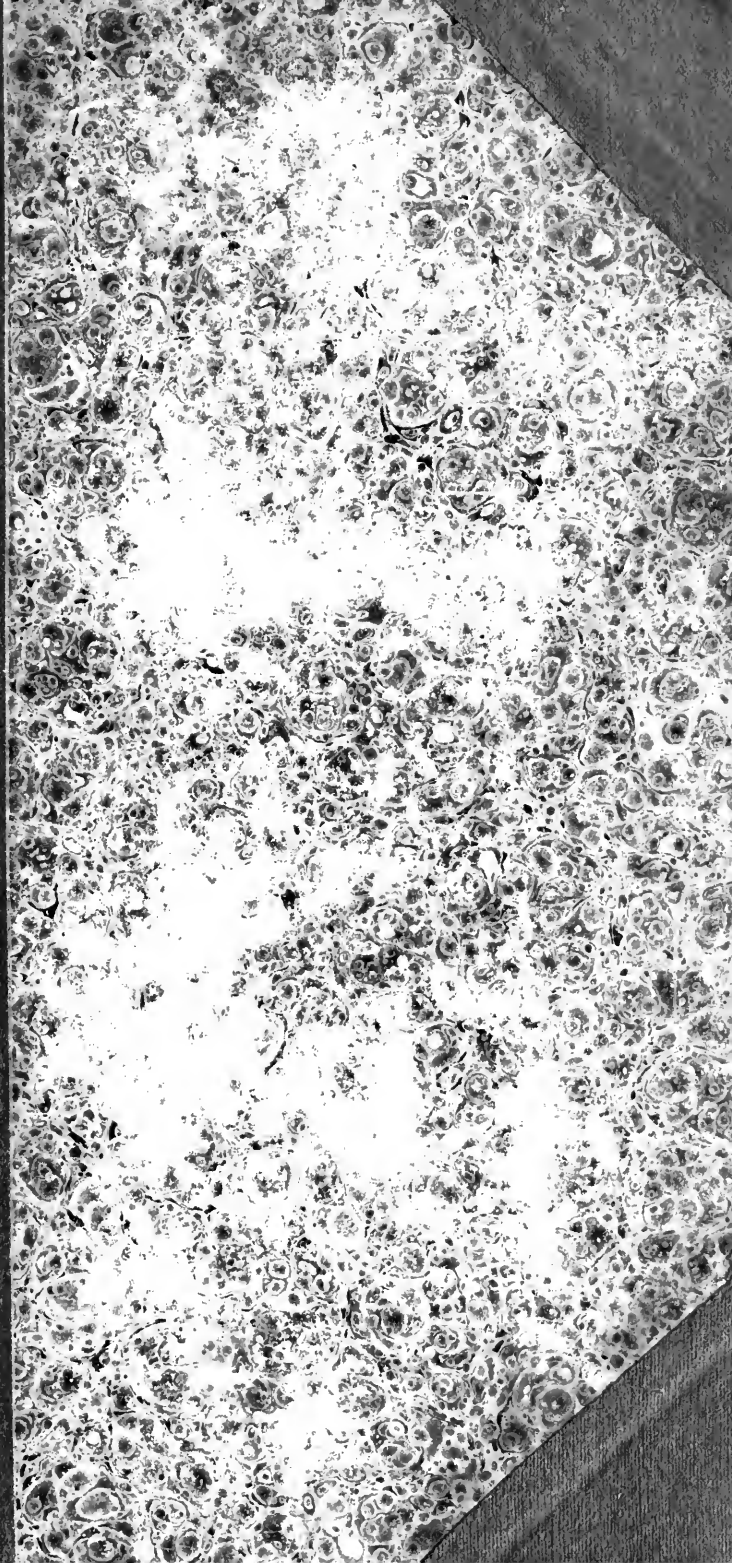


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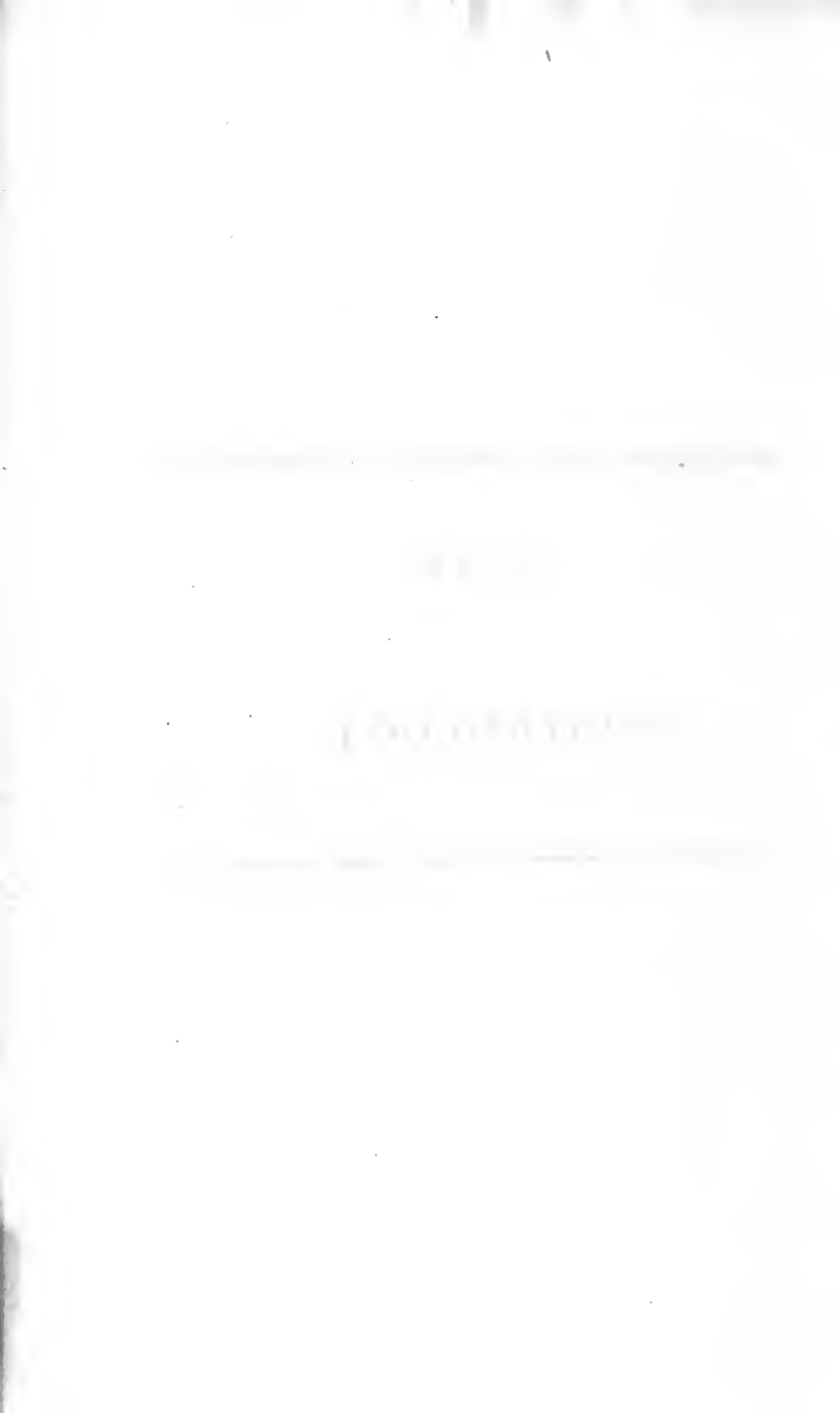
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**ESSAYS**

**ON**

**PHRENOLOGY.**

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11

11

ESSAYS

ON

PHRENOLOGY,

OR

AN INQUIRY INTO THE PRINCIPLES AND UTILITY  
OF THE SYSTEM

OF

DRS GALL AND SPURZHEIM,

AND INTO

*THE OBJECTIONS MADE AGAINST IT.*

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*Res non verba quæso.*

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EDINBURGH :

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1819.

*John Pickard*

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*Direction to the Binder.*

Put the Plate at the End of the Volume.

## INTRODUCTION.

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THE following are the circumstances which have led to the publication of this volume of Essays.

My first information concerning the System of Drs GALL and SPURZHEIM, was derived from No. 49. of the Edinburgh Review. Led away by the boldness of that piece of criticism, I regarded the System as contemptibly absurd, and the authors of it as the most disingenuous of men. After this, however, in 1816, I accepted an invitation from a friend to attend a private dissection of a recent brain, to be performed by Dr SPURZHEIM. The subject was not altogether new, as I had previously attended a course of Demonstrative Lectures on Anatomy by Dr BARCLAY. The Brain and the Edin-

burgh Review were laid upon the Table. The structure of the Brain was exhibited to the senses of all present, and contrasted with the bold averments of the Reviewer. The appearances presented by the parts were distinctly perceptible, for the number of spectators did not exceed eight or ten, and every one was invited to make minute observations, and to mention such doubts as occurred to him.

The result of the dissection was a complete conviction in the minds of all present, and among them were several gentlemen of the medical profession, that the assertions of the Reviewer in regard to the appearances of the Brain, were refuted by the facts presented to their senses.

The faith previously placed in the Review being thus shaken, I attended the next course of Dr SPURZHEIM'S Lectures, for the purpose of hearing an account of the whole System from himself. The Lectures produced the conviction, that the doctrines were widely different from what they were generally represented to be, and that if they were true, they were of the highest importance in the Philosophy of Man. The lectures, however, did not give rise to an in-

stantaneous perception of the truth of the doctrines. They shewed only that the System had the aspect of a science, and that patient examination and reflection would be necessary before it could be thoroughly understood, and the solidity of it ascertained.

Informed thus of the objects of investigation, and of the mode of conducting it, I resolved to put the System to the test of Experience. To do so, it was necessary to attain a knowledge of the situations of the organs and the functions of the faculties, and to compare together mental manifestations and developement of head. The difficulties in accomplishing this end at first were great. Unaccustomed to minute observations of form, I was scarcely able to perceive that one head differed from another in figure, and almost despaired of ever being able to discriminate those minute shades of difference in developement, which indicated differences in the organs. Accustomed also to speculate on ideas and the laws of thought, rather than to observe actions and discriminate the sources in the mind from which they flowed, I found it difficult to comprehend precisely the func-

tions assigned to the different faculties, and to recognise the influence of each in the actions which were the subjects of observation. But I resorted to the practice of selecting only decided characters as the objects of the earliest observations. I compared the forehead of one individual, who was remarkable for Intellectual Deficiency, with that of another who was remarkable for Intellectual Superiority. The difference was so great, and the correspondence betwixt talent and full developement, and betwixt incapacity and imperfect developement, so uniform, that it was impossible to mistake the characters, or doubt their connection with the forms. In the same way, with regard to Feelings, I compared the heads of persons who were remarkable for Cautiousness and Timidity, with the heads of others remarkable for Precipitancy of conduct; and in these cases also the differences were so conspicuous, and the concomitance betwixt the sentiment and developement so steady, that it was impossible to entertain a doubt upon the subject. The same course was followed with the faculties of Benevolence, Firmness, Self-Esteem, and others,

the organs of which are large; and the same irresistible conviction invariably followed.

Practice in this science, as in every other, gave facility, and increased expertness. After some experience in observing, each individual appeared, on the most transient glance, to have a form of head as peculiarly his own, and as easily distinguishable as the features of his face. The practice of tracing actions to motives also, gave increased facility in discriminating dispositions and capacities; and human nature was found opening up under the eye by the most fascinating, yet sure and instructive mode of philosophizing that could be devised. In the course of time, therefore, my observations were directed to the smaller organs, and many of them also I have verified, although regarding others I still suspend my belief, for want of facts to confirm it.

These studies were carried on at hours of professional relaxation, solely for the sake of instruction and amusement, without the most distant prospect of the results being laid before the public. The circumstances which gave occasion to their publication, shall now be mentioned.

While engaged in putting the doctrines to the test of experience, the tide of ridicule and abuse against them continued to flow in an unabated stream. The only attention which I gave to these invectives, was to examine them carefully, to discover if their authors professed to have compared the System with Nature, and to have found it refuted by facts. But in no case that fell under my notice, was there even an appearance of such an appeal to Nature having been made. Every opponent appeared either to suppose the alleged facts too ridiculous to deserve a philosophical investigation, or to conceive himself capable of demonstrating *à priori*, by a speculative argument, that they could not be true. As, however, I had by observation ascertained the facts to be founded in nature, I could regard with no sentiment of respect the self-conceit of those who supposed them too ridiculous to deserve investigation. The presumption of those also who conceived themselves capable of refuting them by speculative arguments, appeared equally absurd: and, hence, all the attacks made on the System had no

effect in shaking my belief in its general truth.

In this state of the discussion, a Number of the "Literary and Statistical Magazine for Scotland" fell into my hands, in which the Editor invited a free discussion of the merits of the System in his pages. This liberality appeared to me highly praiseworthy and philosophical; for at that time most of the periodical works teemed with abuse of the doctrines, and appeared hermetically sealed against the admission of any discussion in their defence. After waiting for some time, to see if an abler defender would avail himself of the invitation, and finding that none appeared, I offered the Editor a Paper, the careless production of a leisure hour. It was published, and another was requested. The periods of publication being quarterly, I easily found leisure to comply with this request, by contributing a second Essay. The interest still continuing to increase, a third and a fourth followed in succession. I was thus an author imperceptibly and almost unintentionally, and had the satisfaction to learn, that the speculations had not

been disagreeable to many readers of the Magazine.

By communicating information to others, I found my own knowledge of the subject increased. I had for some time perceived the system to be founded in facts; but two questions presented themselves to my attention :—How has it happened that these facts, which now appear obvious and indisputable, were so long undiscovered? and, What is the cause of the determined opposition with which the dissemination of a knowledge of them appears to be resisted? The answer to these questions did not at first occur to me, and not indeed till after two of the Essays now mentioned had been published. At last, however, some views occurred which appeared to throw light upon the subject.

GALL and SPURZHEIM's Philosophy may be summed up in two propositions. 1st, That the mind manifests a plurality of innate faculties,—meaning by the word Faculty, a power or instrument of thought of a limited nature, having specific functions: And, 2dly, That Each faculty manifests itself

by means of distinct organs, and that these organs are different parts of the Brain.

The Metaphysicians had treated the first proposition with contempt and derision,—and the Anatomists were equally decided in their rejection of the second. I accounted for the opposition of both these parties in the following manner.

1st, Consciousness is single, and, as the Metaphysicians have studied the philosophy of the mind only by reflecting on the subjects of their own consciousness, it was impossible that they could discover the existence of distinct innate faculties, although such faculties had a real existence. This proposition is proved and illustrated by the fact, that we could never, by mere reflection on the impressions received by means of the five senses, discover that the senses are distinct instruments, and that each has specific and limited functions.

In the *second* place, The mind has no consciousness of the existence of the organs by means of which it acts on the external world, and hence the cause why the Metaphysicians have made no discoveries in regard to that part of our constitution.

In the *third* place, It is an indisputable fact, that dissection cannot reveal the functions of the organs of the body; and yet Anatomists have contented themselves with merely dissecting the Brain, and contemplating its structure, in order to discover its functions, or, at the most, have made some inconclusive observations with this view in Comparative Anatomy, and on the effects of mutilations of that organ on the mental faculties. They, therefore, remained, of necessity, ignorant of the fact, that different parts of the Brain are the organs of different powers of the mind.

GALL and SPURZHEIM, on the other hand, were fortunately, but, as they admit, accidentally, led into a mode of philosophizing much better adapted than these, to make us acquainted with the true philosophy of the Mind and the functions of the Brain. They compared the power of manifesting the Mind with the developement of the Brain, as indicated by the figure of the Head, in sane and healthy individuals. They also engaged themselves, with animated industry, in ingenious, and, in some respects, original, dissections, to connect their Physiolo-

gy with Anatomy, without which it would have been imperfect. Every reader must perceive that they might, by this mode of philosophizing, make discoveries which neither the Metaphysicians nor the Anatomists could accomplish. It may be true, that the Mind manifests a plurality of innate faculties, each distinct in its constitution and functions; and yet, as consciousness is single, the Metaphysicians might not be able to discover this fact by their mode of philosophizing. In like manner, it may be true, that different parts of the Brain are the organs of different faculties, and yet the Anatomists could not, from dissection, make this discovery. But by comparing the power of manifesting the mind with the developement of the brain, both discoveries might be simultaneously made by the same inquirers.

These principles are developed at full length in the first of the following Essays, and they are mentioned here only for the sake of a little previous explanation. When I had discovered the application of them as philosophical principles, to direct us in the study of the human mind, I was forcibly

struck with their importance. This application of them was new to myself; for, although it had been long known to the world that Consciousness is single, and that Dissection does not reveal functions, yet, to the best of my knowledge, the inferences from these facts had not been perceived. But as it appeared to me not improbable that the inferences might have been made by authors with whose works I was unacquainted, and not wishing to claim philosophical merit, to which my title might be questionable, I made use of the principles in the third Essay in the Magazine, without holding up as new discoveries their importance and utility. The present volume also went through the press without such a claim being even hinted at; and in the correspondence with Dr ROGET, it will be seen that I mention their application as familiarly known; because I conceived it might be so, although I was not aware of this being the case. But a friend, to whom the volume was shewn when on the eve of publication, strongly represented, that it ought not to be presented to the world without a more direct call on the public attention to the importance of the

principles, and to the effects on the study of the Philosophy of Man likely to be produced by them. This circumstance has given occasion to this prefatory statement.

If it shall turn out that the application of the above-mentioned facts, as philosophical principles, has been made by other authors, I shall willingly resign every merit which may be supposed to belong to the discovery of their application.

If the reader should wish to form an estimate of their utility, he has only, after reading the first Essay, to turn up any work on the Philosophy of the Mind, or the Functions of the Brain, and apply them to the speculations contained in them. If the work be on the Philosophy of the Mind, let him inquire whether the author professes to treat only of the laws which are supposed to regulate Ideas, or of the faculties of the Mind ; and if of the latter, what he means by Faculties, and whence he derives his information regarding them. If the subject of the work be the Physiology of the Brain, let the reader inquire whence the author has derived the information which he communicates. The defects of our present systems will

appear by this examination, in a light which will forcibly attract the attention of every philosophical mind. Drs GALL and SPURZHEIM appear to have been aware of the facts which constitute these principles, but they have not made that formal and explicit use of them of which they are susceptible.

The explanation now given enables me also to complete the history of the present publication, in a more satisfactory manner than I could otherwise have done. From the first moment in which I was convinced of the truth of the system, all hesitation about avowing my belief in it disappeared. I saw, that the facts on which it was founded were part of the order of creation, and to apprehend danger from a knowledge of them, or to be ashamed of avowing acquaintance with them, appeared inexpressibly ridiculous and absurd. In the society of my friends, therefore, I fearlessly avowed my belief in, and admiration of, the facts which GALL and SPURZHEIM had brought to light, from the first moment in which I perceived them to be true. But it was out of the course of my habits and profession to appear as a public defender of them, and no

such intention ever suggested itself, till, by the periodical contributions to the Magazine, I found myself in possession of a mass of materials nearly equal to the formation of an octavo volume, and which had been pronounced to possess some interest, by persons not incapable of judging. I perceived also, that by the proper application of the principles now mentioned, to the philosophy of GALL and SPURZHEIM, and to that of the Metaphysicians, and by contrasting them with each other, the true merits of both might be more precisely estimated, and a general view given of the present state of the Philosophy of the Mind, which could scarcely fail to be interesting. These considerations, therefore, led me to collect the Essays, and model them anew. The work has thus been the employment of some leisure hours; and, if it contribute either to the instruction or amusement of the reader, I shall be abundantly recompensed for the trouble it has cost me.

The names usually given to the System are *Craniology* and *Cranioscopy*: but these are improper; for the functions connected with the manifestation of the mind are in it

never attributed to the cranium, but to the brain only ; and, even in regard to the brain, its structure and functions are not the ultimate objects of investigation, for it is considered only in so far as it is the instrument by means of which the innate faculties of the Mind manifest themselves in the external world. The real subject of the system is the Human Mind. I have, therefore, adopted the term *Phrenology*, (from *φρεν* mind, and *λογος* discourse,) as the most appropriate, and that which Dr SPURZHEIM has for some years employed.

GEO. COMBE.

EDINBURGH, }  
*September 1819.* }

# ESSAY I.

ON THE

PRINCIPLES OF THE SYSTEM OF GALL AND  
SPURZHEIM ; AND THE OBJECTIONS MADE  
AGAINST IT.

---

## SECT. I.

OF THE PRINCIPLES OF THE PHILOSOPHY OF  
GALL AND SPURZHEIM.

---

*“ Till Metaphysics and Physiology are studied more in connection  
“ with each other, it seems impossible that the former should  
“ ever rise to the dignity of a Science.”*

Article “ DREAMS,” in the Edin. Encyc.

---

THE system of Drs Gall and Spurzheim is generally conceived to be merely an empirical theory ; the utmost utility of which is, to enable us to gratify an idle curiosity, by guessing at the propensities of others. This is a great mistake. It is a system of the philosophy of Man, embracing the consideration of his moral and intellectual faculties, and the ap-

parent connection of these faculties with his organic constitution. It never pretends to enable us to predict Actions; but it treats only of Powers and Capacities in general.

Gall and Spurzheim make no inquiry into the nature, substance, or essence of the Mind itself. Their only object is to ascertain the circumstances under which it manifests its Powers; and they do so, by observing Facts submitted by the Author of Nature, to the cognizance of our faculties.

Mr Stewart most justly observes, "That the metaphysical opinions which we may happen to have formed concerning the *nature* either of *body* or of *mind*, and the *efficient causes* by which their phenomena are produced, have no necessary connection with our inquiries concerning the *laws according to which the phenomena take place*."—"Whether, for example," says he, "the cause of gravitation be material or immaterial, is a point about which two Newtonians may differ, while they agree perfectly in their physical opinions. It is sufficient, if both admit the general fact, that bodies tend to approach each other, with a force varying with their mutual distance, according to a certain law. *In like manner, in the study of the human mind, the conclusions to which we are led, by a careful examination of the phenomena it exhibits, have no necessary connection with our opinions concerning its nature and essence.*"—(Elements vol. i. Introd.)

Gall and Spurzheim, therefore, state only “ the conclusions to which they are led, by a careful examination of the phenomena which the mind exhibits ;” and they avow themselves as ignorant as their opponents, concerning the *nature, essence, or substance* of the mind. Let us proceed, therefore, to give an account of the *principles* on which their system of philosophy is founded.

There are three facts in the constitution of Man, of great importance to be attended to, in commencing the study of the philosophy of his nature, which have not hitherto met with the consideration they deserve. Indeed they form three fundamental principles, to be kept in view in all our inquiries ; and we solicit an earnest attention to a few remarks upon them.

First, *Consciousness* is *single*, although there is a plurality of *instruments*, by means of which the mind manifests itself. For example, we have *five* senses, by means of which we receive impressions from external nature ; and yet consciousness partakes of the unity of the mind, and not of the plurality of the instruments. Hence it follows, that we could never, by reflection on the subjects of our own consciousness alone, discover that we possess distinct senses.

In the second place : The *organs*, by means of which the mind acts upon, and by means of which it receives impressions from the external world, per-

form their functions without any consciousness in the mind either of their existence or their operations. For example, voice is produced by the contraction and relaxation of a number of muscles connected with the larynx, at the command of the will; and yet consciousness gives us no intimation either of the existence or functions of these muscles. In like manner, the leg and arm are extended and withdrawn by means of the nerves of voluntary motion, and a great number of muscles, at the command of the will; and yet of the existence and operation of these nerves and muscles, consciousness gives us no intimation. We are conscious of the act of volition which puts them in motion, and of the result produced; but not of the existence and operation of the special nerves and muscles themselves.

The case is the same in regard to the organs of the five senses. When the table is struck in my presence, and I attend to the subject of my own consciousness, all that I discover is the existence of an impression on my mind, which I call a sound, and from which, by the constitution of my nature, I immediately infer the existence of something external causing it; but, by this reflection, I cannot discover that the impression is excited by means of an ear. Indeed I have no consciousness that it is excited through the medium of any organ. Hence it is an undeniable fact, that the organs used by the mind for manifesting its powers, perform their functions without

the least consciousness in the mind either of their existence or their operations\*.

In the third place : It is a fact which cannot be disputed, that the *functions* of the organs can never be discovered by dissection alone. An anatomist might dissect the olfactory nerves, till his eyes grow dim with age, and never discover that these nerves perform the functions of smell. He might dissect the optic nerve, in like manner, and his discoveries would, in this respect, be equally short of the truth. He might dissect every organ of the body, but could never, from the anatomical structure of any one of them, infer the functions it performs in the living body.

It will be asked, then, by what means do we discover that we possess organs, as the media of communication betwixt the mind and the external world? And by what means do we discover that there is a plurality of these media, and that each of them is distinct from the others? By Experience and Observation alone. For example, I discover, by experience and observation, that, in the presence of light, I see; that in the presence of odorous bodies, I receive the impressions called smells; and that when a hard body is struck, I receive the impres-

---

\* The utility of this constitution is obvious. It is with the object alone that we have any practical concern, and not with the apparatus destined by nature for producing the perception of it. The apparatus is under Nature's care, and its functions depend on its constitution, not on the human will.

sions called sounds. But, as already said, even after this experience, I may be still ignorant whether these impressions are produced by the operation of the external causes directly on the mind ; or by the operation of the external causes, through the means of an intermedium ; and whether there is only one general intermedium ; or if there be several intermedia. But, suppose that, after I have learned, by experience, that the percussing of a hard body is followed by the perception of sound, I wish, on a particular occasion, to experience that perception, and desire that the table be struck ;—if I should find that I cannot perceive the impression of sound, and yet that in the presence of light I can see ;—here is indubitable evidence that the functions of seeing and hearing depend on different intermedia : for, while the ordinary means have been used to produce the impression of sound, no impression has been experienced ; while the ordinary means have produced the perceptions of sight, as before. It might have been possible for me, prior to this last experiment, to believe that all impressions from external objects were communicated directly to the mind, without the intervention of any intermedium, and that the differences perceptible in the character of the impressions, arose from differences in the external causes. But, after I have found that the external cause, which had hitherto produced in me the impression of sound, now produces that impression no more, while the external cause which had hitherto

produced vision, still produces that effect, I am led clearly to infer, that the power of experiencing the impressions, depends on other causes besides the external objects, that there must be intermedia of communication betwixt the objects and the mind, and that these intermedia must be distinct from, and independent of each other. Otherwise, how could it happen, that the wonted impressions should be received from light, while the wonted impressions could not be received from sounds, when the external causes, and the percipient being remained, in both cases, the same?

Thus, from experience and observation, we might infer the existence of some distinct intermedia of communication betwixt us and the external world; while yet we had not discovered what these intermedia really were.

But, in the next place, how could we discover what these intermedia are? And the particular functions of each intermedium? Only by one mode of proceeding. Consciousness could never reveal one word of truth upon the subject: for we have seen, that we have no consciousness of the existence of the intermedia; and, of course, no consciousness of the functions performed by each of them. Anatomy could afford us as little light: for we might dissect the olfactory nerves,—the optic nerves,—the nerves of taste and touch, and the auditory apparatus, till the scapel fell from our hands with our last breath; and we could find no circumstances,

in the structure of these nerves, which would indicate their functions in the living body. How, then, could the discovery be made? Only by comparing the power of experiencing impressions with the condition of the organization. After we have discovered, that percussion of a hard substance produces the impressions called sounds, it is only by comparing the power of experiencing these impressions with the state of the organization, that we can discover, that the Ear is the special organ destined to act as the intermedium in producing the impression of sound. It is only by a course of observations, of the constant concomitance betwixt a certain state of that organ in particular, and the power of experiencing the impressions of sounds, that we discover which is the organ of hearing. It is only by observing, that when the ear is sound and unobstructed we can hear, and that, when wanting, or in a diseased or obstructed state, we cannot hear, that we come to the conclusion that the auditory apparatus is the organ of hearing.

After we have made the discovery, in this simple way, dissection may throw light upon the structure of the apparatus, or upon the apparent or nonapparent adaptation of the structure to the functions, according to our imperfect notions of adaptation; although it could never reveal to us the functions, by the mere unfolding of the structure. Indeed, so indubitable is this proposition, that every anatomist will at once admit, that except in the case of the

eye, and perhaps of the ear, there is no apparent correspondence whatever betwixt the functions and the structure of the organs of sense ; and he will admit, that even as to these, the apparent correspondence stops when we come to the optic and auditory nerves.

But what does even the apparent correspondence in these senses amount to ? Only to this ; that we perceive some analogy to exist betwixt the apparatus constituting the eye and the ear, and certain sets of apparatus which we find to modify light and sound in external nature. This, however, does not explain how either apparatus produces its effects. The cause of the refraction of light, and consequent convergence produced by a convex lens, is equally mysterious as the function of vision in an optic nerve. It is no real explanation of the functions of the eye, to say that it modifies light like a lens ; it is only an illustration of its mode of acting ; because it is as great a mystery how a lens modifies light, as it is how the eye does so ; and we might as well explain the properties of the lens by referring to the eye, as explain the functions of the eye by referring to the lens.

I make these observations to shew that, even in physics, properties can never be inferred, *a priori*, from structure, and hence much less can functions be so inferred, when we enter on the examination of organization destined to serve as a medium for the manifestation of thought. Indeed, the que-

stion of adaptation or non-adaptation of structure to properties possessed, or functions performed by, matter, appears to involve an inquiry placed beyond the reach of the faculties of the human mind. We neither know, nor do we possess faculties fitted to enable us to know, any thing of the *essence* of things. We can penetrate no deeper than the observation of the fact of concomitance betwixt structure and functions or properties; and, instead of vainly attempting to go farther into the secrets of nature, which our faculties are not fitted to comprehend, we ought rather to infer that the adaptation is exquisite and perfect, seeing the structure is created, and the functions are appointed, by an Almighty and Omniscient Mind.

Let us now remark, in what manner Gall and Spurzheim proceed. They lay aside all preconceived theories and opinions, both regarding the faculties of the mind, and the connection of these faculties with organization, and they give themselves up entirely to the observation of nature. There was at the same school with Dr Gall, a boy whom he had a strong desire to rival in the art of learning words, but to whom he found he could make no approaches in that art, by any effort he could make. This circumstance caused him to ask himself, Is there any thing in this boy's mind that is not in mine? I excel him in other acts of thought, yet he excels me in this. What can the fact arise from? If the mind, as the metaphysicians teach, manifest but one

power, equally capable of feeling in every way, and of acting in every way, how does it happen that I possess a power, of acting in one way, superior to what this boy possesses; while he possesses a power, of acting in another way, superior to what I possess? I am certain that the difference, in so far as regards myself, *is natural*; for I ardently desire to rival this boy in the power of learning words, yet I cannot do so.

It was difficult to answer this question; but Nature gave a key to solve it. Dr Gall observed, by mere accident, that a particular portion of this boy's head was more developed than the corresponding portion of his own; while other portions of his own head were more developed than the corresponding portions of the boy's. Here, then, were two facts, viz. a certain mental power, and a certain developement of head in concomitance. They afforded no result of themselves, but they led to further observations. They led Dr Gall to compare manifestations of mental power, with developement of brain in other individuals; and he found, that in almost every case, in which a particular portion of the brain was fully developed, a particular power of manifesting the mind was possessed; and that in almost every case, where the developement was wanting, the power was not displayed. He thus discovered, by observing facts, that the original power of manifesting the mind was not uniform, as to all modes of feeling or of thought, either in the same indi-

vidual, or in different individuals. Hence, he drew the conclusion, that the mind manifested not a single power or faculty alone, equally applicable to every pursuit, but several distinct faculties, each of which appeared to possess limited and specific functions. From the observation, that the power of manifesting each of these faculties, was in proportion to the developement of a special portion of the brain, he concluded, that each manifested itself by means of a special organ.

But, considering the present state of general opinions, it may not be amiss to pause here, and examine the competency of this mode of philosophising, and the degree of credit which we may be safe to attach to the conclusions drawn from it. In short, let us try it by the principles which were formerly laid down.

In the *first* place, then, it may be true, that there is a plurality of internal faculties, and that the power of manifesting them is different, in different individuals, and yet that consciousness may give us no intimation of these facts ; because, as we have already seen, consciousness partakes of the unity of the mind, and not of the plurality of the instruments of thought ; and, because reflection on the subjects of our own consciousness, can give us no information regarding the faculties which other individuals either possess, or do not possess. A blind man would be incorrect in his conclusions, if he were to infer from his own case, that mankind in general cannot experience the perceptions of vision.

In the *second* place, If the same order of nature obtain in the internal faculties, as in the external senses, these faculties may manifest themselves by means of organs, and the organs may be distinct, and yet consciousness may give us no intimation of either the existence or the functions of the organs. Hence, consciousness appears to give no evidence, either for or against the principles of the philosophy of Gall and Spurzheim.

In the *third* place, Dissection gives us no idea of the functions of the organs; and hence it may be perfectly true, that the brain is the organ of the mind; and that distinct parts of it are the organs of distinct faculties, although the brain has been dissected for two thousand years, and these facts have never been discovered.

Hence, Consciousness and Dissection must remain for ever silent upon the subject.

What other mode, then, remains of arriving at the conclusions? None, but that by which the discoveries are said to have been made,—by observing manifestations, and by comparing manifestations and development together. If our three principles be correct, no ingenuity on earth is capable of pointing out a different mode of making the discoveries. We request the metaphysicians and the anatomists to attend to this state of the question, which they have never yet done; and, if they can, to point out *how* the discoveries could possibly have been made in any other way.

But, it will be said, that this exclusion of all other modes, does not show that Gall and Spurzheim's mode is itself competent. The end may be altogether unattainable by human ingenuity ; and then Gall and Spurzheim may be wrong, equally with their opponents. For example, we shall be told, that two preliminary positions must be established, before the competency of their mode of philosophising, and the accuracy of their conclusions, can be admitted : *First*, That mankind, in their actions, generally manifest their true faculties ; *secondly*, That the true developement of their brains can generally be discovered, by observing the shape of the head. It is only by comparing manifestations with developement, that the conclusions are obtained ; and hence, if it be impossible to discover, either the natural faculties which inspire men to act, by observing their actions, or the real developement of their brains, by observing the form of their heads, then the mode of philosophising above stated is altogether incompetent, to attain the result sought for ; and the conclusions drawn must, of course, be fallacious.

Perhaps as *actual* manifestations, whether of real faculties or not, can be compared with *actual* figure of the head, whether that figure indicate the true developement of the brain or not, we might say, that it is of no importance whether the manifestations be of real faculties or of feigned, or whether the figure be of the brain or of the head ; if, *de facto*, *certain*

*actual manifestations*, go in concomitance with *certain actual peculiarities of form*; because the *fact*, in nature, is always the thing of chief importance; and, if we assure ourselves of the fact, we may afterwards find a way of solving the difficulties which apparently attend it.

But we shall not take such high ground, although it would be strictly philosophical to do so. We prefer, on the contrary, endeavouring to shew, *first*, That it is possible to discover the real faculties which inspire men to act, by observing their actions; and, *secondly*, That it is possible to discover the true development of the brain, by observing the figure of the head.

Let us observe, however, in passing, that on our success in establishing these positions, may depend, not the fate of the philosophy of Gall and Spurzheim alone, but the question of the possibility of our ever discovering the true organs of the mind, and the true functions of the brain. We have already seen, that consciousness cannot reveal any thing in regard to the organs of the mind; and that dissection can reveal nothing in regard to the functions of the brain. If, then, actions indicate no permanent and uniform natural faculties, from which they flow; if every man's character exhibits, through life, a series merely of isolated, inconsistent, and inscrutable acts, flowing from no sentiment, and referable to no principle, then no rational ground remains for comparing manifestations

with developement, either before or after death, even although the developement were as patent as the sun at noonday; and, of course, no mode appears to remain of ascertaining the true functions of the brain, if it really be the organ of the mind, or of discovering what are the organs of the mind, if it really manifest itself by means of organs at all. This is a fact to which the anatomists, who have raised a clamour against this system, have not sufficiently attended.

Is it possible, then, to discover the true sources from which actions flow, by observing the conduct of men, or is it not? The metaphysician reflects on the subjects of his own consciousness, and talks mystically of the "tortuous windings of the human heart." But we go into society for an answer to the question.

In the first place, then, let us observe, that the opinion that men, in their actions, generally manifest their true faculties, and that these faculties are permanent and uniform natural powers, has been in all ages, and in all nations, familiar to the "vulgar," and that they have acted upon that opinion. While the metaphysicians have been erring for two thousand years, in their speculations regarding the mind, the "vulgar" have, in all ages, had a correct practical knowledge of the philosophy which we are now teaching. They discovered, for instance, by merely observing the conduct of individuals, that one has a natural, permanent, and powerful dispo-

sition or capacity of a particular kind, which another has not. One, for example, is, permanently and strongly, addicted to sensual indulgence,—another to covetousness,—another to cruelty,—another to benevolence,—another to pride,—another to vanity; one has a great talent for music,—another for mechanics,—another for painting,—another for poetry,—another for abstract philosophy. Now, the “vulgar,” always regarded these dispositions and capacities, as something natural, uniform and permanent. Nay, they even regarded them as independent of one another, and separable; for they often found that the possession of one was not accompanied with the possession of the whole. Hence, in addressing any individual, the vulgar have all along been, and still are, in the custom of modifying their conduct, according to their previous knowledge of his dispositions or genius, obtained by observing his actions. To the covetous man they address one motive; to the benevolent man another; to the proud man a third; and to the vain man a fourth. When they want to move such individuals to act, they speak to the first of *his personal interest*; to the second, of *the pleasure of doing good*; to the third, of *the necessity of preserving his own dignity*; and to the fourth, of *the great praise* that will attend the performance of such an action.

In the *second* place, The “vulgar” have always had the most complete persuasion, that these dispositions of mind were *natural*; because they have

perceived them to be uniform, permanent and steady, to grow with our growth, and to strengthen with our strength. They have never believed, that a man, by an effort of the will, can totally change his nature, or that the true character is so little manifested, that they may find a man prone to benevolence to-day, who yesterday was prone to avarice; that they may find a man sinking in the lowest abasement of self humiliation in his own eyes to-day, who yesterday was conceited, confident and proud; or that to-day the individual may be deaf to the voice of censure or of fame, who yesterday was tremblingly alive to every breath that was blown upon his character. As to intellectual endowments, the "vulgar" never designed for the orchestra the man whom they found incapable of distinguishing betwixt a rude noise and a melodious sound, on the notion, that "a genius for *music*" might be "acquired by habits of study or of business." They never placed in difficult situations, requiring great penetration and much sagacity, individuals who could not trace consequences beyond the stretch of three ideas: nor did they ever conceive, that a man, who has no intellectual capacity to-day, may be a genius to-morrow, or in ten years hence, by an effort of the will.

They, no doubt, have always observed, that the faculties follow a succession in their developement; that the child is not in possession of the powers of the full grown man; and that, hence, a boy may be

dull at ten, who may turn out a genius at twenty years of age, when his full powers are unfolded by time. But they never took up the conceit that *every* boy may be made a genius, by habits of study or of business; and they never believed, that, after the faculties are fully developed, any individual may, by exertions of the will, become great in a department of philosophy or science, for which he had previously no natural capacity. They have observed, that cultivation may strengthen powers already bestowed by nature; but they have never found that education could confer either dispositions or capacities which had no previous existence; while they have found, on the other hand, that where nature has bestowed a powerful disposition or capacity of any particular kind, that disposition or capacity will hold the predominant sway in the character during life, notwithstanding every effort to eradicate or subdue it. They have observed, too, that where nature has bestowed in an eminent degree, the faculties which constitute genius, the individual will manifest his native superiority, in spite of every obstacle arising from circumstances or situation. The lives of poets, painters and artists, in every age, have displayed examples of the truth of this observation.

Hence, in the opinion of the “vulgar,” the “tortuous windings” of the human mind, are neither so numerous nor so intricate, as the metaphysician would persuade us. Man, no doubt, may do indivi-

dual actions, or even for a time follow a course of action, the same in external appearance, from different internal motives ; so that, from isolated actions no safe conclusions, as to motives, can generally be drawn. But no man can pass his whole life in disguise ; and no man can acquire the art of *acting* in the business and enjoyments of life, so habitually and so skilfully, as not to allow his true character to shine out, clear and undisguised, to those who are placed in a situation to observe it. But, farther, let it be observed, that it is only in so far as the *propensities* and *sentiments* of our nature are concerned, that disguise is practicable, even in a single case. In every act that depends on the knowing and reflecting faculties, disguise is absolutely impracticable. For example, no man can write logical discourses, or trace profoundly an abstract principle, who has *not* powerful reflecting faculties. No man can compose exquisite music, who has *not* the faculty of tune. No man can write exquisite poetry, who has *not* the faculty of ideality. When, therefore, we perceive, even with the most transient glance, such acts to be performed, we have evidence insuperable and irresistible, of the existence of the faculties which produce them.

The “vulgar,” let it be observed, in the *third* place, formed these opinions, not in consequence of logical deduction or metaphysical investigations, but from the observation of plain facts, submitted to the cognizance of their understandings. They per-

ceived the manifestations of the dispositions, or of the intellectual faculties ; and from these manifestations they inferred the existence and the nature of the faculties which produced them. If the metaphysicians are disposed to dispute *the competency* of the “vulgar,” to observe the facts, or the sufficiency of the facts to infer the conclusions, let them bring forward their arguments against the one or the other ; but till we see that these arguments are entitled to weight, we must be allowed to take for granted both the competency and the sufficiency as self-evident truths, which admit neither of proof nor illustration.

Thus fortified, we may almost venture to assert, that the first point is established in favour of Gall and Spurzheim, viz. that it is possible, by accurate, patient, and continued observation of actions, to discover the true dispositions and capacities which individuals possess. Now, their philosophy is founded on a comparison betwixt the manifestations of these faculties, and the developement of the brain. The next point to be ascertained, therefore, is, whether it be possible, in general, to discover the true form of the brain, by observing the figure of the head.

On this point, I begin by mentioning the cases in which it is *not* always possible to make this discovery. These are cases of disease and old age. In disease, the skull may be enlarged or diminished in volume, by causes other than the developement

of the brain ; and in old age, the inner table of the skull sometimes sinks, while the outer table preserves its original volume ; so that the true developement of the brain, in such individuals, cannot be accurately inferred from the developement of the head. But in all healthy individuals, from infancy to the decline of life, the external shape of the head, in general, indicates exactly the developement of the brain. The skull is composed of two plates or tables, with a diploë between ; but these tables are so nearly parallel in all the great bearings of the head, that the inner and outer surface may be safely said to correspond. The skull, besides, is not an adamantine barrier, confining the brain within specific boundaries ; but a strong, yet yielding, covering, shielding the brain, while in the progress of its growth, it accommodates itself to its size. It resembles, in this respect, the shell of a crab or of a snail. At birth it is small ; it increases as the brain increases ; and it stops in developement when the brain has attained its full size. A process of absorption and deposition goes continually on in its substance ; so that if the brain presses from within, the renovating particles arrange themselves according to this pressure, and thus, the figure of the skull and of the brain in general correspond. The integuments which cover the skull on the outside, indisputably lie close upon its surface, and are so completely parallel, as to exhibit its true figure. Thus, then, there is no obstacle in general, to the

discovery of the figure of the brain, by observations on the form of the skull.

But it will be said, perhaps, that these are mere assertions, destitute of proof. I answer, that I do not know *how* to prove a fact in philosophy, except by requesting those who are inclined to doubt it, to observe the fact for themselves. Those who have observed the appearance of the skull after death, and compared it with the developement of the brain, are able to form their opinion of the truth of the facts now asserted. Those who have not made such observations, ought to make them, or to make inquiries of those who have made them, and ascertain the truth by the best means in their power. I do not ask any one to believe a statement on my assertion. All that I request is, that the reader will not reject my assertion as untrue, without inquiry, and without evidence.

It is proper to notice, however, in the next place, that the anatomists erect a strong argument against the system of Gall and Spurzheim, upon the existence of the frontal sinus. To those who are unacquainted with anatomy, I may explain, that at the top of the nose, the two tables of the skull are, in *some individuals*, a little separated; and that the canal or hollow, formed by this separation, is called the frontal sinus. Anatomists have said much about the impossibility of discovering the size of the brain, by observing the form of the skull, in consequence of the opening betwixt the tables at

this particular spot : but this argument is just about as fair and as strong, as if, on my affirming, as a general proposition, that the developement of the skin indicates the figure of the body, an anatomist were to object to my assertion, because, in blacksmiths and bricklayers, the skin is much thickened on the palms of the hands, on which account the developement of the skin does not, in such individuals, indicate the true figure of the body. This is an illustration of the exact amount of that argument ; for, in the *first* place, The frontal sinus does not exist in every individual. In the *second* place, where it does exist, it is confined to a narrow region of the skull, at the top of the nose ; and in no healthy individual is it found extending to any considerable distance over the cranium \*.

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\* Dr Spurzheim says, on this subject : “ The only reasonable difficulty started against the possibility of distinguishing the organs at the lower part of the forehead, and behind the orbits, originates from the frontal sinus, and from the circumstance, that the brain, situated behind the orbits, and behind both hemispheres, does not reach the surface of the skull. I always shew to my auditors the difference between the external bony crest, often erroneously called frontal sinus, and the elevation, which we consider as a greater developement of the organ of locality. They will also recollect my demonstrating, that children, and young and adult persons, have no holes between the two tables of the skull, at the forehead, and that the real frontal sinus occur only in old persons, or after chronic insanity, in general, when the brain is diminished in size.”—*Examination of Objections to the Doctrines of Gall and Spurzheim*, by J. G. Spurzheim, p. 78;—79.

To obtain the best information upon this subject that I could, I requested a gentleman of the medical profession, who had finished his studies at Edinburgh, and gone, in October 1817, to Paris, to make particular observations in the course of his dissections, and to report to me on the frequency and extent of the frontal sinus. In a letter, dated Paris, 8th March 1819, after frequent dissections for seventeen months, he writes as follows: "As  
 " to the frontal sinus, it is largest at No. 22<sup>o</sup>, and  
 " extends to part of locality. In disease, sometimes  
 " as high as the parietal bones, or more. Since attending to them, I have not seen the *frontal sinus*  
 " *on a single head, except a mad woman.* Spurzheim thinks they may be distinguished from enlargement caused by developement of the brain; but I cannot say that I could. I think he says, that it is only in old age and disease that you find them. I have seen nothing to contradict that. There are no occipital sinuses in healthy subjects that I know of. There is the usual diploë, but no more, at least that I have seen or even heard of, unless it be the depression made in the inside of the occipital bone, by the transverse sinus of the *dura mater*; but this is no objection to the system, as that sinus is merely a groove in, and not an opening betwixt the tables of the skull."

Even, however, admitting the frontal sinus to be found in every individual, no anatomist will venture to assert that there are, in sound heads, any sinuses

• The Parisian order is different from ours, & this 22 is our 19 or Individuality—

in the parietal bones, the occipital bone, the higher part of the frontal bone, or in the temporal bones ; and no anatomist will deny, that these bones form *nineteen twentieths* at least of the skull. Hence, the public will be able to judge of the degree of importance of the arguments founded on the existence of the frontal sinus.

But, in point of fact, as we shall afterwards see \*, the best anatomists do not dispute the assertion, that the shape of the skull in general cases, and in healthy individuals, indicates the developement of the brain. It is unnecessary, therefore, to add another argument upon the subject.

Thus, we hope, that we have succeeded in shewing, *first*, That men in general, manifest their true and natural sentiments and capacities in their actions ; and, *secondly*, That the form of the brain, in general, and in healthy individuals, may be discovered, by observing the figure of the head. Hence we draw the conclusion, that the true faculties and the true developement may be compared together in living subjects ; and, on these grounds, we establish the proposition, That Gall and Spurzheim's mode of philosophising is competent to enable us to attain the results sought for.

If any one, after what has been said, still find the idea ridiculous, that a certain developement of brain should go in concomitance with a certain disposi-

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\* See section 3d of this Essay.

tion or capacity of mind, I can only say, that the ridicule, if there is any, must attach to Nature, and not to Gall and Spurzheim. According to our notions of philosophy, no FACT IN NATURE *can be ridiculous*. If the propositions now laid down be *true*, they are part of the order of creation ; and that individual has a weak head and a cold heart, who can find subjects of merriment in any appointment of things which owes its origin to GOD. And I should be glad to be informed, on what principle any one can venture to scoff, who has never made observations on the subject ? Is he a judge of what the order of Nature ought to be ? It has been too much the case to try this system by comparing it with preconceived opinions, instead of trying it by a reference to Nature. The doctrines are new, and differ extremely from the current opinions of the world ; but these circumstances do not prove them to be fallacious. The theory of Gravitation, and the Circulation of the Blood, were equally at variance with the current opinions of the age in which these discoveries were made ; and, tried by the standard of these opinions, they appeared ridiculous in the extreme ; yet these discoveries were true, and the current opinions erroneous. It will prove the same with this system, if it be founded in Nature ; and no one can know, whether this is the case or not, who has never compared it with nature. He who has merely compared it with his previous opinions, has not put it to the test by which it must

stand or fall. When its supporters say that it is so founded, they place themselves on a basis from which they cannot be shaken, but by shewing that their observations or conclusions are erroneous; and this can be done only by an appeal to facts by the opponents themselves. And yet, what opponent has ever disputed the doctrines of Gall and Spurzheim, on the ground that he had made observations, and found the result at variance with their statements? Who, then, we beg leave to ask, is entitled to call the conclusions of Gall and Spurzheim in question? Is it the Metaphysician, who has never studied the mind, except by reflecting on the subjects of his own consciousness? Is it the Anatomist, who has never compared the developement of the brain with the manifestations of the mind? Or, is it the mere talker, ignorant equally of metaphysics and of anatomy? Every one is certainly entitled to state his objections in his own way; and, undertaking to support the system, we are bound to hear them, and to answer them. We shall, therefore, take them up, each in his turn, at least such as have assumed a literary or a tangible shape.

## SECT. II.

*Objections of the Metaphysicians considered.*


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“ Pour moi, j’ai cru que mon unique objet étoit de démontrer que Spinoza  
 “ n’a nulle idée des choses qu’il avance, que ses définitions sont vagues, ses  
 “ axiomes peu exacts, et que ses propositions ne sont que l’ouvrage de son  
 “ imagination, et ne renferment rien qui puisse conduire à la connaissance  
 “ des choses. Cela fait, je me suis arrêté.”—CONDILLAC.

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ONE great cause of the opposition made to the system of Drs Gall and Spurzheim, is the great difference betwixt it and all the metaphysical systems of the philosophy of the mind. I shall endeavour to point out the extent of this difference, and to contrast the leading doctrines of these gentlemen in regard to the faculties, with those of the metaphysicians, that every reader may have an opportunity of forming a judgment for himself.

The speculations of the ancient metaphysicians, were confined wholly to *ideas*, and the means by which ideas get access to the mind, and how they are reproduced, separated and compounded, after they have once penetrated into the sensorium. These philosophers appear evidently to have considered the mind as a single general power, equally capable of feeling in every way, and of forming ideas of every kind.

Passing over the jarring doctrines of these philosophers concerning the *manner* in which ideas

### 30 METAPHYSICAL OBJECTIONS CONSIDERED.

were formed, which chiefly occupied their attention, we shall come at once to the modern philosophers. Mr Locke compares the mind to a *tabula rasa* or blank, and in one place, indeed, to a dark closet, and conceives it to be replenished with ideas admitted through the medium of the external senses.

Now, I request the reader to observe, that neither in the writings of the ancients, nor of Mr Locke, is there a single word said about innate faculties of the mind, having specific natural functions; or, if they are mentioned, it is to deny their existence. If we keep out of view the doctrines of these philosophers about Ideas, the manner of their formation, association and reproduction, we have nothing whatever left. The Mind is regarded by all of them as a single general power, without determinate functions, or constitution of any kind.

Every one knows the state to which the theories about ideas were brought by Bishop Berkeley and Mr Hume. The one demonstrated that we have no evidence of the existence of matter; the other that we have no evidence of the existence either of matter or of mind.

The whole of the ideal theories, and the superstructures raised upon them, fell before Dr Reid. He called the attention of mankind to the fact, That there is no evidence of ideas being images or transcripts of external things, introduced into the mind through the medium of the senses; and he

shewed that, our ideas of external objects are formed, on the presentation of the object to the senses, in virtue of an inexplicable law of our constitution, and that the impression made on the senses has no more resemblance to the thing perceived than a word has to the thing signified.

But here Dr Reid's discoveries stopped. He is as silent as his predecessors about any innate faculties, or natural constitution belonging to the mind itself. With him, as with them, the mind is considered as a single general power; and the ideas which it forms, and the laws of their association and reproduction, are the only points which are investigated.

Following in the same path, Mr Stewart next appears. If great ingenuity, unwearied perseverance, and deep reflection, could have perfected the Philosophy of the Mind, this author would have done so; for no one ever entered on the study with a more sincere desire to find the truth, than he. But let us enquire what he has accomplished. He has written beautiful speculations upon ideas, and habits of associating and recalling ideas; but not a word upon the natural constitution of the mind itself. The Mind, as formed by the hand of Nature, is, with Mr Stewart, as well as his predecessors, a mere blank, or single general power. If we open his philosophical works, and seek to know whether every individual has equal natural power of feeling in every way, and of forming ideas of

every kind, we receive only the evasive reply, that  
 “ in whatever way we choose to account for it,  
 “ whether by original organization, or by the ope-  
 “ ration of moral causes, in very early infancy ;  
 “ no fact can be more undeniable, than that there  
 “ are important differences discernible in the minds  
 “ of children, previous to that period at which, in  
 “ general, their intellectual education commen-  
 “ ces ;” (Elements, Introduction, part 1.) If we  
 lay aside his speculations about ideas, habits and  
 associations, we have nothing left. He begins and  
 ends without telling us any thing about the *natu-  
 ral* faculties of the mind ; faculties which are as  
 distinct from each other, as the ear is from the eye,  
 and as distinct from the ideas which are formed by  
 means of them as the ear is from each impression  
 of sound.

Now, if, in point of fact, the mind manifest a  
 plurality of innate faculties, and if the functions  
 of these faculties, like the functions of the five sen-  
 ses, be distinct, then the Metaphysical Systems of  
 philosophy are of little or no utility ; for in them  
 no account of such faculties is to be found. If  
 there be innate faculties, and if they be as distinct  
 from each other as the eye is from the ear, then  
 the philosophy of the mind consists in a knowledge  
 of them and of their functions, and the doctrine of  
 ideas will be of subordinate importance. If there  
 be a faculty which gives the power of perceiving  
 melody, that faculty will possess a uniform and spe-  
 cific constitution, and be subject to uniform laws.

whether the music produced be that of the Ashantees or of the Italians, of the English or of the Irish ; just as the sense of smell is the same in its nature, whether operated on by the effluvia of a Scottish heath, or of an Indian plain. In like manner, if there be a faculty which traces the relation of necessary consequence, that faculty will perform its functions in the same manner, whether it be employed in Japan or in England ; and the general acts produced by it will partake of its constitutional character, whatever the variety of individual ideas may be which are formed by it in different countries.

Now, the whole question betwixt Gall and Spurzheim and the metaphysicians, is this : Are there such innate faculties possessing specific functions, or are there not ? If the metaphysicians say that there are not, then they maintain that the mind manifests but one general power, and hence that each individual has naturally an equal power of feeling in every way, and of forming ideas of every kind ; and they deny entirely the existence of limited natural capacities, qualifying men for one mode of action rather than another. If, on the other hand, they admit that such natural faculties exist, I must observe that, to the best of my knowledge, no account of them is to be found in their writings. I am acquainted with no metaphysical work which even professes to give an account of the innate faculties and functions of the mind, such as is given of the five senses.

The system of Gall and Spurzheim, on the other hand, treats of such faculties and of their apparent connection with our organization ; and their account of them is founded on observation of manifestations, and not on fanciful speculation.

But the reason why such faculties are never mentioned by the metaphysicians is, that their mode of philosophising made it impossible for them to discover them. They confined themselves to reflections on the subjects of their own consciousness, and, as consciousness is single, it was impossible for them, by such means, to discover the plurality of the faculties or their functions. By reflection, we discover only the kinds of feelings we experience, and the kinds of ideas we form ; but in this way, or from this source, we learn nothing of the plurality or distinct functions of the faculties themselves. Every man's mind appears to himself, to be a single power, capable of feeling in various ways, and of forming ideas of various kinds ; but if we add observation to reflection, we shall find the most irrefragable evidence, that the mind really manifests a plurality of powers, and that each power is in some degree separable, and has specific functions.

Hence, when such faculties are discovered, and their functions ascertained, we are really at the bottom of the Philosophy of the Mind. If we are told that an individual possesses the sense of hearing, we know precisely how he is liable to be affected by external objects, and what extent of na-

tural power of perception he in consequence enjoys, whatever the sounds may be which he hears, or the modes in which he associates them. In the same way, when we are told what natural faculty or faculties any individual eminently possesses or wants, if we know the functions of these faculties, we know in consequence what he has the natural power of doing, and what he has not the natural power of doing ; no matter what particular ideas these faculties have previously formed or associated.

It is unnecessary to enlarge on these views. Those who are conversant with the Philosophy of the Mind will perceive at once that the question betwixt the metaphysicians and the followers of Gall and Spurzheim is the most important that has ever been agitated in this branch of science. If Gall and Spurzheim are correct in their mode of studying the faculties, and if reflection on the subjects of our own consciousness is incapable of revealing any thing regarding the plurality and separate functions of these faculties, then the whole speculations of metaphysical writers regarding the mind, fall to the ground, like the fanciful disquisitions of the alchemists, except in so far as particular truths may be picked out from among their erroneous theories.

These observations will perhaps be better elucidated by entering a little more deeply into the doctrines of the metaphysicians themselves.

In the *first* place, then, Mr Stewart, that most

### 36. METAPHYSICAL OBJECTIONS CONSIDERED.

able metaphysician, seems not to have formed to himself any very accurate conception of what a Faculty is. In his Elements, he nowhere specifies what he understands by this term, whether a power of a limited nature, or only a specific mode of action of one general power. Speaking of the faculties and principles of the mind, he says, "These faculties and principles are the *general laws* of our constitution, and hold the same place in the Philosophy of the Mind, that the general laws we investigate in physics hold in that branch of science." (Elements, Introduction.)

Now, it appears to me that a *faculty* means simply a power or capacity which has innate functions and activity: a *principle* of our constitution, on the other hand, is an ultimate fact; and has no functions and no activity; as, for example, it is a principle of our constitution that, on opening our eyes in the presence of light, we see the objects around us, and believe in their existence. It is a principle of our constitution, that we can recall the ideas formed by the reflecting faculties at our pleasure, while we cannot recall the feelings experienced by the faculty of amateness, by a mere effort of the will. And, lastly, a *law* of our constitution is merely a rule which appears to characterise a number of phenomena, which are to us ultimate facts. It has no functions, and it is independent of the will: for example, we cannot see a rod with the end immersed in water, straight, for it is a law of

our constitution, that we must see according to the refraction of light, and the refraction of light makes the rod appear crooked.

Hence, faculties are the powers or capacities of our constitution, and they have their distinct functions, principles and laws ; but it is not correct to omit functions entirely, and to confound faculties, principles and laws of our constitution together, as if they were one and the same thing. Individuals may differ from each other in regard to the energy of their faculties, and even in regard to the number of faculties which they are able to manifest ; but the principles and laws of our constitution must be the same in every individual of the human race.

In the *second* place, The faculties of the metaphysicians are really not specific and distinct powers, having separate functions ; but they are mere *affections or acts* of a single general power. For example, in their systems, we have no account of specific faculties for feeling DESIRES. Desires and emotions are supposed by them to be merely particular affections of the general power ; and, of course, every individual who can feel strongly in one way, is supposed naturally capable of feeling with equal intensity in every other way, if certain exciting circumstances are present. And, in regard to the intellectual faculties, they are merely modes of action of the single power ; and the functions of all of them are implied in each.

SENSATION appears to be considered by the metaphysicians, as the first faculty of the Mind ; and yet, sensation is obviously only an *affection* of the faculties which feel, and of the nervous system in general. No philosopher has pointed out the functions of sensation, as a faculty distinct and independent like the eye or the ear, or shewn how it can be exercised without perception. This leads me to observe, that PERCEPTION is an act of all the faculties which form ideas, but is obviously no faculty itself. We cannot experience a sensation, caused by an external object, without having a perception ; and we cannot perceive without having a conception of the thing perceived. Thus, the functions of Sensation, Perception and Conception, are inseparable instead of being distinct. CONCEPTION, indeed, is defined to be the act of forming ideas of absent external objects formerly perceived ; but this is a mere gratuitous limitation of the word ; for we conceive equally when we perceive, when we remember, and when we imagine, or language has no meaning. Mr Stéwart treats of ATTENTION as a faculty of the mind ; a mode of viewing the subject, which affords a clear proof, that he never formed to himself a definite conception of what a faculty is. Attention signifies merely the steady application of the faculties which perceive to any object. It is no separate faculty. It would be as philosophical to call Relaxation or Contraction muscles, or to call Digestion an organ of the abdo-

men, as to call Attention a faculty of the mind. The same remarks may be applied to ASSOCIATION. This term signifies the connection supposed to subsist betwixt different ideas ; but as the ideas are not faculties, it is evidently absurd to call any set of bonds of connection betwixt them a faculty of the mind. ABSTRACTION signifies the act of the mind in separating and classing ideas ; but the act is not a faculty. IMAGINATION signifies the act of forming new combinations of ideas ; but we can scarcely conceive it to be a faculty itself, otherwise ideas would pass through a range of faculties, and be first perceived by one faculty, then conceived by another, then abstracted by a third, and last of all, imagined by a fourth, before imagination could perform its functions. In the same way MEMORY is styled a faculty, and is called the power of recalling ideas ; but how can ideas be recalled before they are formed ; and what principle have we for attributing the formation to one faculty, the conception to another, and the recollection to a third ?

But the best evidence that these names designate merely acts of the faculties in general, and not faculties themselves, is to be found in the circumstance, that *each* of them implies the functions of almost all the others. For example, we cannot *remember* a train of circumstances, without *conceiving* them, and *associating* them. Hence, memory implies conception and association. We cannot *imagine* a landscape, or a piece of mechanism, without

*conceiving* ideas of objects previously formed, without *separating* and *classing* them anew, without *remembering* them to be natural or fictitious, and without *associating* them, so as to form new combinations. Hence, imagination implies conception, abstraction, memory, and association. We cannot separate and classify ideas by *abstraction*, without *conceiving* them, without *remembering* them, without *associating* them, and without *imagining* them; and hence, abstraction implies all these other faculties also. Perception, as has been already remarked, cannot be exercised without implying conception. Hence, the only original faculty of the mind appears to be Conception, and the functions of it appear to be universal.

It is very different with the KNOWING and REFLECTING FACULTIES in the system of Gall and Spurzheim. According to that system, no one faculty can perform the functions of another. If an individual be deficient in the power of manifesting a particular faculty, we know specifically the effect of this want on his mental powers; and if he has a great power of manifesting one or more faculties, we know the precise scope of his capacities. In their system, the same faculty forms a particular class of ideas, and recalls and combines that class; and ideas do not pass through a suite of different powers as they do in the systems of the metaphysicians. If we could conceive the external senses endowed with the power of reproducing their sensations at the

command of the will, we should then have an illustration of the powers of the faculties, according to the system of Gall and Spurzheim. The ear would first receive impressions of sounds, and it would recall them and combine them; the olfactory nerves would receive impressions of smells, and would recall and combine them; and thus, each class of ideas would be formed, recalled, and combined by one specific instrument or faculty, at the command of the will. There would not be one instrument for receiving the impressions, another for conceiving them, a third for associating them, a fourth for abstracting them, a fifth for imagining them, and a sixth for remembering them. And hence, the power of forming each class of ideas, of recalling them, and of combining them, would be in proportion to the energy and activity of one specific faculty, and to the command of the will over that faculty, and not in proportion to association, or any other fanciful power of the mind.

Accordingly, if we go into society, we shall find the fact to correspond completely with these principles. He who has the faculty of tune in a powerful degree, can perceive, remember, and imagine notes of melody with great power and effect, and his capacity of doing so is not in proportion to any other faculty of the mind, but in proportion to this faculty alone. He who possesses, in a powerful degree, the faculty which traces necessary consequences, is able with great facility to perceive, remember and

imagine, the steps of a logical argument, while, perhaps, he is extremely deficient in the natural power of perceiving forms, colour, or melody, or performing any mental act whatever with regard to this class of objects.

Hence in the system of Gall and Spurzheim, ideas are of subordinate importance, because each faculty is entirely distinct from the ideas which it forms. The ideas depend upon the circumstances in which the individual is placed, while the faculty itself, and its constitution or functions, depend upon nature.

In the metaphysical systems, a great deal is attributed to Attention and Habits of Association. But, unless the faculty be possessed, the function of which is to attend to certain objects, these objects cannot be attended to: and as ideas of the objects cannot be formed, of course they cannot be associated. Hence, he who wants the faculty of tune cannot attend to music; and he who wants the reflecting faculties cannot attend to an abstract discourse.

It is of no utility to indulge speculations about the effects of habit and association, until we are made acquainted with the number and functions of the natural faculties, which acquire the habits, and form the ideas associated. Such kind of information resembles in value that of a dissertation which should treat of particular tastes and particular smells, instead of the functions of the senses of taste and smell themselves. If the mind receives no specific constitution from nature, we can per-

ceive no reason why the genius and character might not be entirely formed by habit and association.

It is evident that every metaphysician who possesses a philosophical understanding has felt exceedingly the want of a basis for his philosophy. Mr Stewart repeats, almost in every chapter, that *there must be original principles* in human nature ; but, in his whole works, we never find them *specified*. The causes of the difficulty which he finds in specifying these principles, appear to be the following : *first*, he very properly denies the existence of *innate ideas* ; and, therefore, could not call any kinds of ideas original principles of the mind : *Secondly*, Faculties, in his application of the word, have no *specific constitution or natural functions*, but are merely modes of action of a single and universal power, the Mind ; and, therefore, he could not refer original principles to the constitution of the faculties : and, *thirdly*, he never speaks of *determinate relations* betwixt the mind and any objects in nature ; and, therefore, he could not found original principles on these relations. His notion of an original principle of our constitution appears to be, that it is a mere ultimate fact of our nature, of which we can give no account. He had no other way of discovering these ultimate facts, except by going over the whole modes of human thought, and by analyzing them. Hence, he could not, at the commencement of his work, specify these original principles ; and although he had been

able to do so, he could have made no use of them, for they are not powers or capacities, but mere isolated facts. But this appears to shew, beyond the possibility of doubt, that even Mr Stewart had no idea that a faculty is a specific natural power; that it has a certain natural constitution; and that it stands in a determinate relation to its objects.

I make these observations, not from any hostility to this author, whose great ingenuity, love of truth, and erudition, must secure to him respect from every intelligent and virtuous mind; but to shew that if the present mode of philosophising, even in the hands of so great a master, produce so few useful results, we ought not to adhere to it with prejudiced partiality, nor view, with sentiments of aversion, the communication of any system, which professes to be in opposition to its principles.

I shall, no doubt, be asked, Do you admit *all* Spurzheim's faculties? The answer I make is this: The division of these faculties is founded, not on a logical analysis of the acts of the mind, as a single power, nor on any logical classification of the *objects* on which the mind may be employed, supposing it to manifest but a single power, but upon observation of manifestations alone. I can say, that I have myself verified many of the faculties, by comparing manifestations and developement; and I am certain that the functions of those faculties, and the seats of their organs, are correctly indicated. Other fa-

culties I have not so ascertained. But as to these I have found nothing adverse to them. My observations have not been sufficiently extensive, or made with sufficient accuracy, to enable me to say that I have evidence for them from my own observations. But, as Dr Spurzheim says that he has evidence for them in his practical observations, and as I have found his statements correct in so far as my own experience goes, I think it more philosophical to adopt his enumeration, founded on his experience, than to affect to make a new division, founded on my own more limited knowledge. Besides, it would be abandoning the principles of the science, to attempt to generalize the faculties, without observations to warrant such a proceeding; because I have already attempted to shew that, except by observing manifestations, there is no way of discovering either the plurality or the functions of the faculties. According to this system, whoever possesses a faculty, ought to possess the power of performing all the functions attributed to it. Hence, if we were to reduce several of Dr Spurzheim's faculties, by generalization, into one, and to find, on going into society, an individual excelling in the power of performing some of the functions of this generalized faculty, and destitute of the natural power of performing others, we should be refuted on our own principles.

Neither Gall and Spurzheim, nor their followers, however, pretend that their division of the faculties

and their specification of the functions are perfect. On the contrary, every one, who knows any thing of the system, perceives the existence of a great difficulty in ascertaining the number of the faculties, and in specifying their functions; and he knows, that none state this difficulty more forcibly than these authors. Every believer in the system, therefore, is aware that it is far from perfection; and he wishes to see it amended, as experience increases. He knows, in short, that no two individuals, and even no one generation of inquirers, can bring a system of philosophy to perfection. But, knowing as he does, the basis on which the system is founded, he must reject all enumerations of faculties founded on mere metaphysical disquisition. He will readily accept of the contributions of every accurate observer, to increase the stock of knowledge which the system contains; but he will decline the aid of the mere metaphysician, who analyses ideas alone, and neglects the study of nature.

But here, it will, no doubt, be objected, that according to Gall and Spurzheim, each faculty appears to be a distinct mind, endowed with its own constitution, relations and laws; and hence that, as the faculties are several, it is inconceivable how consciousness can be single. The mind, we shall be told, appears, according to this account, to be merely a bundle of separate, distinct, and independent capacities; whereas every one has the testimony of consciousness that he possesses a single think-

ing principle alone. In reply, we repeat that Gall and Spurzheim make no inquiry into the nature of the Mind, and that they state only "the conclusions to which they are led, by a careful examination of the phenomena which the mind exhibits." They avow themselves, therefore, utterly unable to give any satisfactory explanation of the difficulty how consciousness comes to be single, while the instruments of thought are numerous. But they say that they have stated the principles upon which they have drawn their conclusions. If it can be shewn that the principles are unsound, or the conclusions incorrect, they will give up both; but until this be done, they must be allowed to hold by what appear to them to be undeniable facts, although some unexplained anomalies attend them. If any one objects both to principles and conclusions, for no reason except that a difficulty exists, let him show how consciousness of the impressions received by means of the senses comes to be single, while, in that case, the instruments are indubitably five in number, and the apparatus of each instrument is double.

In the last place, The metaphysicians, in their systems of philosophy, leave entirely out of view the consideration of the organization. I cannot perceive a reason for their doing so, except the single one, that the mind has no consciousness of the existence and functions of the organs, while the organs are in a state of health. But, is it not

equally true, that we have no consciousness of the existence and functions of the organs of sense? And yet, who would ever propose, on that account, to study the philosophy of the senses, independent of the organization? Conceive, for a moment, in what state the philosophy of the senses would now have been, if it had been studied by reflecting on the subjects of our own consciousness alone. Could we, by such reflection, have discovered either the existence or the functions of the senses? Impossible. We should, on such a supposition, have had the *impressions* received by means of the senses, divided into classes, according to the fancy of each metaphysician who studied them; but they would not have been divided and classed exactly as nature has divided them. As formerly stated, it is only by comparisons made of the power of receiving impressions, with the state of the organization, that the number and functions of the senses have been discovered.

Although, therefore, we have no consciousness of the existence or functions of the organs of the internal faculties, when the organs are in a state of health, yet we have distinct intimations, from other sources, both of the existence of these organs, and of the importance of them to the manifestations of the mind. Has not the metaphysician himself consciousness, that, at times, he cannot put forth the mighty energies of his mind, and cannot rouse up

his faculties, to reflect, with deep attention, on the subjects of his own consciousness ?

“ Laugh ye, who boast your more mercurial powers,

“ That never feel a stupor, know no pause,

“ Nor need one ; I am conscious, and confess

“ Fearless, a soul that does not always think.”

COWPER.

Has not the metaphysician consciousness that, for some hours out of every day, he must lay himself down to seek repose, and rest his faculties from their activity ? Has he not been conscious, if ever he was sick, that the power of manifesting his faculties, rose and fell with the increase or abatement of disease ? And do not these facts indicate that the faculties manifest themselves by means of organs, although, in sound health, he has no consciousness of the instrumentality of the organs, in the performance of each act of thought ? Could the metaphysician, for a moment, suppose that it was the immaterial, the immortal principle of the mind, which thus varied in its powers, as the body varied in its state of health or disease, which was thus exhausted by fatigue, and laid itself down to seek refreshment in sleep ; or which was thus recruited and restored to its wonted vigour, by the lancet and purgative roots ? Impossible. Nature clearly told him that it was the organs which were thus affected ; but, merely because, in his moments of health, and when he was in his study, nature did

not give him consciousness of the operations of the organs, he altogether disregarded their existence, and their functions.

Again, did it never occur to the metaphysician, that the explanation of the successive developement of the power of manifesting the faculties, as the human being advances from childhood to maturity, might be found in the successive developement of the organs; and that an explanation of the difference in the power of manifesting the faculties, which is perceptible in different individuals, might be found in the same fact? He certainly knows that the effect results from the joint action of all the operating causes; and, if disease, fatigue, or exhaustion of the organs, thus affects the power of manifesting the faculties, are we not entitled to conclude, that, even in the soundest health, the power of manifestation may be in close connection with the state of the organs? It never can be believed, that their influence on the power of manifesting the mind, begins to exist only when the organs become diseased. And if it has an existence independent of disease, there appears no reason for shutting our eyes to that influence, and studying the mind as if it were already a disembodied spirit.

But the greatest advantage to be gained by studying the faculties in conjunction with the developement of the organs is to be found in this circumstance, that the distinct and successive deve-

lopement of the organs leads us to a knowledge of the existence and separate functions of the faculties themselves more directly than any other means. When we perceive uniformly that those individuals who have a certain part of the head fully developed, possess a certain mental faculty in an eminent degree; and that, when the developement is small, the power is weak, this fact indicates the distinct functions of the different faculties more forcibly than a hundred arguments. In short, by this mode of studying the Philosophy of the Mind, a greater progress will be made in ten years, than by any other in a thousand.

So much for the objections of the Metaphysicians. We proceed now to consider those of the Anatomists.

## SECT. III.

*Objections of the Anatomists considered.*


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“ These men value themselves upon a perpetual scepticism,—upon believing nothing but their own senses,—upon calling for demonstration, where it cannot possibly be obtained,—and sometimes upon holding out against it, when it is laid before them,—upon inventing arguments against the success of any new undertaking,—and, where arguments cannot be found, upon treating it with contempt and ridicule.”

DR JOHNSON.

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WE come now to another class of opponents, the Anatomists. As the present work may fall into the hands of readers who are not aware of the true state of the Physiology of the Brain, I beg leave to mention that, although that organ has been dissected for several thousand years, yet, up to the present day, no rational theory, except that of Gall and Spurzheim, has been formed of its functions. The most celebrated Anatomists of the present day declare, in their Demonstrative Lectures, that the functions of the brain, although it is apparently the most important organ of the human system, form an enigma in physiology which no sagacity has yet been able to solve.

If the three principles laid down in the First Section of this Essay be correct, the cause of this ignorance is to be found in the imperfection of the mode of examination hitherto pursued, by dissection

alone. No Anatomist has yet studied the functions of the brain, by comparing the manifestations of the Mind with the developement of that organ; and no one has ever pointed out any other way, by which a knowledge of its functions may be attained.

But the Anatomists, instead of meeting the question with Gall and Spurzheim, on the fair and broad principle, take a more summary method of settling the dispute. When Gall and Spurzheim say that they have compared manifestations and developement, and have found certain results, the Edinburgh Reviewer, who is regarded as their champion, makes this formidable answer:—"We look upon  
 " the whole doctrines taught by these two modern  
 " Peripatetics, anatomical, physiological, and phy-  
 " siognomical, as a piece of *thorough quackery* from  
 " beginning to end."—Edin. Review, June 1815.

When we ask *why* the Anatomist thinks so, he adds, "To enter on a *particular refutation* of them,  
 " *would be to insult the understanding of our read-*  
 " *ers.* Indeed we will flatter the authors so far as  
 " to say, that their observations are of a nature to  
 " set criticism entirely at defiance. They are a  
 " collection of mere absurdities, without truth, con-  
 " nection, or consistency;—an incoherent rhapsody,  
 " which nothing could have induced any man to  
 " have presented to the public, under a pretence of  
 " instructing them, but absolute insanity, gross ig-  
 " norance, or the most matchless assurance."—*Ib.*  
 page 239.

Cicero says, "Etsi satis clemens sum in disputando, tamen *interdum* soleo subirasci." Such was wont to be the feeling with which I read the article now quoted. But I hope, that my regard for truth will not prompt me to overstep the bounds of delicacy dictated by subsequent events. The writer of that article, is now in the grave; and his ear is closed equally to the voice of censure, and of praise; and he died, in the midst of his days, a sacrifice to the most excellent feelings of our nature. He died in carrying relief to the miserable and the helpless. Cold, then, would that heart be, and malignant that spirit, which could stir up his ashes, to insult them. Let us draw rather a veil over his errors, and let the good he did live after him, while his mistakes are buried in the grave.

But regard to the interests of truth makes it impossible to pass over the review entirely. Though contained in a periodical publication, it may be said still to live. *Litera scripta manet*. The motive for silence regarding it, might be mistaken. I must be excused, therefore, for making it the subject of a few observations.

When Galland Spurzheim, then, said that, by comparing manifestations and developement together, they had discovered that the number of faculties is thirty-three, and that each faculty manifests itself by means of a special organ, the reply made, in this article, was, "Perhaps we might content ourselves with

“ saying, that the whole doctrine of the *Thirty-*  
 “ *three faculties* to which the argument relates, is  
 “ downright nonsense; and so put an end to the  
 “ discussion at once. But we see sufficient reason  
 “ for declining this summary method on the pre-  
 “ sent occasion; and, therefore, we shall take the  
 “ liberty of substituting for the names of the *Thir-*  
 “ *ty-three* faculties, two very simple and intelligible  
 “ terms, viz. *Intellect* and *Inclinations*; and pro-  
 “ ceed.” The author proceeds accordingly, and  
 adds, “ We deny that there is the *slightest* ap-  
 “ proach to uniform proportion or connection be-  
 “ tween the vigour of intellect, or the strength or  
 “ peculiarity of inclination in man, and the size of  
 “ the brain,” (p. 245.)

Perhaps the least offensive mode of replying to this assertion, and the one which will best give the public an idea of the degree of *weight* to be attached to the opinions expressed, will be to give the opinion, on the same subject, of another anatomist and physiologist, highly celebrated for his knowledge and sound philosophical views. We refer to MAGENDIE, whose name stands so high both in France and Britain. He says, “ *Le cerveau est l'organe materiel de la pensée; UNE FOULE DE FAITS ET D'EXPERIENCES LE PROUVENT.*” (Précis Elementaire de Physiologie, par F. Magendie, à Paris 1816, tom. i. p. 115.) “ De tous les animaux, l'homme est celui dont le cerveau proprement dit est proportionnellement le plus volumineux.

“ *Les dimensions de cet organe sont proportion-*  
 “ *nées à celles de la tête. A cet égard, les hom-*  
 “ *mes different beaucoup entre eux. En général,*  
 “ *le volume du cerveau est en relation DIRECTE*  
 “ *AVEC LA CAPACITE' DE L'ESPRIT. On aurait tort,*  
 “ *cependant, de croire que tout homme ayant une*  
 “ *grosse tête a nécessairement une intelligence su-*  
 “ *périeure, car plusieurs causes independantes du*  
 “ *volume du cerveau peuvent augmenter le volume*  
 “ *de la tête ; mais il est rare qu'un homme, dis-*  
 “ *tingué par ses facultés mentales, N'AIT PAS UNE*  
 “ *TETE VOLUMINEUX. Le seul moyen d'apprécier*  
 “ *le volume du cerveau dans un homme vivant,*  
 “ *est de mesurer les dimensions de son crâne ; tout*  
 “ *autre moyen, même celui qui a été proposé par*  
 “ *Camper, est infidèle.*” Tome i. p. 163.

To this authority I may add, for the sake of the popular reader, the following quotations from two celebrated authors of the Edinburgh School of Medicine, illustrative of their opinions upon the general question, that the brain is the organ of the mind. Dr Cullen says, “ The part of our body  
 “ more immediately connected with the mind, and  
 “ therefore more especially concerned in every af-  
 “ fection of the intellectual functions, is the com-  
 “ mon origin of the nerves ; which I shall, in what  
 “ follows, speak of under the appellation of the  
 “ brain.

“ Here, however, in assuming this last proposi-  
 “ tion, a very great difficulty immediately presents

“ itself. *Although we cannot doubt that the operations of our intellect always depend upon certain motions taking place in the brain ; yet these motions have never been the objects of our senses, nor have we been able to perceive that any particular part of the brain has more concern in the operations of our intellect than any other. Neither have we attained any knowledge of what share the several parts of the brain have in that operation ; and, therefore, in this situation of our science, it must be a very difficult matter to discover those states of the brain that may give occasion to the various states of our intellectual functions\**. (Practice of Physic, vol. ii. § 1538–9.

Dr Gregory, speaking of the internal faculties of the mind, says, “ Omnes hæ facultates (videlicet Memoria, Imaginatio, Judicium) tam purè mentis sunt, ut primo intuitu haud quicquam corporei iis inesse videatur : docent tamen morbi qui eas impediunt, certum cerebri statum, ut bene exerceantur, requiri : *idque sensuum internorum primarium esse organum.*” Conspectus, cap. x. § 289.

Those who never think for themselves, but take up the opinion of the greatest authority, may here

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\* The reader will easily perceive, that Dr Cullen’s “ very great difficulty,” arose, necessarily, from the mode in which the subject was studied in his time, and which is still generally followed.

adopt the sentiments of the reviewer, the French physiologist, or the other authors, as they think one or other of them entitled to most respect. But, for the sake of those who prefer forming an opinion for themselves, we must go a little deeper into the objections stated.

In the *first* place, then, we observe, That the denial in the review is obviously not founded on observation, but is merely a bold venturous assertion. If the writer of it had made observations himself, he must have found *some kind of developement* in concomitance *with some kind of manifestations*, and he was bound to have stated, honestly and fairly, the result. If the same kind of developement was found uniformly in concomitance with the same kind of manifestations, is it not obvious that, in stating his results, he would have established a system of his own, if he overthrew that of Gall and Spurzheim? or, if he had found that the most opposite kinds of developement were in concomitance with the same kind of manifestations, he would have overturned the system in the most effectual manner, by shewing that there was no connection whatever between the brain and the mind. He would have placed his observations in the opposite scale to those of Gall and Spurzheim; the two parties would have been at issue on a fact; and the public would soon have determined betwixt them. But he clearly evinces, that he never made a philosophical observation on the subject; for he

divides the faculties into INTELLECT and INCLINATIONS, and his whole objections are grounded on the assertion that “there is not the slightest approach to uniform proportion or connection between the vigour of intellect, or the strength or peculiarity of inclination in man, and the size of the brain.” Now, in point of fact, Gall and Spurzheim never made the assertion here imputed to them. Their assertion is, that there is an uniform proportion betwixt the developement and activity of *particular* portions of the brain and the manifestations of *particular* powers; and not that there is an uniform proportion betwixt the developement of the brain in *general*, and *intellect or inclinations in general*. They say, that they have found certain particular appearances of developement, joined *by nature* with certain particular powers of mind. It was incumbent on the Reviewer, in order to meet their assertions, to have kept to the very points which they had advanced, and to have replied that such appearances of developement, and such powers of mind, were *not* conjoined by nature. Instead of this, he fabricates two faculties for himself, Intellect and Inclinations, and asserting that “*these* are not conjoined by nature with any uniform developement of brain,” instantly draws the inference that the system of Gall and Spurzheim is absurd.

Every one, however, must see, that on this occasion he entirely missed his aim. He did not think

proper to notice, that if any one say,—“ I have divided the faculties according to my own fancy, and have not found the power of manifesting these faculties, to correspond with any uniform development of brain,”—such a person does not meet Gall and Spurzheim at all; because Gall and Spurzheim did not first divide the faculties according to their fancies, and then seek organs for them, by the help of their imaginations. They found faculties and organs together, made and joined by Nature, and they only observed them. If, then, any one were to divide the faculties differently from them, and to find a certain developement corresponding uniformly with his division, he would certainly overturn their system; because he would shew, that they had observed erroneously. But, when he says merely, I have found that *my* division *does not correspond* uniformly with any precise developement, he affords a certain degree of indirect testimony to the correctness of their observations; because, if their division of the faculties and their account of the developement be correct, then, *every other* must necessarily be erroneous.

This is the true state of the question betwixt Gall and Spurzheim, and their opponent; for, let it be again recollected, no anatomist has ever pretended to say, that he has compared *actual* developement with *actual* manifestations, and found the result to differ from their statements; but every one of them has made his attack either without making any comparison at all, or, after having compared

only assumed faculties with preconceived notions of developement, founded in his own imagination.

We shall take notice only of one other sentence in the review. It is the last paragraph of the article. "We must needs," says the Reviewer, "indulge ourselves with a summary paragraph too. 'The writings of Drs Gall and Spurzheim, have not added one fact to the stock of our knowledge, respecting either the structure or the functions of man ; but consist of such a mixture of gross errors, extravagant absurdities, downright misstatements, and unmeaning quotations from Scripture, as can leave no doubt, we apprehend, in the minds of honest and intelligent men, as to the real ignorance, the real hypocrisy, and the real empiricism of the authors.'"—Review, p. 268.

Now, Magendie, whom we have just mentioned, speaking of the anatomy of the brain, says, "Tout récemment, cette matière vient d'être éclaircie de nouveau par la publication de l'ouvrage de MM. Gall et Spurzheim, et par les travaux auxquels elle a donné lieu." (p. 156.) And this author, well acquainted with the true rules of philosophising in the science of physiology, concludes his observations on the brain and its functions, with the following judicious and philosophical note. "Ce serait ici le lieu de traiter de l'usage des diverses parties du cerveau dans l'intelligence et dans les facultés instinctives ; mais ce sujet est encore trop conjectural, ou trop peu connu. pour entrer

“ dans un livre élémentaire. Nous nous occupons  
 “ depuis quelques temps d’expériences directes sur ce  
 “ point ; nous nous empresserons d’en faire connaître  
 “ les résultats aussitôt que nous les jugerons dignes  
 “ d’être rendu publique.” (Tome i. p. 186.) This  
 is ingenuous and philosophical procedure. The au-  
 thor saw that Gall and Spurzheim’s method of phi-  
 losophising was correct, and the only one that could  
 lead to a knowledge of the functions of the brain ;  
 but he had not made the observations himself,  
 which, they say, every man must make, who wishes  
 to have direct evidence on the subject. But, then,  
 Magendie, merely because his own observations were  
 deficient, does not presume to stigmatise Gall and  
 Spurzheim by the application of opprobrious names.  
 He says, I shall make observations myself ; and till I  
 have done so, I offer no opinion on the subject.

We have still another formidable medical op-  
 ponent in Dr P. M. ROGET, F. R. S. and author  
 of the article entitled CRANIOSCOPY, in the  
 Supplement to the Encyclopædia Britannica ; and  
 we must now, therefore, dedicate a few pages to  
 the consideration of his observations.

We observe, *in limine*, that the titles which Gall  
 and Spurzheim give to their science are PHRENOLO-  
 GY, when the philosophy of the mind is chiefly con-  
 sidered ; and PHYSIOGNOMY, when the outward deve-  
 lopement of the organs is principally in view. They

attribute functions connected with the manifestation of the mind, to the *brain*, but none to the *skull*.

Their science consists in comparing the development of the brain with the manifestations of the mind. The name *Cranioscopy*, therefore, is gratuitous on the part of this author, and incorrect in itself. This circumstance would not be worth noticing, were it not the practice of some opponents to shew an ignorant contempt of the doctrines, by fabricating names which do not indicate the true nature of the subject.

This author, like every other anatomist, industriously keeps out of view the *principles* on which the true merits of the system must be decided, and which have been so often repeated. He collects only such superficial objections as have a tendency to delude without enlightening. He does not advance one idea of his own upon the subject; but sets himself to throw all manner of suspicion upon those of Gall and Spurzheim. In short, he is one of the “philosophers who darken, and put out—eternal truth by everlasting doubt.” He says, “Let us, however, for the sake of argument, suppose, that the form of each organ within the skull, could really be ascertained by external examination of the head, shall we allow it to be an *easy* task to determine the *real* character of the individual who is the subject of observation? Are we *always* able to discriminate between real and affected sentiment; or to mark with certainty, the operation of

“ all the various motives which constitute the springs  
“ of action ?”

No, certainly ; Gall and Spurzheim nowhere maintain that we are “ *always*” able to discriminate between true and affected sentiment ; but they say that, if we observe long enough and close enough, it will be in our power to discriminate ; and hence, that in every case where we *can* discriminate the true character, the comparison betwixt manifestations and developement ought to be made, and the result stated, before the conclusion is drawn, that the manifestations observed by them were not those of the real character. Gall and Spurzheim say, that *it is possible, by close and accurate observation*, to discover the true character ; and it is so especially in children, who cannot effectually disguise their true feelings, and never conceal their talents. The author of *Cranioscopy* replies, It is not “ *always* EASY” to discover the true character ; and hence, as *it is possible* to observe erroneously, he wishes his readers to draw the conclusion, that Gall and Spurzheim *did* observe erroneously, and that their conclusions are entitled to no credit. This reasoning cannot be praised as logical. The true conclusion appears to be, that if it be possible, by patient and enlightened observation, to discover the true character, the presumption is, that the true character was discovered by Gall and Spurzheim, till the contrary be shewn. If we are never to receive a statement as true, where there is a

danger of its being incorrect, farewell science and philosophy ; for both are founded upon statements which we must receive upon the credit of the philosophers who make them, and which it is impossible for each ordinary individual to verify to the extent of a thousandth part, by his own observations.

The author, however, proceeds thus : “ *Is the transient glance of a passing observer*, sufficient for unravelling the complex web of our affections, or unveiling the secret and tortuous recesses of the human heart, so as to assign to each principle its precise sphere of agency ? ”

No certainly ; Gall and Spurzheim nowhere affirm that “ the transient glance of a passing observer,” is sufficient for such a task. Then, to what purpose does this observation tend ? To throw a suspicion over their statements by a side wind, when the author did not choose to attack them manfully in front. It will be observed, besides, that the above sentence speaks of “ the complex web of our *affections*” alone. Now, as formerly stated, it may be possible for men occasionally to disguise the *motives* of a single action, because nature has given them the power of doing the same act from various motives ; for example, a person may give charity to a public hospital from ostentation, as well as from benevolence : but it is impossible, permanently, to disguise *dispositions*. The person who gives charity to an hospital merely from ostentation will not ha-

bitually do private acts of benevolence ; and it is by observing the general tenor of a person's conduct that his true character can be known. Let it be observed, however, that it is impossible to *disguise* CAPACITIES, if the individual manifest them at all. He who has heard, *for the most fleeting moment*, the prodigious bursts of melody which flow from the throat of Catalani, cannot be deceived as to the fact of her possessing a great endowment of the faculty of tune. Or, he who has heard, but for five minutes, the splendid eloquence which flows from the lips of Chalmers, can have no doubt that he possesses the faculty of ideality. These, then, are cases in which even "the transient glance of the passing observer," may compare manifestations and developement together ; and from such comparison just conclusions may be drawn.

The author, however, goes on to ask, "Can the  
"most profound moralist, or acute metaphysi-  
"cian, pronounce *with confidence*, what are the na-  
"tural dispositions of *any* human being, when these  
"dispositions have been **CHANGED** or modified,  
"exalted or subdued, perverted or refined, by the  
"force of habit, education, example, and a *multi-*  
"tude of other powerful causes, which, in the  
"course of life, have moulded his intellectual and  
"moral constitution ? Can he trace them through  
"the guise of falsehood, artifice and dissimulation,  
"which *so commonly* hide his *real* character from

“ the world, and which *occasionally* deceive the eye of the closest and most vigilant observer ? ”

Yes ; I humbly maintain, that the man of plain common sense, and still more, “ the most profound moralist and acute metaphysician, *can* pronounce *with confidence*, what are the *natural* dispositions of *any human being*,” provided he observe with moderate patience and intelligence. The Scripture says, “ Can the Ethiopian change his skin, or the leopard his spots ? ” We say, Can any human being CHANGE his nature ? And can education do more than *exalt* powers ? Can it *create* them ? But, as we have already shewn, mankind act every day on the belief, that they *can discover* the *true* characters of men, by observing their actions.

“ Is it (proceeds our author,) to the behaviour of a person who knows that he is watched ; is it to the partial report of his friends ; is it to the testimony of the individual himself, the most fallible of all, that the Cranioscopist is to trust for his knowledge of human character ? *Such, however, is the KIND of EXPERIENCE from which it appears, that all the doctrines relative to the functions of the different parts of the brain have been derived ; and it is in this experience, as in an impregnable fortress, that the adherents of the system make their last and most resolute stand.* ”

It is difficult to say, with what sentiments such unfounded assertions ought to be regarded. One is almost tempted, on reading them, to use some of

the courtly epithets of the Edinburgh Review ; but let us rather observe, that as Gall and Spurzheim's mode of philosophising is the only one capable of leading to any rational results in this branch of science, their observations, however imperfect and inaccurate, are entitled to more respect, from the very circumstance of their being made in the right way, than any opinions which the author now quoted can be possessed of, if he never followed their mode of philosophising. He must, necessarily, be in a state of profound ignorance on the subject on which he writes.

Dr Spurzheim has said, " I again repeat, that I  
 " could here speak only of the results of the im-  
 " mense number of facts which we have collected. Se-  
 " veral may complain of my not mentioning a greater  
 " number of these facts ; but in reply, I need only  
 " answer, that were I to write as many books of  
 " cases as there are special organs, still no one could,  
 " on this subject, attain personal or individual con-  
 " viction, before he had practically made the same  
 " observations. I may farther remark, that the de-  
 " tailed narrative of a thousand cases would not im-  
 " prove the science, more than that of a few charac-  
 " teristic ones, which state our meaning, and show  
 " what is to be observed, and how we are to observe.  
 " **SELF-CONVICTION CAN BE FOUND-**  
 " **ED ONLY ON SELF-OBSERVATION ;**  
 " and this cannot be supplied by continually read-  
 " ing similar descriptions of configuration. Such a

“proceeding may produce confidence, but not conviction. This requires the actual observation of nature.” (Outlines, p. 222.)

Now, the author of *Cranioscopy*, with this passage in view, goes on to say, “Quitting the airy region of Theory, they, that is Gall and Spurzheim, fancy themselves posted on a rock, secure against the insidious minings of scepticism, and bidding defiance to the rude assaults of argument. The appeal to the evidence of induction, as the supreme authority in the court of philosophy, is made with confidence; and ALL THE WILD EFFUSIONS OF A BEWILDERED FANCY, ARE PRESUMED TO BE SANCTIONED BY A SUPPOSED CONFORMITY WITH EXPERIENCE. You may speculate, or reason, they exclaim, as you please; *observation shows, that such and such forms of the head, are the invariable concomitants of such and such predominant dispositions and faculties.*”

But the author does not meet the observations of Dr Spurzheim by counter observations of his own. It is difficult, then, to perceive, how he knows that their doctrines are the “wild effusions of a bewildered fancy.” I regret much that he has not discussed the principles upon which the system is founded; for I should be glad to be informed by him, if it be possible to discover the functions of the brain, supposing it to be the organ of the mind, by any way except by comparing manifestation and developement together; and whether a person, who has

not made the comparison, can know any thing whatever on the subject. The author does not say, "I have compared manifestations with development, and found the results to be different from those which you state;" for, "this would have been taking a broad and liberal ground, stating it fairly, allowing what there is of truth, or an appearance of truth, and then asserting his own judgment by exposing what is deficient, and giving a more masterly view of the subject." But this would not have suited the author of *Cranioscopy*. He, therefore, finds an easier way of getting over the assertion of Gall and Spurzheim, that certain manifestations and a certain developement go together.

He says, "Who will dare to set up his *opinion* in opposition to ascertained facts? We certainly pretend not to such boldness." What, then, DOES he pretend to do? "We shall venture only," says he, "TO EXPRESS DOUBTS as to the REALITY of these facts, on which so much is made to depend; and to suggest the expediency, previously to any admission of their truth, of *inquiry* not only into the manner in which the knowledge of these PRETENDED FACTS has been obtained, and in which inductions from them have been made, but ALSO INTO THE TALENTS AND QUALIFICATIONS OF THE OBSERVERS, on whose testimony we received them."

Such inquiries may, no doubt, appear exceedingly proper, to persons ignorant of the first rules of philosophising. But, why not inquire at once into the *facts themselves*, when they are submitted to our own observation, as a more direct mode of coming at the truth, than an inquiry into the TALENTS AND QUALIFICATIONS of the persons who say they have discovered them? Is this like a philosopher? Gall and Spurzheim do not affirm, that the facts were observed in the Moon, or in the interior of Africa, or in some place, or in some way, to which no person has access but themselves. If they had done so, then it would have been exceedingly proper to enquire into their talents and capacity for observing, before believing their statements; because, on the result of such preliminary inquiries, would have depended the character of the only evidence that could be obtained, and, of course, the credibility of their assertions. But, when they affirm, that the subjects of observation are open and patent to the whole world, who have eyes to see and understandings to comprehend, and when they say, Compare manifestations with developement, and you are at the bottom of the problem yourself; what need for inquiry into *their talents and qualifications to observe*? Surely the author of Craniology, who thought himself qualified to *refute* their doctrines, could never doubt of his own qualifications to make the observations on which the system is founded. If so, why did he not make them? If he thought

himself *not qualified* to observe the facts, that is to say, to become acquainted with the basis of the system, why did he attempt to refute it?

When Gay Lussac hears that Sir Humphry Davy has made a discovery in chemistry, and reads Sir Humphry's statement of the way in which it was made, does he begin by inquiring first, whether *it be possible* to make the discovery at all, seeing natural substances are "so changed and modified, "exalted and subdued," by "a multitude of powerful causes?" And, after settling this point, does he, in the second place, begin to inquire into Sir Humphry Davy's *talents* and *qualifications* as a chemist, and into his *capacity* to make the discovery, and then believe in it, or not, according to the result of this inquiry? No man who knows the very first rudiments of philosophy would follow so absurd and preposterous a course. Gay Lussac would make the experiment forthwith himself, *in the mode directed by the discoverer*; and he would state the result honestly and candidly. If he found the discovery real, he would say so, and give Sir Humphry his merited fame. If he found that he could not produce the result, he would repeat frequently his experiments; and if he could not at all succeed, he would then publish an account of his experiments, and of the results, and submit to correction if he had erred in his method; or, if he had followed the right course, and always obtained a different result, he would overthrow the alleged discovery,

What should we think of Gay Lussac's refutation of Sir Humphry's discovery, founded on a metaphysical inquiry into the *possibility* of making it, and into the "talents and qualifications" of the discoverer? We should pity him for his ignorance of the rudiments of philosophy.

Now, I beg of the author of Cranioscopy, to tell me if the mode of verifying conclusions, said to be drawn from facts, be not the same *in every* science? Why, then, not in the science of Phrenology, alleged to be discovered by Gall and Spurzheim? Who would listen for a moment to a person pretending to refute a result in Chemistry, by inquiring into the character of the discoverer? Who would hear any man argue against a result said to be obtained by observing facts, if that person admitted that he had never even attempted to observe them? And, more especially, What would we think of his objections, if, at the very time he made them, he concealed, but did not dispute, *that there was no way on earth of making the discovery*, but the one which was said to have been followed; but which, he nevertheless refused to follow himself? Should we not require him at least to *demonstrate*, beyond all possibility of doubt, that observation of the facts was *impossible*? And has the author of Cranioscopy done so? Will any man rest satisfied that he has demonstrated that the *real* character *cannot* be discovered by observing actions; or that the *development cannot* be observed?

But even allowing him to have proved, by demonstration, that the true character cannot be discovered by observing actions, Could he not have compared *actual* manifestations with *actual* developement, and stated the result? Let us even allow to him, that men *never* manifest their *true* faculties, and that the *true form* of their brains *cannot* be discovered by observing their heads; yet surely they manifest *some* faculties, and their heads have *some* developement. Now, if certain dispositions and capacities *actually* manifested, correspond uniformly with a *certain* actual developement, it may be of little consequence whether the dispositions manifested be true or false, or whether the developement be of the brain or of the skull. The *fact* is the only thing of importance; and may not the fact be as Gall and Spurzheim state, for any thing he knows to the contrary? In the whole of his article, he does not say that he has made a single observation; and yet he comes forward to refute the facts, by an inquiry into the “talents and qualifications” of those who observed them! If he has made observations, and found no concomitance betwixt specific powers and specific developement, the statement of this fact would have been worth a thousand arguments; for it would have proved that the brain and the mind are not connected in the way that Gall and Spurzheim suppose; and, of course, that their observations are absurd. But he never ventures thus far.

It appears impossible to dispute, that Gall and Spurzheim proceed in the right road to attain the end they profess to have in view. Unless, therefore, that end be in itself trifling and ridiculous, their success, however small in degree, must be a valuable addition to science; and their errors, however numerous, cannot be detected but by following in the very course in which they have proceeded. No absurdity, therefore, can equal that of attacking their observations and conclusions, by an attempt to shew by argument, that Gall and Spurzheim themselves possess stupid and unphilosophical understandings; when, by following the steps of a rational philosophy, their doctrines might at once be either refuted or confirmed by an appeal to facts.

The author of *Cranioscopy*, indeed, complains, like many other persons who do not attend to the nature of the subject, that Gall and Spurzheim do not specify sufficient premises from which their conclusions can be deduced by the rules of a rational logic. But the nature of the subject precluded the specification of all the cases which they have seen, and from which their conclusions are drawn. They would have swelled volumes had they attempted to specify the hundreds of instances on the evidence of which, each organ is admitted; and such a specification would have done no good, because we see that their observations are doubted, as well as their conclusions. The object of their writings is to point out the manner in which obser-

vations ought to be made, and to specify the conclusions which they have drawn from innumerable cases. Every one, therefore, who complains that Gall and Spürzheim's works produce no conviction on his mind, and that their conclusions appear to want premises, mistakes the nature and the object of their works. The premises are found in nature, and the conclusions only in the books. If the reader will go patiently, and without bias, to interrogate Nature, she will afford him premises; and the conclusions of Gall and Spürzheim will then be found to be drawn with a degree of accuracy of which those who shut their eyes against observation have no conception.

After these observations, we may hear how the author of *Cranioscopy* completes his paragraph, already so auspiciously begun, and completes, at the same time, his *inquiry*, the result of which is to establish or overthrow the system under his consideration. He continues:—"We should know in what  
" spirit he conducted the inquiry; with what previous dispositions he examined the objects of his  
" contemplation; what motives led him to these researches; and what interest he may have in the  
" event. Experience, we should recollect, leads to  
" very different results, according to the sagacity  
" and good faith of the person who acquires it.  
" Minds already prejudiced, collect from it only a  
" confirmation of their errors, and become, by its  
" means, only the more obstinately wedded to their

“ opinions. The sailor, stedfast in his belief that  
“ his whistling to the sea will raise a wind, or con-  
“ jure up a storm, instead of being undeceived by  
“ experience, is only the more strengthened in his  
“ faith, by the observations which it furnishes to  
“ him. In what a multitude of instances do we  
“ not find men deceiving themselves as grossly,  
“ when they draw inferences from what they see,  
“ if prepossessed with the expectation of meeting  
“ with a certain coincidence, or succession of events !  
“ How disposed are we all to disregard the excep-  
“ tions to a preconceived rule, and to allow undue  
“ weight to every example that conforms to it.  
“ How willingly we repel the evidence that opposes,  
“ and how eagerly we catch at whatever corrobora-  
“ rates our previous notions, especially when these  
“ notions have originated with ourselves, and are  
“ viewed as the darling offsprings of our own lucu-  
“ brations.”

These observations are exceedingly judicious in themselves, taken in disjunction from the conclusion which the author plainly intends us to draw from them. He means us to dismiss the whole doctrines as a delusion, without farther inquiry, because Gall and Spurzheim were liable to be deceived in their investigations. If he had meant otherwise, he ought to have expressed himself so. If he intended only to recommend more accurate observation, he ought to have stated, in justice to the founders of this philosophy, that they have at

least the merit of pointing out the proper way in which the inquiry should be conducted. He no doubt was at liberty to state, if he pleased, that, in his opinion, they had followed that mode to so little purpose, that not one of their conclusions could be trusted; yet justice required that they should get the merit of discovering a mode of philosophising, the want of which has been the cause of the long unacquaintance of physiologists with the functions of the brain.

Magendie says, “ La physiologie, toute brillante qu’elle paraisse dans les traités écrites de nos jours, est encore une science à son berceau. Il faut absolument qu’elle sorte de cet état affligeant d’imperfection. Pour obtenir ce résultat, le premier pas à faire doit être de changer la forme et par conséquent la marche qu’elle a suivie jusqu’ici; elle doit prendre la marche analytique et la forme théorique: alors seulement elle pourra se perfectionner et se mettre au niveau des sciences naturelles les plus avancées.”—(*Precis Elementaire de Physiologie*.—Préface.)

Whatever imperfections may be chargeable against the observations of Gall and Spurzheim, it cannot be denied that they have the merit of pursuing the mode of philosophising here so strongly recommended. Their antagonists, on the other hand, who *argue* against their observations, instead of bringing them to the test of their own experience, still cling to the hypothetical mode of philosophising,

and seem incapable of considering the statements of Gall and Spurzheim, as facts, and not as speculations ; so inveterate are the habits of speculating, instead of observing, in those who generally cultivate the science of physiology.

The objections now combated, are not brought forward the first in point of order in the article Cranioscopy ; but they ought to have been so, as they touch the *principles* on which the system is founded ; and, on that account, they have been here considered first. I proceed now to notice some other objections, which relate more to the substance than the principles of the system.

“ The truth is,” says the author, “ that there is  
“ not a single part of the Encephalon, which has  
“ not, in one case or other, been impaired, destroyed, or found defective, without any apparent  
“ change in the sensitive, intellectual, or moral faculties. Haller has given a copious collection of  
“ cases which bear upon this point ; and a similar  
“ catalogue has been made by Dr Ferriar, who, in  
“ a paper in the fourth volume of the Manchester  
“ Transactions, has selected many of Haller’s cases,  
“ with considerable additions from other authors.  
“ The evidence afforded from this mass of facts,  
“ taken conjointly, is quite sufficient to overturn  
“ their fundamental proposition. This evidence is  
“ not impeached, by the feeble attempts of Dr  
“ Spurzheim to evade its force, by a general and  
“ vague imputation of inaccuracy against the ob-

“ servers, or by having recourse to the principle of  
“ the duplicity of each of the cerebral organs;—a  
“ principle of very dubious application, on a sub-  
“ ject of so much uncertainty as the physiology of  
“ the brain !”

If the cases here alluded to, be true,—if the mind has really been manifested with complete effect, when the whole, or the greater part of the brain has been wanting, then the brain is not, and cannot be, the organ of the mind. The conclusion, therefore, which the author ought to have drawn, and which he ought boldly to have advanced, is, that the brain is not the organ of the mind ; and that all theories which are founded on such a supposition, are absurd. But amid the innumerable and incontrovertible facts, obvious to the common observer, which render the affirmative of this question probable, and seeing that all enlightened medical writers maintain it, such a denial would have been hazardous ; and this author, therefore, like many others, chose rather to embarrass the discussion with difficulties, than to strike out light himself.

But, in answer to the objection contained in the foregoing cases, I remark, that when we find the report of such cases in books, we must always inquire what notions the authors had regarding the meaning of the word “ faculties,” when they used it. It is an undeniable fact, that hitherto the most obscure and undefined notions have been entertained regarding what a faculty really is ; and that no

opinions whatever have been entertained regarding the functions of any faculties implanted in the mind by nature. No philosopher has hitherto conceived the lower propensities of our nature, or even the higher sentiments, to be manifested by means of distinct faculties. These propensities and sentiments, have been considered merely as modes of affection of the single power, the Mind; and the term *Faculties*, was held to refer to the intellectual powers alone. Such being the case, it is not difficult to conceive that a person who entertained such notions might for months attend a patient who could not manifest the faculties of the lower propensities, or even those of the higher sentiments, and might not discover these wants. He might believe that the patient was able to manifest *all* his faculties unimpaired, seeing he meant by the word *Faculties*, only the intellectual powers; while, in point of fact, he was nevertheless unable to manifest several of the propensities or sentiments. In such a case, if the patient's brain was dissected after death, and those parts of it found diseased which served as the organs of the faculties which he really could not manifest, the medical attendant might, from mere ignorance of this system, be led to conclude that the brain was not the organ of the mind, and yet err egregiously in doing so.

In the next place, we may observe, that the anomalies recorded in books are easily accounted for by the fact. that the brain, and consequently the or-

gans of each faculty, are double, like the organs of the external senses; and that the faculty may have been manifested by the one organ, although the other was diseased.

But it is of importance also to observe, that these cases are recorded by authors, who could not have had the philosophy in question in view when they reported them; and that, as human nature is the same in the present day, that it was ten, twenty, or a hundred years ago, it is much better to resort at once to Nature for evidence to refute the system, than to appeal to inaccurate observations contained in old volumes. No person would resort to the books of the Alchemists for evidence to overthrow a modern discovery in chemistry; and there appears no good reason for resorting to books for evidence to overthrow the opinions of Gall and Spurzheim, when, in their case also, Nature herself can be appealed to. The discrepancy betwixt the observations of Gall and Spurzheim, and those of the authors cited by Dr Roget, may arise from the ignorance of the latter as probably as from the incapacity of the former. After what has already been said, the presumption is much stronger that these authors were deceived, than that Gall and Spurzheim were mistaken. The authors were unacquainted with the true mode of discovering the functions of the brain. Gall and Spurzheim discovered it, and they say that they followed it in their investigations.

We may even allow, however, to the Anatomists, for the sake of argument, that many anomalies and apparent exceptions actually exist in regard to the system; and we may ask, whether there may not, nevertheless, be such a great body of well ascertained facts in support of the general conclusions, that no doubt of them can remain; and if so, whether we ought to reject the general conclusions entirely, because difficulties exist, or to hold by the conclusions as certain, and regard the anomalies as points which time and farther observation may enable us to explain. No science was ever founded, that was, in the first instance, free of difficulties; and they are only shallow minds, who seize on the difficulties and stifle the rising truth, rather than assist in removing them. The author of *Cranioscopy* says, "The anatomy of the brain is so complex, and *so void of apparent adaptation to any purpose we can understand*, that it will suit any physiological system, nearly equally well." Why, then, would he wish such a state of ignorance to continue, and why does he not admit that Gall and Spurzheim deserve at least the merit of attempting to remove it, in the only way in which it can be removed?

The author of *Cranioscopy* proceeds also to refute what he is pleased to call Dr Spurzheim's "arguments" in favour of the system founded on *anatomy*. But if we have been successful in shewing, that "the arguments" on which the system is founded are direct facts, we need to trouble our-

selves very little about the additional evidence which it derives from analogy. Analogy can afford only illustrations or cumulative proofs. While the fundamental truths remain, the arguments founded on analogy may be sound or unsound. It was only because the author of *Cranioscopy* overlooked the fundamental principles on which the system is founded, that the analogies appeared to him so imperfect; but if the facts bear out the doctrines, the analogies will appear in another light; and hence, as the strength of the analogies depends on the truth of the previous propositions, it appears to me unnecessary to waste a word upon the subject.

Before leaving this branch of the discussion, it may be proper to notice, that several anatomical gentlemen have stated as an objection to the system, that certain appearances in the brain, mentioned by Dr Spurzheim in his account of the anatomy of that organ, arise from optical illusion, and, of course, that they are not founded in fact. I am not able to say, whether the illusion is on the part of Dr Spurzheim or of his opponents, being unacquainted with the minute anatomy of the brain myself; but it is of great importance to observe that however great Dr Spurzheim's mistakes as to the anatomy of the brain may be, such mistakes do not necessarily invalidate his account of the functions of that organ. Dr Spurzheim does not say, that he has discovered the structure of the brain to be so and so, and inferred from that structure, that the brain

is the organ of the mind, and that different parts of it are the organs of different faculties. If he had done so, it is clear, that an opponent, by shewing, that his notions of the structure are erroneous, would have overturned the whole system. But Dr Spurzheim, on the contrary, observes, “ that the “ deepest perspicacity would not, *a priori*, have attributed the smell to the pituitary membrane of the “ nose; the taste to the nervous papillæ of the tongue; “ the sensation of light to the optic nerve, &c. Who, “ says he, in seeing the structure of the stomach, “ could conjecture its digestive power? Who, from “ the structure of the *viscera*, could decide, that “ the liver secretes bile, the kidneys urine? Who, “ from the structure and form of the nerves, can “ determine, what kind of impressions they propagate? It is the same with the brain. Let the “ directions of its fibres be known, and let anatomists distinguish their greater or less consistence; “ their more or less white colour; their different “ size, length, &c. What conclusion as to the functions, can they draw from these circumstances? “ NONE. Thus, it is certain, that the anatomical “ knowledge of any part does not indicate its function; and it is, therefore, necessary, to have recourse to OTHER MEANS in order to discover it. “ On this account, the physiology of any part often precedes its anatomy. Thus, it was generally known, that we see by means of the eyes, before anatomists were acquainted with their struc-

“ture.” Hence, “many organs of the brain were discovered, before its structure was demonstrated; and these discoveries might have subsisted for many centuries, without the structure of the brain being known.” (Spurzheim, p. 205.) When, therefore, an anatomist shews that Dr Spurzheim is mistaken in his ideas of the structure of the brain, he proves only that Dr Spurzheim is not yet perfectly master of the anatomy of that organ, but he does not prove that he is mistaken in his notions of its functions.

The author of *Cranioscopy* goes on to say, “The possibility of discovering the size and shape of the different parts of the brain from the external examination of the head, is also *discountenanced* by anatomy.” It is amusing to see *Doctors*, who, without making a single observation on the subject, agree perfectly in pronouncing Gall and Spurzheim’s system to be absurd, differing among themselves *toto cælo*, regarding the truth of the fundamental principles on which it rests. The *Edinburgh Reviewer*, in direct opposition to the author of *Cranioscopy*, says, “But we will acquiesce implicitly for the present in the proposition, (FAMILIAR TO PHYSIOLOGISTS LONG BEFORE THE AGE OF GALL AND SPURZHEIM,) that there is in most instances, a general correspondence between the size of the cranium and the quantity of cerebrum.” (Page 246.) Of course, if the general size of the skull correspond to the general quantity of brain, it will be difficult to persuade us, that the

figure of the skull in particular parts, does not correspond with the developement of the brain also in particular parts. We have, moreover, the testimony of Magendie already quoted, (p. 56.) concurring with the Reviewer in favour of Dr Spurzheim, and in direct opposition to the assertion of the present author.

This author likewise objects to what he calls Dr Spurzheim's "arguments," in support of the system, founded on Pathognomical indications, such as gestures, looks and voice; but what he supposes to be arguments are not given as such. Dr Spurzheim found by observation that in an individual who manifests great self-esteem, a certain part of the brain is fully developed; and likewise, that the individual carries his head high, and reclining backwards. But these two facts are independent; and the one was never stated as an evidence establishing the other. It may appear fanciful to those who have not observed nature, that such a concomitance of sentiment, developement of brain, and carriage of the body, should exist; but, as we have already repeatedly observed, any supposed absurdity of this kind is no evidence that the allegation is not true; and if it be true, it ceases to be ridiculous. We are in great danger of erring, when we slight an account of a fact in nature, because the fact appears to us ridiculous. The appearance of absurdity may arise from our own ignorance, as probably as from the errors of the observer. We know so little of the con-

stitution of nature, that we ought more frequently to examine, and more rarely to scoff, than we generally do. For my own part, I have verified many of Dr Spurzheim's pathognomical signs by observations; and it appears to me that he is correct in saying that they indicate certain propensities and sentiments. But it would be absurd to argue from the nature of these signs to the existence of the organs; and Dr Spurzheim never does so. In some cases, where he has perceived strong indications of the existence of an unascertained faculty by manifestations, which could not be referred to any one already ascertained, he has suggested the probable situation of the organ of the unascertained faculty, from observing the pathognomical signs attending the manifestations which he conceived to belong to it; but he never proceeds farther. And such conjectures, *a priori*, were legitimately made, if Dr Spurzheim had found, which he says he had, a general coincidence between the character of the signs and the situation of the organs, in regard to the faculties which he had ascertained. Again, therefore, the supporters of this system have reason to complain of its opponents, for mistaking the outworks of it for the citadel, and for representing one conclusion as unsound, merely because they themselves have misapprehended another.

The author of *Cranioscopy* appears to me to have employed the authority of his name, and the force of his talents, in propagating prejudices, instead of

removing them. He appears clearly not to have perceived the basis of the system, or the importance of the questions involved in it; and hence he seems, carelessly perhaps, to have taken for granted that it was absurd, and then to have set about proving it to be so. "Such," says he, "is the body of doctrines, and such the reasonings in their support, which have emanated from the school of Gall and Spurzheim, and which they have dignified with the appellation of a new science!"—"We shall refrain," continues he, "from employing the weapons of ridicule against a system so vulnerable to its attacks, and which would have been so capable of affording Swift a new incident for the history of the Philosophy of Laputa. The simple explanation of the sandy foundation on which it has been built; of the flimsy materials of which it has been compounded; and the loose mode in which they have been put together, will suffice to enable our readers to form their own conclusions as to the soundness and solidity of the edifice."

No person who had viewed this question with a philosophic eye could have made such observations as these. The author of *Cranioscopy* could not be unacquainted with the imperfect state of knowledge in the medical profession, in regard to the functions of the brain, and the organs of the mind; and he would take it as no compliment, if we were to suppose him ignorant of the causes of this imperfect

state of information. Yet, if he saw the deficiency, and the causes of it, he must have perceived the peculiar fitness of Gall and Spurzheim's mode of philosophising to remove both, and to wipe the darkest stain of imperfection from the science of physiology, with which it is at present blotted. It is inconceivable, therefore, how he could, without once appealing to nature, stigmatize their system as one "so capable of affording Swift a new incident for "the history of the Philosophy of Laputa!" If the followers of Gall and Spurzheim were disposed to employ "the weapons of ridicule" against opponents "so vulnerable to its attacks," they have materials enough afforded them for an amusing picture of the absurdity of men coming forward to instruct others, who are necessarily ignorant themselves. They could, perhaps, without much difficulty, excite a strong feeling of "just indignation," against their "confident nonsense;" but we shall at present only use the words of Dr Johnson, part of which form the motto to this section; and which appear completely applicable to the present case. "There are (says he,) "some men of narrow views, and grovelling conceptions, who, without the instigation of personal malice, treat every new attempt as wild and chimerical "and look upon every endeavour to depart from the "beaten track, as the rash effort of a warm imagination, or the glittering speculation of an exalted "mind, that may please and dazzle for a time, but "can produce no real or lasting advantage.

“ These men value themselves upon a perpetual  
 “ scepticism,—upon believing nothing but their own  
 “ senses,—upon calling for demonstration, where it  
 “ cannot possibly be obtained,—and sometimes up-  
 “ on holding out against it, when it is laid before  
 “ them,—upon inventing arguments against the  
 “ success of any new undertaking,—and, where ar-  
 “ guments cannot be found, upon treating it with  
 “ contempt and ridicule.

“ Such have been the most formidable enemies  
 “ of the great benefactors to mankind, and to these  
 “ we can hardly doubt, but that much of the oppo-  
 “ sition which “ *Gall and Spurzheim*” have met  
 “ with, is to be attributed ; for their notions and dis-  
 “ course are so agreeable to the lazy, the envious,  
 “ and the timorous, that they seldom fail of be-  
 “ coming popular, and directing the opinions of  
 “ mankind.”—Johnson’s *Life of Drake*.

The true merits of Gall and Spurzheim, on the contrary, are correctly expressed in the following passage, quoted from Dr Reid, and applied by him to certain Philosophers on the Mind, who had struck out at least some important views in that interesting branch of science, although they had not been so fortunate as to bring it to perfection.

“ Instead of despising,” says he, “ the dawn of  
 “ light, we ought rather to hope for its increase :  
 “ instead of blaming the philosophers I have men-  
 “ tioned, for the defects and blemishes of their sys-  
 “ tem, we ought rather to honour their names, as

“ the first discoverers of a region in philosophy  
“ formerly unknown ; and, however lame and im-  
“ perfect the system may be, they have opened the  
“ way to future discoveries, and are justly entitled  
“ to a great share in the merit of them. They  
“ have removed an infinite deal of rust and rub-  
“ bish, collected in the ages of scholastic sophistry,  
“ which had obstructed the way. They have put  
“ us in the right road, that of experience, and ac-  
“ curate reflection. They have taught us to avoid  
“ the snares of ambiguous and ill-defined words.  
“ They have made many openings that may lead  
“ to the discovery of truths which they did not  
“ reach, or to the detection of errors in which they  
“ were involuntarily entangled.”—Reid’s Inquiry,  
chap. i. § 4.

Here, then, I conclude the discussion with the Anatomists ; and, in the close, I request the reader to attend only to one striking circumstance, which probably has by this time occurred to his own mind. We have seen, on the one hand, the metaphysicians, and indeed all attentive observers of human nature, acknowledging that no fact can be more indisputable, than that “ there are important  
“ differences discernible in the minds of children,  
“ previous to that period at which, in general, their  
“ intellectual education commences ;” while, at the same time, they acknowledge that they cannot give any reasonable theory on the subject. We have seen, on the other hand, the most skilful phy-

sicians and physiologists admitting that, although the brain appears, from numerous facts, to be indisputably the organ of the mind, yet “ a very “ great difficulty” exists, in perceiving “ that any “ particular part of it has more concern in the operations of our intellect than any other.” And, lastly, we have seen, that if, in point of fact, difference of natural power of manifesting the faculties, depends on difference of developement of brain, this is a discovery which the metaphysicians could not possibly make by their mode of philosophising ; and if particular parts of the brain be the organs of particular faculties, this is a discovery which the anatomists could not possibly make by their mode of philosophising ; while the mode pursued by Gall and Spurzheim, is peculiarly fitted to make both discoveries, and is free from the insuperable objections applicable to both of the other two. The inference in favour of these gentlemen is too obvious to require to be stated. Every reader will perceive it himself.

I add only, that I hope medical opponents who may in future write against this system, will keep in view, more than those who have hitherto written against it have done, the true interests of science. The merits or demerits of Gall and Spurzheim, as individual philosophers, are of subordinate importance. If their system is to be opposed, let the real principles of it be attacked, and let their observations be met by contrary observations. Let

the opponents also state the extent of their own knowledge, in regard to the natural faculties of the mind, and the organs by means of which they are manifested, and the sources whence they have derived their information. Those who are necessarily ignorant themselves, are little qualified to instruct others; and it appears to me that every one who has not followed the mode of philosophising pursued by Gall and Spurzheim must necessarily be unacquainted, both with the faculties manifested by the mind, and the functions performed by the brain. Besides, it is unbecoming in persons attached to a liberal profession to increase prejudices by arguments against alleged facts in nature, when they might diffuse truth by simple observations of nature themselves. Such a mode of proceeding, too, is little calculated to attain the end they have in view, if their object be to put down the system. It is too strong to be overturned by such means\*.

“Huic si paucos putatis affines esse, vehementer  
 “erratis. Latius opinione disseminatum est hoc  
 “malum: manavit non solum per Italiam, verum  
 “etiam transcendit Alpes, et obscurè serpens mul-  
 “tas jam provincias occupavit.”—*Cicero in Catili-*  
*nam.*

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\* See Correspondence with the Author of *Cranioscopy*, in Appendix, No. I.

## SECT. IV.

*Popular Objections considered.*

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<sup>a</sup> *Oh that ye would altogether hold your peace, and it should be your wisdom.*—JOB xiii, 5.

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IN the future history of philosophy, no circumstance will create more amusement than the recital of the astonishment and contempt with which the philosophers and the public of the nineteenth century received the discovery, That the human mind is endowed with a plurality of innate faculties having specific functions, and that particular parts of the brain are the organs of particular faculties. In a few years, when the facts have become familiar, it will scarcely appear credible, that reviewers, verse makers, and novelists, could have vied so ardently with each other, which of them should display most wit against the doctrines on their first promulgation.

But in justice to the public of this age, it is proper to observe, that their knowledge of the doctrines has been derived chiefly from the writings of opponents, and that these opponents have concealed the real principles on which the system is founded, and the important questions in Physiology and the Philosophy of the Mind which it embra-

ced. The public, therefore, were not so much to blame for their mirth. Indeed, in so far as ridicule merely was concerned, it is perhaps difficult to say whether there was most on the side of the public against the doctrines, or on the side of the supporters of the system against the public, who absurdly found a subject of merriment in the constitution of their own nature. Those who saw that the public mirth was founded entirely on the circumstance of the mind not having consciousness of the existence and functions of the organs, were highly amused with the scenes which frequently occurred in promiscuous conversation, when the doctrines were first generally talked of. The deeper the brain was ingulfed in alcohol, and the more the system was proved to be true, by the manifestations becoming in consequence disturbed, the more obstinate became the denial of the functions of the brain, and the louder the laugh against the supposition of its being the organ of the mind. Such scenes must have occurred in the presence of every reader, and certainly, on calm reflection, no aberration of the human intellect appears more truly ludicrous, although it is easily accounted for.

In tracing the causes which so far misled the public opinion, I am sorry to say, that the efforts of the medical profession appear always the most prominent. The first written attacks against the system, in which every rule of philosophy and decorum was abandoned, were made by persons of that

profession; and in private society, I have found the contempt of every one who had formed an opinion hostile to the system, founded on the authority of some medical practitioner. The public conceived that medical men, from their professional pursuits, must necessarily be well acquainted with the functions of the brain; and hence, when the family physician or surgeon pronounced the doctrines to be nonsense, they thought that there could be no doubt that this was the case; and this conclusion uniformly prevented further inquiry. In endeavouring to shew, therefore, that medical practitioners in general, are as little qualified to decide on the merits of the system as the rest of the public, my object has been, not to throw any general discredit on that profession, but to remove, in the present instance, a great obstacle to the progress of truth. If the public had been convinced at an earlier period of the discussion, that they themselves were as competent to judge of the merits of the system as medical practitioners, there can be little doubt, that ere this time, the subject would have been investigated by men of philosophic minds, and a much greater progress made towards the final settlement of the dispute.

But we leave the public and the medical profession to settle their respective claims to the merit of the ridicule thrown upon the system,—or we leave them even to scoff a little longer, if they please, at the functions of the brain,—and proceed to observe,

that the other objections generally stated by popular inquirers are two ; namely, that the system leads to Materialism and Fatalism. These objections are entirely popular, and not at all of a philosophical nature ; because the philosopher inquires only what is *true* ; for he knows well, that if the truth of a fact in nature be ascertained, it is *part of the order of creation* ; and that a knowledge of that order can never lead to any evil result. The answers, therefore, which we make, must also partake of the popular character.

We observe, therefore, as to the charge of Materialism, that, in this system, no inquiry is made into the *nature* either of the soul or of the body. The phenomena only of the mind are observed. The expression *organ*, designates an *instrument*, by means of which a faculty manifests itself. The muscles, for example, are the organs of voluntary motion, but the muscles are not the being which moves ; the eyes are the organs of sight, but the eyes are not the being which sees ; and, in like manner, the brain is the organ by which the mind manifests itself, but the brain is not the mind. Who has not observed, that delirium accompanies fever in the brain ; that first exhilaration, then a gradually increasing insensibility, follow the different stages of intoxication ; that insensibility is the effect of a blow on the head, or an attack of apoplexy ; that in infancy the manifestations of the faculties are weak ; in middle age vigorous ; and that in old age they

are feeble again? And yet, who has ever, from such observations, had his belief in the immortality of the soul weakened? Our perceptions must have been dull, indeed, if such facts have not been observed; and if they have been observed, what conclusions have been drawn from them? One or other of the two following must be drawn; either that the mind itself is affected by disease, and that its faculties are suspended, perverted, or extinguished; or, that the organs alone, by means of which the mind manifests itself, are affected, and thus produce the apparent changes upon the former. If any one wishes to assume the first opinion, we beg leave to ask him, Whether, if the mind itself be liable to suspension, perversion and change, we may not have equal reason to question its perpetual existence? While, on the other hand, if we hold, that delirium from fever and insanity, are diseases entirely of the brain or organ of the mind, then we may hold as Dr Spurzheim does, that the soul

—— “ shall flourish in immortal youth,

“ Unhurt amidst the war of elements,

“ *The wreck of matter, and the crash of worlds.*”

It has been stated as an objection to this doctrine, that it is inconceivable how an immaterial principle can be excited or incumbered in its manifestations, by a material substance.

But this is to agitate a question, which Nature has placed beyond the reach of the human faculties; namely, in *what particular manner* the mind

and body are connected. No philosopher of our times, who knows the limits set to human inquiries, would attempt to answer this question, or to investigate the subject. Dr Spurzheim makes no pretensions to explain such a mystery. He states only the opinion, that the mind is influenced in its manifestations by the state of the organs of the body ; and he states the facts on which his opinion is founded. If any person think the conclusion not warranted by the facts, then the Doctor does not ask him to believe. But if any one admit, that the facts warrant the conclusion, but refuses his belief, because he cannot conceive *how* the influence takes place, then he must be left to himself, or sent to learn the very first principles of philosophy, which treat of the limits set to the exertions of the human understanding.

But, perhaps, the most satisfactory answer which we can give to the charge of Materialism, is the one very justly given by the author of Cranioscopy. If a gentleman, who has exerted himself so much to pick every possible flaw in the system, has exculpated it from this charge, the public have pretty good security that the charge itself has very little foundation. I feel, on this account, much pleasure in quoting the following passage from that article. " It seems hardly necessary (says he) to expose the absurdity of the accusation, that these doctrines tend particularly to materialism, although the dread of such a consequence has been sanctioned

“ by royal edicts. There are two opinions only,  
“ which, in respect to this question, stand opposed  
“ to each other; namely, that which asserts percep-  
“ tion to take place by the intervention of a mate-  
“ rial organ, and that which asserts it to take place  
“ immediately by the energies of the mind itself, or  
“ at least without the intervention of the body.  
“ The doctrines of Gall are unquestionably incom-  
“ patible with this last opinion; that is, with pure  
“ immaterialism, which may in fact be regarded as  
“ denying the existence of matter altogether. This  
“ sceptical spiritualism can be avoided only by the  
“ admission of the necessity of a material organ;  
“ and if this be admitted, any modification of such  
“ opinion, that does not exclude the mind as the  
“ ultimate percipient, must be equally remote from  
“ absolute materialism. The immaterialist believes,  
“ that it is the soul which sees and the soul which  
“ hears, as much as that it is the soul which judges  
“ and the soul which imagines; and since he does  
“ not condemn as impious the allotment of different  
“ organs of sight and hearing, what greater heresy  
“ is there in the allotment of different parts of the  
“ sensorium, as the organs of judgment and imagi-  
“ nation? If, indeed, any one were to say, that the  
“ affections of these parts are themselves Judgment  
“ and Imagination, he would be a materialist; but  
“ he would be as much a materialist, if he should say,  
“ that the affections of the organs of sight and  
“ hearing are themselves the ideas of colour and  
“ sound.”



The charge of Materialism being thus disposed of, we proceed now to offer a few observations on the other charge of FATALISM. This system no doubt teaches that various propensities and sentiments are implanted in us by Nature ; and that some propensities and sentiments are naturally more powerful in one individual than in another ; so that one may be disposed to virtuous actions from mere inclination, and another to vicious actions from inclination also. And does not every day's experience confirm these facts? Man does not act from reason alone ; he is impelled by *inclination* and *desire*. This system, therefore, teaches only, that the inclinations and desires, which stimulate to action, are implanted by Nature, and are not factitious. And, as to the difference of natural endowment in different individuals, are not some individuals found practising virtue and maintaining virtuous conduct in the midst of " a world lying in wickedness," while others are found engulfed in every kind of iniquity, although bred in the sanctuary itself? But it is no part of the system, to teach that strong inclination and necessity are the same thing. It does not teach that actions are irresistible. On the contrary, we have never ceased to repeat, that every faculty may be restrained or indulged in outward manifestations at the command of the will. The setter dog has a strong inclination to eat the game which he assists in killing, and it is on this propensity that his whole usefulness in hunting is founded ; but does not every day's expe-

rience prove, that even his propensity can be restrained? Again, although the system teaches, that every faculty being active, must produce feelings and perceptions conformable to its nature, it does not teach that all faculties are equal in the authority of their dictates. On the contrary, while it teaches that we must feel sensual desire, or a desire for property, when certain faculties are possessed, and certain objects presented, it teaches also, that there is also a faculty of justice, the authority of which is perceived to be entitled to predominance, as the mind feels this one to be destined to regulate and control the manifestations of these lower propensities. Accordingly, does not every person often feel a strong propensity to eat, to indulge in sexual intercourse, to obtain fortune? But does he not feel a perfect capability of resisting every one of these impulses, from the dictates of reason, the sentiments of religion, or the feelings of duty?

Many well-meaning persons have stated a further objection to this system, 'That it virtually charges Nature with the guilt of Man, in respect that it charges her with having implanted the faculties which impel him to action. But of what system may not the same thing be said? There *are* such acts as thefts, murders, frauds, done by men. From what do these acts proceed? Do they proceed from *reason*, from *corrupted desires*, from any source in the mind itself; or do they proceed directly, or, *de plano*, from the *instigation of the devil*? Let each

person choose; but choose he must, to which of these sources he will attribute them. Such actions *are* manifested; and they *must* flow from *some source*. If they flow from perverted reason, then nature gave reason; if from corrupted desires, then nature gave desires; if, from the instigation of the devil, then nature made us liable to be thus instigated. Still, Nature is as much to blame in one case as in another. Those who think to overwhelm this system with ridicule, by making it throw all the burden of man's transgression on Nature, are not aware, that every possible system of philosophy must do the same thing to an equal extent. Man did not make himself; and to *some principles* in nature, therefore, as a legitimate use, or as an abuse of them, all his actions *must* be attributed. According to this system, nature implanted faculties, giving a desire to destroy, to acquire property, or to fight; but nature gave a power to restrain or indulge these in outward acts at pleasure, and implanted an innate faculty which perceives the qualities of right and wrong, to direct these propensities in their outward manifestations. Thus, we may destroy for subsistence, acquire property by industry, and fight in defence; and the faculty which perceives right and wrong, will approve of each one of these acts. But if we murder, steal, or attack every person we meet, it is evident that, although such acts result from the same faculties as the others above mentioned, yet these faculties

are not now under the guidance of the faculty by which right and wrong are appreciated. Such acts are abuses of the faculties. If nature, therefore, has given us the power to restrain the external manifestations of all our faculties; and if she has given us a faculty which distinguishes right and wrong, all which this system proves that she has done, then nature is not responsible for vice, but man is responsible himself, in proportion to the *quantum* of restraining power, and of the distinguishing faculty which he possesses.

These observations, we have said, are entirely of a popular nature. Those who wish to understand the application of the system to the doctrine of moral liberty, will find the subject ably discussed in Dr Spurzheim's larger work. A few observations will also be found on the same subject in a future part of these essays.

## ESSAY II.

ON THE FACULTIES OF THE HUMAN MIND, AND  
THE ORGANS BY MEANS OF WHICH THEY  
MANIFEST THEMSELVES.

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## SECT. I.

*Functions of the Five External Senses,*

HAVING endeavoured to remove some of the objections which have hitherto precluded inquiry into this system, we proceed to give a short account of the system itself. And, in the *first* place, let us take some notice of Dr Spurzheim's observations on the functions of the Senses.

The opinions entertained by philosophers, in regard to the functions of the senses, have been whimsical, extravagant, and contradictory. Since the times of Bacon and Locke, the greater number of

philosophical systems rest on the axiom of Aristotle, That all ideas come into the Mind, by means of the External Senses. According to this notion, he who has the external senses in the highest state of perfection is able to manifest most powerfully the faculties of the mind ; or, in other words, the faculties, both of man and animals, ought to be proportionate to the perfection of the five senses, and to the education bestowed upon them. And, accordingly, such opinions appear actually to be entertained, even in the present day, by an ingenious author, who has written the article *Logic*, in the *Edinburgh Encyclopædia*. It will be found, that he attributes natural differences, in point of genius, to difference in the perfection of the five external senses. Daily experience, however, contradicts the hypothesis.

Philosophers of another class maintain that the mind acts independently of all organization, and that the senses, instead of being instruments of action, are rather impediments to it. They complain much of the illusions of the five senses ; and they despise all testimony, and all conclusions grounded upon sensation. Such notions are unworthy of being refuted.

A great many philosophers have also attributed to the external senses many acts which are performed by the internal faculties alone. For instance, Helvetius has said, That man owes his arts to the structure of his hands ; and that, if the hoof of the

horse had been joined to the human arm, man would have been still wandering wild in the woods. But many animals have instruments equally curious and perfect in their structure as those to which peculiar capacities of mind are attributed in man; and yet these instruments do not produce in them the correspondent functions. Monkeys have hands almost as nicely formed as those which are attached to the human arm; but do monkeys put wood upon the fire to support combustion? Or do they construct works of art? According to this opinion, moreover, insects, craw-fish, lobsters, and still more the cuttle-fish, also, ought to have exact ideas of extension, of size, and of the theorems of geometry, in consequence of their numerous and perfect organs of touch.

In point of fact, however, the external instruments are often similar, while the functions performed by them are quite different. The hare and rabbit have similar feet; yet the hare lies on the surface of the fields, while the rabbit burrows underground. We have also examples of similar functions observed in animals which have instruments quite different. The proboscis is to the elephant what the hand is to man and to the monkey. The hands of monkeys, and the feet of parrots and squirrels are certainly different; yet, by means of these instruments, they all move their food to their mouths in eating. In order to dig up truffles, the

hog ploughs the earth with his snout, and the dog scratches it with his feet.

Other philosophers, again, have taught, that the functions of the senses are not ordained by Nature, but acquired by Experience. For example, the metaphysicians have written much about the *rectification* of the sense of sight, by means of touch; and about what they call the *acquired perceptions* of sight.

According to Dr Spurzheim, however, each sense performs its functions in consequence of its own innate constitution alone, and the relations of every sense to external impressions are determinate, and subjected to positive laws. If an odour make an impression upon the olfactory nerve, the impression is immediately found to be agreeable or disagreeable; and this feeling arises from the constitution of the sense, and the relation established betwixt it and the odorous particles which excite it to activity. The functions of every sense depend only on its peculiar organization: and hence no preceding exercise or habit is necessary in order to acquire the special power of any sense. If the organization be perfect, the functions are perfect also; and if the organization be diseased, the functions are deranged, notwithstanding all preceding exercise. If the optic apparatus be perfect in newly hatched birds, their sight is perfect. Such is the case with chickens, ducks, partridges, and quails. If, on the contrary, at the first entrance into life, the organization

of the eyes or the ears be imperfect, the power of the animal to see or hear is proportionally deficient. In adult persons, vision is deranged if the eyes be diseased. In old persons, the functions of the five senses lose their energy, because the vital power of the organs is diminished.

It is indeed ridiculous to suppose that Nature should have produced any sense which could not perform its functions without being supported by another and a different sense :—that, for example, we should not be able to see without feeling ; or to hear without seeing. Hence the propositions appear self-evident,—that no sense acquires its functions by means of any other sense, and that any *one* sense cannot be the instrument of producing the sensations experienced by means of *all* the senses collectively. But we must observe, that different senses may enable us to perceive the same object ; and that one sense is more fitted than another to make us acquainted with different objects, and their qualities. For example, we may obtain a conception of the figure of a book, by means of the sense of touch, and also by means of the sense of sight.

Each sense, as already observed, is subject to its own positive laws. For example, we see, according to the laws of the refraction of light ; and hence a straight rod half plunged in water appears crooked, although touch proves that, in this situation, the rod continues straight.

This is a kind of rectification ; but it must not be confounded with the doctrine which maintains that one sense acquires its functions by means of the rectification of another sense. Touch may shew that a rod which is plunged in water, and looks crooked, is straight ; but the eyes will see it crooked, as before. The rectifications, thus effected by the senses, are mutual, and not the prerogative of one sense. In this view, the eyes may rectify the sense of touch. If, without our knowledge, a piece of thin paper be placed betwixt one of our fingers and the thumb, we may not *feel*, but we may *see* it. Even smell and taste may rectify the senses of seeing and of touch. Thus, many fluids *look* like water ; and it would be impossible to discover them to be different substances by the sense of touch ; but it is easy to do so by smell and taste. Thus each sense has its peculiar and independent functions ; and each is subject to positive laws. But every sense also perceives impressions of which another is not susceptible ; and it is in consequence of this circumstance that the external senses rectify one another ; or rather produce, by their co-operation, an extent of accurate conceptions, which, in an unconnected state, they would have been incapable of producing.

It is a task of considerable difficulty to point out accurately the precise limits of the functions of the senses, because, in every act of perception, the instrumentality is combined with that of the internal

*their*

faculties of the mind; and it is not easy to discriminate to what extent the act depends upon the one, and to what extent upon the other. For the elucidation of this point, I submit the following considerations to the attention of the reader.

The senses themselves do not *form ideas*. For example, when an impression is made upon the hand, it is not the organs of touch which form the conception of the object making the impression: but the nerves of feeling in the hand receive the impression, and a *faculty of the mind* perceives the object. Without the nerves of feeling, the internal faculty could not experience the perception; because the medium of communication betwixt it and the object, would be wanting. But neither could the hand experience the perception without the instrumentality of the internal faculty, because the nerves of *feeling* do not perform the function of perception.

Hence, previously to every perception, there must be an antecedent impression on the organs of sense; and the whole functions of these organs consist in receiving and transmitting this impression to the internal faculties. The nature of the impression depends on the constitution of the senses, and on the established relation betwixt them and external objects; and, as it is absolutely impossible for the human will to change either the constitution of the senses, or the relation betwixt them and the exter-

nal world, it is clearly absurd to speak of acquired impressions.

But, as the senses are constituted with a determinate relation to external objects, so the internal faculties are constituted with a determinate relation to the organs of sense. In virtue of the first relation, a certain object makes a certain impression; and, in virtue of the second, a certain impression gives rise to a certain perception; and both depend on Nature, and not on the will, nor on exercise or habit. Before we could “acquire perceptions” of any kind artificially, we must be able either to constitute, by a series of voluntary acts, a relation betwixt the senses and the mind which Nature had not constituted, or to alter a relation which she had appointed. Both appear to me impossible.

But we must distinguish betwixt the perceptions we experience of external objects, and the inferences concerning their qualities which we draw from these perceptions. All those ideas which are pure perceptions are formed intuitively, on the presentation of objects fitted to excite them. Inferences from these perceptions, on the other hand, are the result of our reasoning powers. Now, it appears to me that the visible and tangible appearances of bodies are simple perceptions, because, after the amplest experience of some of these appearances being deceitful, we cannot in the slightest degree alter our perceptions of them. For example, a rod half immersed in water appears crooked, in defiance of

every endeavour to see it straight. When we stand three or four yards distant from a mirror, and perceive our image in it, we cannot, by any efforts, succeed in perceiving the image as if formed on the surface of the mirror, although we know perfectly that it is so. It appears always at the same distance behind the surface as we are before it. If a picture is painted according to the rules of perspective and the laws of optics, so as to represent a vista in the country, or a long street in a city, we are altogether incapable, when in the proper position for viewing it, of perceiving the surface to be plain. The picture appears to us to represent objects at different distances, and the most determined resolution to see them all equally near, is of no avail, although we know that, in point of fact, they are so.

Now, if we learned at first to perceive distance only by experience, I cannot see a reason why we might not learn also by experience to see a picture as a plain surface, which it really is. If, previous to experience, all objects seen by the eye appear only as of different colours and shades, and all equally near, although really at different distances ; and if we learn by experience only that this natural appearance is deceitful, and that, in point of fact, one object is near and another distant, I cannot perceive a reason, why we might not learn by experience also, to perceive pictures as plain surfaces, and images as formed on the surfaces of mirrors ; and, in short, to get quit altogether

of the illusions of optics. If it be easy to acquire, by habit, the power of perceiving objects as at different distances, which naturally appear to the eye as all equally near, it ought to be no difficult matter to learn by experience to perceive a surface to be plain which really is so, after we are certain of the fact ; and yet, I have never heard of an instance of a person who had made such an acquisition. Colour, Form, Magnitude and Distance, appear to me to be objects of intuitive perception ; and, accordingly, I contend, that no experience, and no repetition of acts of volition, can alter such appearances, if the refraction of light, state of the eye, and the internal faculties, remain the same.

The following appears to me a correct mode of ascertaining the limits of the functions of the senses. Whatever perceptions, or impressions received from external objects, *can be recalled* by an act of volition, cannot depend exclusively upon the senses ; because the organs of sense are not subject to the will, and never produce the impressions which depend upon their constitution, except when excited by an external cause.

On the other hand, whatever impressions we are unable to recall by an act of volition, must, for the same reason, depend on the senses alone.

These principles will be best elucidated by examples. For instance, when a bell has been rung in my presence, and the impressions have ceased, I cannot recall these impressions themselves by an ef-

fort of the will ; because their existence depended on the apparatus of the ear being in a certain state of excitation, which cannot be reproduced by an act of volition. Hence I conclude, that the function of giving these impressions belongs to the ear alone. But if I am endowed with the internal faculty of tune, and if a piece of music be played over in my presence, I find that, after the sound of the instrument has ceased, although I cannot recall that sound, I can with facility reproduce the internal impressions which the notes made upon my mind ; in short, I can enjoy the tune internally anew by an act of volition. Hence I conclude that the power of experiencing the perception of melody, and of enjoying the impressions which it makes, depends on the internal faculty of tune, while the sound alone depends upon the ear. Hence, also, the perfection of the power of perceiving melody in any individual, is not in proportion to the perfection of the external ear alone, but in joint proportion to the perfection of that organ, and the internal faculty. Without the external ear, the internal faculty could not receive the impressions ; but the external ear could never of itself produce the perceptions of melody. Accordingly, we see every day that many individuals enjoy the sense of hearing unimpaired, who have no perception of melody whatever. The same principles applied to the other senses will point out distinctly the precise limit of their functions. We may likewise take an example from the sense of touch. If

I embrace a square body with my hands, certain impressions are made on my nerves of touch, called Sensations, in consequence of which my mind forms an idea of the figure of the body. Now, I can recall the conception of the figure by an act of volition ; but I cannot, by such an act, recall the sensation which excited it. The conception, therefore, depends on an internal faculty ; the sensation on the nerves of touch. The whole functions of the nerves of touch are to produce the sensation ; but the power of conceiving is not in invariable proportion to the power of feeling, but in proportion to the perfection of the internal faculty, and the external senses jointly. The perception, however, depends as completely on nature as the sensation ; and the power of perceiving the form of the body, is not acquired by experience.

Dr Spurzheim observes on this head, that where the *same ideas* are acquired by the instrumentality of *two* or more senses, the ideas cannot possibly be formed by *the senses*, because nature, so far as man has discovered, never endows *different instruments* with the *same functions*, in the same individual. For example, we can acquire ideas of form by the instrumentality of the sense of sight, and likewise by means of touch. Now from this circumstance alone it is evident that the conception of figure is formed, not by the eyes, or by the nerves of feeling, because this would be an instance of two separate senses performing the same

functions ; but by an internal faculty, which perceives figure, in consequence of impressions made on either of these two different senses. The impressions made upon the eye, are totally different from those made upon the nerves of touch, but the internal faculty is adapted by nature to both ; and hence the same perceptions are experienced by means of the same faculty, although through the instrumentality of different media ; but the same function is not performed by distinct senses.

These views of the functions of the senses are illustrated and confirmed by the phenomena which take place when the organs of sense are diseased. For example, when the ear becomes inflamed, it often happens that spontaneous sensations of sound are experienced ; when too much blood flows into the eye, impressions like those of light, are felt ; when the nerves of taste become diseased, disagreeable savours are experienced ; when the nerves of touch are excited by internal causes, a tickling or disagreeable sensation is felt ; when the muscular system is relaxed by nervous diseases, and flying spasms occur over the body, impressions occasionally arise from these spasmodic affections, so precisely resembling those of touch, that the individual is at a loss to distinguish them.

Every one is acquainted with the ridiculous theories which have been framed by philosophers, to account for the phenomena of perception. Aristotle taught, says Dr Reid, " That, as our senses cannot

“ receive external material objects themselves, they  
“ receive their species ; that is, their images or  
“ forms without the matter, as wax receives the  
“ form of the seal, without any of the matter of it.”  
(Essays on Intellectual Powers, p. 25.) The Platonists differed from Aristotle in maintaining, “ That  
“ there exist *eternal and immutable ideas*, which  
“ were prior to the objects of sense, and about  
“ which all science was employed.” They agreed with him, however, as to the manner in which these ideas are perceived. Two thousand years after Plato, Mr Locke represents our manner of perceiving external objects, by comparing the understanding “ to a closet, wholly shut from light, with  
“ only some little opening left, to let in external visible resemblances or ideas of things without.” The notion of all these philosophers was, that from the existence of these images or ideas, the mind inferred by a process of reasoning the existence of the external objects themselves.

I have already adverted to the results to which these doctrines were brought by Bishop Berkeley and by Hume, and how the doctrines were overthrown by Dr Reid, by a very simple process of demonstration. He pointed out merely the fact, that the mind is so formed, that certain impressions, produced by external objects, on our organs of sense, are followed by certain sensations ; and that these sensations are followed by perception of the existence and qualities of the bodies by which the impressions are made ; and that

all the steps of this process are equally incomprehensible.

It will at once be perceived, that the doctrine which we have laid down regarding the functions of the senses corresponds precisely with the philosophy of Dr Reid.

The organs of each sense are double ; and yet the consciousness of all impressions experienced by the mind is single. No satisfactory explanation of this fact has yet been given.

The mind has no consciousness either of the existence of the organs of sense, or of the functions performed by them. When the table is struck, and I attend to the subject of my own consciousness, I perceive the impression of a sound ; but by this attention I do not discover that the impression has been experienced by the instrumentality of any organ whatever. Hence the perceptions of the mind are always directed to the objects which make the impressions, and not to the instruments by means of which the impressions are experienced. The instruments perform their functions under nature's care ; and, as has been already observed, are not subject to the will. We should have been distracted, not benefited, by a consciousness of their internal action when they perform their functions. It is when they become diseased that we become conscious of their action, and then the consciousness is painful. Every one must be sensible of this fact whose eyes or ears have been diseased.

After these general considerations, which apply to all the external senses, we shall now state in a few words the specific functions of each sense in particular.

### FEELING OR TOUCH.

DR SPURZHEIM considers the nerves of motion to be distinct from the nerves of feeling. The sense of feeling is continued, not only over the whole external surface of the body, but even over the intestinal canal. This sense gives rise to the sensations of pain and pleasure; of the variations of temperature; and of dryness and moisture. These sensations cannot be recalled by the will; and therefore we consider them as depending on the sense alone. The impressions made upon this sense, serve as the means of exciting in the mind perceptions of figure, of roughness and smoothness, and numerous other classes of ideas; but the power of experiencing these perceptions, is in proportion to the perfection of the internal faculties, and of the sense of touch jointly, and not in proportion to the perfection of this sense alone.

### TASTE.

THE functions of this sense are, to produce sensations of taste alone; and these cannot be recalled by the will. We may judge of the qualities of

external bodies by means of the impressions made on this sense ; but to form ideas of such qualities is the province of the internal faculties.

### SMELL.

By means of smell, the external world acts upon man and animals from a distance. Odorous particles are conveyed from bodies, and inform sentient beings of the existence of the bodies to which they belong. The functions of smell are confined to the producing of agreeable or disagreeable sensations, when the sense is affected by the impressions of external bodies. These cannot be reproduced by an effort of the will. Various ideas are formed of the qualities of external bodies, by the impressions which they make upon this sense ; but these ideas are formed by the internal faculties of the mind.

### HEARING.

IN new born children this sense is not yet active ; but it improves by degrees, and in proportion as the vigour of the organ increases. It is a very common opinion, that music, and the faculty of speech, are the result of the sense of hearing. But neither the one nor the other is produced by that sense.

As we have already mentioned, the auditory apparatus being excited to activity by an external cause, produces only the impression of sound : and here its functions terminate. If, besides, the faculty of tune is possessed by any individual, melody in sounds is perceived by that faculty. If the faculty is not possessed, such perceptions cannot exist: Hence, among birds, the female hears as well as the male ; and yet the song of the male is very much superior to that of the female. Among mankind, also, many individuals hear, and yet are insensible to melody. Thus, both in man and other animals, there is no proportion betwixt the perfection of hearing and the perfection of the power of perceiving melody. If it were part of the functions of the auditory apparatus to give the perception of melody, how does it happen that, in one individual, the apparatus can perform only one-half of its functions, while in others it performs the whole ? This is not like Nature's work. Finally, hearing cannot produce music ; because the auditory apparatus is excited only by sounds which are already produced. The first Musician began to produce music before he had heard it ; and he did so from an internal impulse given by a faculty of the mind. Singing birds, moreover, which have been hatched by strange females, sing naturally, and without any instruction, the song of their species, as soon as their internal organization is active. Hence the males of every species preserve their natural song, though they

have been brought up in the society of individuals of a different kind. Hence also musicians, who have lost their hearing, continue to compose. They possess the internal faculty ; and it, being independent of the auditory apparatus, conceives the impressions which different sounds naturally produce, long after the ear has ceased to be capable of allowing these sounds to be experienced anew. Hence, likewise, deaf and dumb persons have an innate sentiment of measure and cadence. Though, however, hearing does not produce music, yet, without an auditory apparatus, fitted to receive the impressions made by tones, melody could not be perceived ; and, unless that apparatus had once been possessed, neither could melody be produced, because the individual could not judge of the impressions which the sounds he made were fitted to make upon those who hear.

It is a very common opinion also, that hearing alone, or hearing and voice jointly, produce the faculty of speech. This error will be refuted by considering in what any language consists, and how every language is produced. Language has been divided into two kinds, natural and artificial. In both kinds, a certain sign is used to indicate to others certain feelings or ideas of the mind. Various motions of the body, and expressions of the countenance, indicate, the moment they are beheld, certain emotions and sentiments. In this case, the expression of the countenance, or the motion of the

body, is a sign fitted by Nature to excite in us the perception of the feeling. It is obvious, that the power of the sign, in this case, to excite the perception does not depend either upon hearing or voice; for neither is employed in producing it: but that the effect is an ultimate fact of our constitution, which must be referred to the will of our Creator. Besides these signs, however, we make use of many others to communicate our thoughts, which have no original connection with the things signified. For example, the word TABLE has no necessary connection with the thing upon which I now write. How, then, does the word come to indicate the thing? The internal faculties first conceive the object: having done so, they wish to fix upon a sign by which that conception shall be always indicated again. They, therefore, *employ the voice* to make the sound which we express when we utter the word 'Table. The thing itself being pointed out, and the sound being uttered at the same time, the meaning of the sound comes to be understood; and hence every time this sound is pronounced, the idea of the thing is suggested. But we are not to suppose that the auditory apparatus conceived the idea of the table, or that the organs of voice conceived it. This was done by the internal faculties alone; and these merely made use of the organs of voice as instruments for producing a sign. Hence, the reason why monkeys do not speak is, not because

they want the sense of hearing, and organs of voice, but because they have not reflecting faculties which can fix upon signs to indicate the conceptions which they form.

The proper function, then, of the sense of hearing, is confined to the production of the impressions which we call sounds; yet it assists a great number of internal faculties.

The auditory nerve has a more intimate connection with the organs of the moral sentiments, than with those of the intellectual faculties.

## SIGHT.

THIS fifth and last of the senses, is the second of those which inform man and animals of remote objects, by means of an intermedium; and the intermedium, in this instance, is Light.

This sense has been said to acquire its functions by touch or by habit. Dr Reid and many other philosophers have written ingenious disquisitions, to shew that our perceptions of distance, figure, and motion, are acquired. These speculations have proceeded on the principle, that Nature has done little for man, and that he does a great deal for himself, in endowing himself with perceptive powers. But vision depends on the organization of the eye; and is weak or energetic, as the organization is imper-

fect or perfect. Some animals come into the world with perfect eyes ; and these animals see perfectly from the first. The butterfly and honey-bee fly at the first attempt, through fields and flowery meadows ; and the young partridge and chicken, run through stubble and corn-fields. The sparrow, on taking its first flight from the nest, does not strike its head against a wall, or mistake the root of a tree for its branches ; and yet, previously to its first attempt at flight, it can have no *experience* of distance.

On the other hand, animals which come into the world with eyes in an imperfect state, distinguish size, shape, and distance, only by degrees. This last is the case with new-born children. During the first six weeks after birth, their eyes are almost insensible to light ; and it is only by degrees that they become fit to perform their natural functions. When the organs are so far matured, however, the children see, without habit or education, as well and as accurately as the greatest philosopher.

Indeed, as has been formerly mentioned, the kind of perception which we enjoy by means of the eyes, is dependent solely on the constitution of the eyes, and the relation established betwixt them and the refraction of light. So little power has experience to alter the nature of our perceptions, that even in some cases where we discover, by other senses, that the visible appearance of objects is illusive, we still

continue to see that appearance the same as before. For example, the greatest philosopher standing at one end of a long alley of trees, cannot see the opposite rows equally distant from one another at the farthest end, as they are at the end nearest to him, even after experience has satisfied him that the fact really is so. He must see, according to the laws of perspective, which make the receding rows appear to approach ; and there is no difference, in this respect, betwixt his perceptions, and those of the most untutored infant. In like manner, the greatest philosopher, on looking into a concave spoon, cannot see his right hand upon the right side, and his left hand upon the left side, even after he has learned, by the study of the laws of optics, that the image of himself, which he sees in the spoon, is reversed.

It is very true, that Nature does not give us intuitive perceptions of the number of feet or inches at which any object is distant from us ; because feet and inches are artificial measures, with which Nature has nothing to do. But when two objects of the same size, are presented to the eye, the one double in point of distance to the other, the mind has always an intuitive perception that they are not equally near.

What, then, are the true functions of the eye ? No organ of sense *forms ideas*. The eye, therefore, only receives, modifies, and transmits the impressions of light ; and here its functions cease.

Internal faculties form conceptions of the figure, colour, distance, and other attributes of the objects making the impressions : and the power of forming these conceptions is in proportion to the perfection of the eyes and the internal faculties jointly, and not in proportion to the perfection of the eyes alone. Hence the lower animals, although they have eyes equal in perfection to those of man, are not able to form the ideas of the qualities of bodies, which he forms by means of his internal faculties, through the instrumentality of the eye, because in them the internal faculties are wanting.

In conformity with this limitation of the functions of the eye, it will be found that we can recall conceptions of the colour, figure, distance, and other qualities of bodies, which we perceive by means of vision, while we cannot recall the impressions experienced from the presence of light. And, when the eye is inflamed, we experience perceptions of the impression of light alone, and do not form ideas of figure, motion, or distance.

The senses may be exercised, and their powers greatly improved by exercise. The taste of the gourmand is more acute than that of the peasant ; and the touch of the artisan, than that of the ploughman.

Such nearly is the account of the functions of the senses, which the Edinburgh Reviewer has been pleased to stigmatize “ as incredibly nonsensical,

“and disgraceful to any one who has studied even  
“the common elementary works on the animal eco-  
“nomy.” It appears to me in a different light.  
The public will judge whether the Reviewer has  
shewn most presumption or philosophy in his criti-  
cism.

SECT.

## SECT. II.

*Of the Internal Faculties of the Mind, and of the Organs by means of which they manifest themselves.*

WE have already mentioned the principles upon which this system is founded. It is founded on observations of facts. When, therefore, it is asked, Why we admit a particular organ of this, and not of another function? the answer is, Experience proves the existence of those we admit. In speaking of actions alone, it is certainly difficult to conceive the necessity either for particular faculties or for particular organs. The metaphysicians have endeavoured, by analyzing ideas, to generalize faculties. But unfortunately Nature does not accompany them in doing so. It might have appeared to them more beautiful and more scientific if Nature had endowed us with a single faculty for perceiving all qualities of external objects, instead of endowing us with five senses, as at present, each limited in its functions, and each different in its powers. But it has not pleased Nature to do so; and what can Man do, but study Nature as he finds her? In like manner, it would perhaps have pleased the Metaphysicians better, if all acts of thought could have been referred to one or two original powers; but Nature, unfortunately, appears to have constituted us otherwise; and we seek to

know Man as he is made. We noticed before that, if we were to generalize the faculties, of ORDER, FORM, COLOURING, LOCALITY, and TUNE, and to say that all the kinds of acts falling under these separate faculties belong to a single power of the mind, it might look more simple and more philosophical. But what would become of us, when, on going into society, we found one man who had a great natural power of perceiving and conceiving FORM, who was deficient in the natural power of perceiving and conceiving COLOUR? and so on with the rest of the faculties now mentioned: In short, when we found one individual excelling in the power of performing some of the functions of this generalized faculty, and utterly destitute of the natural power of performing others? We should be refuted on our own principles. We must admit as many faculties, therefore, as we find differences in the natural capacities of men to experience different kinds of feelings, and to form different classes of ideas.

Dr Spurzheim considers Man by himself, and also compares him with other animals. When he finds the animals manifesting the same feelings and propensities as those manifested by Man, he conceives the faculties which produce these feelings and propensities to be common to both. In order to determine what faculties are primitive, he proceeds according to the following rules. He admits such a faculty as primitive, only as he finds, as follows:

1. To exist in one kind of animals, and not in another :

2. Which varies in the two sexes of the same species :

3. Which is not proportionate to the other faculties of the same individual :

4. Which does not manifest itself simultaneously with the other faculties ; that is, which appears or disappears earlier or later in life than other faculties :

5. Which may act or rest singly :

6. Which is propagated in a distinct manner from parents to children : And,

7. Which may singly preserve its proper state of health or disease.

After ascertaining, according to these rules, a faculty to be innate or primitive, the next point was to ascertain its functions. He accomplished this end by the following mode of proceeding: When he had ascertained a faculty to be innate, he observed the actions of a number of individuals in all of whom it was manifested powerfully. Whatever acts all of these individuals could do with superior facility and excellence, indicated the sphere of the functions of the special faculty which each of them possessed in an eminent degree. For example: He observed the actions of a number of persons who manifested a strong faculty for music, and found a peculiarly eminent power of perceiving melody common to them all, while in all their

other powers, propensities, and sentiments, they differed extremely. One, for example, was capable of reasoning well, another not. One was prone to sensual love, another was not. One was vividly alive to the sentiment of benevolence, another was not. All which facts, he conceived, indicated that the faculty of music was separate and distinct from the faculties of reasoning, of sensual love, of benevolence; and that the perceiving of melody was the special function of that faculty, since all the individuals possessing it, resembled each other in being eminent musicians, although their characters corresponded in nothing else. In this way he ascertained the functions of every faculty, or the special desires and powers of feeling, perceiving, or acting, which it conferred; so that, on knowing what faculties any individual possesses most powerfully, we are able to tell to what kinds of feelings, perceptions, and actions, he is naturally most disposed.

And besides, he investigated, in regard to each faculty, what effect the size and activity, health and disease of the organs, produced upon the power of manifesting it.

On these principles, Gall and Spurzheim have discriminated thirty-three primitive or innate faculties of the mind, and have pointed out the functions of each, and the effect which the state of the organs has upon the power of manifesting it. In the case of many of the faculties, their observations have been so numerous that they hold their conclusions

as *certain* : In regard to others, where the observations have been fewer, they state their conclusions as probable ; and, in every case where reasonable evidence is wanting, they state them as *conjectural*. —Conjectural, however, must be distinguished from *imaginary*. They have stated a faculty as probable and conjectural, only in consequence of having found *actions* which could not be referred to any of the other ascertained faculties as their fountain ; and which, of course, must have proceeded from some undetermined faculty, the special functions of which were not ascertained, for want of a sufficient number of observations.

Dr Spurzheim divides the faculties into two orders : FEELINGS and INTELLECT. The feelings are subdivided into two genera ; PROPENSITIES and SENTIMENTS. The second order, consisting of Intellectual Faculties, is subdivided also into two genera, KNOWING Faculties and REFLECTING Faculties.

The chief points which are to be kept in view in studying the Faculties of the Mind, are, *First*, That each faculty is a specific power of feeling in a certain way, or of forming ideas of a certain kind ; and that each is distinct from the feelings which it produces, and the ideas which it forms. *Secondly*, That each faculty has received its constitution from Nature, and that its functions depend on that constitution alone, and not on the human will. *Thirdly*, That the same functions cannot be performed

by different faculties. For example, the faculty of tune is a specific power to perceive melody, and it is distinct from the impressions of melody which it perceives. This faculty perceives melody in virtue of its constitution, and not in consequence of the will: And it does not trace the relation of cause and effect, feel benevolence, or perform any other functions beside that of perceiving melody. *Fourthly*, The faculties stand in a determinate relation in regard to the objects of external nature; which relation cannot be changed by the will. For example, the faculty of Amativeness cannot be excited by the perception of an object in distress; nor are feelings of compassion readily excited by the perception of an object indelicate and obscene. *Fifthly*, Each faculty may be excited to activity, by presentation of the objects naturally related to it; and it may become active also from internal excitement. In every case, the functions performed are conformable to the constitution of the faculty, by whatever cause it is excited. And, *sixthly*, The intensity of the power of feeling in any way, or of forming ideas of any kind, is always in proportion to the energy and activity of the special faculty, whose function it is to produce such feelings, or to form such kinds of ideas.

The situations of the organs are represented on the plate annexed, and upon casts of the human head, which are now sold by statuaries. The organs are double, and are situated in the opposite corresponding parts of the brain. No

“argument” can be offered to prove why one organ should be situated in one place, and another in another: Or why there should be several faculties, and also several organs: We can only say, that such is the case. Those who take the trouble to compare the manifestations of the mind with the developement of the head, will find evidence of the facts for themselves; and those who do not choose to do so must either believe upon the testimony of others, or remain for ever unconvinced. No person is requested to believe upon testimony; but all are invited to make observations; and the only favour which the followers of the system request is, that those who have not made observations, will not condemn what they do not understand. Dr Spurzheim has observed, that “SELF-CONVICTION MUST BE FOUNDED ON SELF-OBSERVATION;” and, as I am convinced of the justice of this remark by experience, I do not intend to offer a single case, or a single argument, for the purpose of inducing any reader to believe. I shall point out what is to be observed, and the mode of observation, and leave every one to satisfy his own mind by his own experience. I shall, indeed, for the sake of the popular reader, add, in a separate section, a few cases or examples illustrative of the doctrines; but these cases neither form all the evidence on which my own conviction is founded, nor are they given as evidence sufficient to produce be-

lief in the reader. They are intended merely as illustrations.

The names given by Dr Spurzheim to the faculties, have been much ridiculed. No doubt smoother appellations might have been wished for; but a person who turns away from a study, only because he finds an appellation new or uncouth, cares little about things. His motto ought to be, *Verba non res quæso*. If a name indicate the thing signified, and if the thing signified be important in itself, the name is of subordinate importance. Now, Dr Spurzheim's names indicate most forcibly the things signified; and they have assumed their present lengthened, and sometimes cumbrous appearance, from no circumstance but his desire to give a name, expressing in itself, as far as language would admit, the thing which he meant to communicate. Instead, therefore, of altering his terms, it will be better to adopt them, and accompany them with his explanation.

“The English language,” says Dr Spurzheim, “presents very few single words which express my  
“conceptions of the peculiar faculties of the mind.  
“Hence I was, in some cases, compelled either to  
“speak by circumlocutions, or to make names en-  
“tirely new. Now, I do think with Mr Locke,  
“that, in this respect, we have the same right as  
“our predecessors; and I therefore propose new  
“single names, which I have formed, as much as  
“possible, in agreement with the spirit of the lan-

“guage. Having established different propensities  
 “as peculiar faculties of the mind, in order to de-  
 “signate propensity, I have employed the termina-  
 “tion *ive*, as indicating *the quality of producing*,  
 “and *ness*, as indicating *the abstract state*. I  
 “have, therefore, joined IVENESS to different roots  
 “or fundamental words; and, in choosing these  
 “roots, I have always given the preference to Eng-  
 “lish words generally admitted. When I could  
 “not find any such, I choose Latin participles,  
 “which, in English, are so commonly used, even in  
 “expressions of meaning, similar to those which I  
 “look for,—as destructiveness, productiveness, &c.

“The termination *ous*, indicates a sentiment, as  
 “anxious, cautious, pious, conscientious, &c.; and I  
 “should have been very glad to find similar adjectives for every primitive sentiment of the mind.  
 “When that has been the case, I have only added  
 “*ness*, in order to express the abstract state, as consciousness, conscientiousness, &c.

“The names of the INTELLECTUAL FACULTIES  
 “are easily understood, and do not require any particular explanation.

“If, under any head of this nomenclature, there  
 “be any better name, or one which may indicate  
 “more exactly any determinate faculty, but no determinate action or effect of that faculty, I shall  
 “be anxious to make use of it: for I am always  
 “disposed to acknowledge truth, and every real improvement.”—(Spurz. Pref. to Octavo Work.)

We proceed now to the consideration of the faculties themselves ; and we follow the order of arrangement adopted by Dr Spurzheim.

### ORDER 1.—FEELINGS.

#### GENUS 1.—PROPENSITIES.

The faculties falling under this genus do not form ideas ; their sole function is to produce a propensity of a specific kind. THESE FACULTIES ARE COMMON TO MAN WITH ANIMALS.

#### 1st, AMATIVENESS.

The function of this faculty is to produce the feeling of sensual desire. The cerebellum is the organ of it. The intensity of the desire is in proportion to the energy and activity of the faculty. The power of manifesting this faculty is not in general possessed before puberty ; and, it is a fact, that the developement of the cerebellum is not complete till that period of life.

There is no uniform proportion between the brain and the cerebellum ; many individuals having large brains and small cerebella, and *vice versa*. The vigour of the propensity is never in proportion to

the size of the brain ; but, *cæteris paribus*, always to that of the cerebellum. Men and male animals in general, have a larger cerebellum than women and female animals. It is not, however, a universal law, that the cerebella of males are uniformly larger than those of females. There are exceptions ; and of these, there are more among mankind than among animals.

This particular organ is situated at the top of the neck behind : discover the mastoid process behind the ear, and the protuberance of the occipital spine above the middle of the neck ; the space between these two elevations, indicates the extent of this organ in man. This faculty, and the organ of it, are ascertained.

2d, PHILOPROGENITIVENESS.—(*Love of Progeny.*)

The function of this faculty is, to produce the instinctive feeling of attachment to offspring. It is too much the custom of superficial thinkers to conclude that all the feelings of human nature arise from reason. The philosopher, however, knows well that no feeling arises from reason. Reason only investigates causes and effects, and decides after comparison. The mother, while she beholds her tender offspring with ineffable delight, experiences the glow of Nature in her bosom. She does not produce the feeling by reasoning with herself, that it is

her duty to experience it. The excitement is instantaneous. The object requires only to be presented to her eye or her imagination, and the whole impetus of parental love is felt.

The intensity of the feeling is in proportion to the energy and activity of the faculty, and the interest felt in children is in proportion to the intensity of the feeling. The faculty is, in general, stronger in women than in men. There are, however, exceptions. Even among women, certain individuals consider children as a heavy burden; while certain males regard them with the most exquisite delight. This is not the case only among wretched persons, but indiscriminately among rich and poor, and among persons of good and of indifferent breeding. When too energetic, the faculty prompts the individual to do harm to children, by spoiling them; when it is weak, they are regarded with indifference.

The weakness of this faculty does not excite a mother to destroy her child; but a mother destitute of this propensity, is less able to resist those external circumstances of temptation which provoke her to commit this crime. Such a mother will not resist so strongly as she would have done, if her mind had been influenced in a greater degree by the powerful energy of philoprogenitiveness. Dr Spurzheim mentions, that he and Dr Gall had examined the shape of the head in twenty-nine women who were infanticides; and that twenty-five of them had the organ of philoprogenitiveness very small.

Negroes manifest this propensity in an eminent degree ; and this organ is, in them, greatly developed.

The cerebral part which is situated immediately above that of amativeness, and which corresponds with the general protuberance of the occiput, is the organ of philoprogenitiveness. Its developement coincides with the energy of the propensity. By means of this and the preceding organ, it is easy to distinguish the skulls of males and females of the same species ; and, consequently, also those of men and women. Throughout all animals, a striking similarity is preserved in the skulls of both sexes ; but the skulls of men and other males are generally shorter and wider, while those of women and other females are longer and narrower. This faculty and the organ of it are considered as ascertained.

### 3d, INHABITIVENESS.

In examining the habits and modes of living of various animals it is obvious, that different species are attached to different regions and countries. Nature, which intended that all regions and countries should be inhabited, assigned to all animals their dwelling, and gave to every species its distinct propensity to some particular region. If we place any animal in another region, it leaves it, and returns to its natural dwelling. For example, some

animals seek the water from the first moment of their existence, while others stay upon dry land. Some animals are partial to high regions, some to low countries and plains, and others to marshes.

It appears to Dr Spurzheim, that there is a particular instinct in each class of animals, which determines the place of its dwelling; and that that instinct, like all others, must manifest itself by means of a special organ.

It appears to him probable, that a faculty, whose functions are similar, exists also in man. His plate indicates the supposed situation of the organ; but the positive evidence of the existence of the faculty being insufficient, it is stated only as *conjectural*.

#### 4th, ADHESIVENESS.

Dr Spurzheim remarks the fact, that there are certain animals which live always in a state of society; such as elephants, sheep, goats, crows, pigeons, while others are always found living in a state of separation; such as tigers, foxes, hares, wolves, and many others. It is clear that the cause of these dissimilar habits among animals is not chance, and that the habits cannot be the result of reflection. In them, therefore, we readily admit a natural and internal instinct peculiar to each kind, which gives it the propensity to live in a specific way.

Among mankind, there are strong indications of a faculty conferring a propensity of a similar kind. Dr Spurzheim has observed something like an involuntary manifestation of the sentiment of attachment in mankind. The function of the faculty seems to be to give attachment in general. And the permanence and strength of attachment in certain individuals whom he and Dr Gall have seen, have been found not to be in proportion to the endowment of any other faculty or faculties of the mind, but to constitute a peculiar feature of the character. They, therefore, are disposed to regard the feeling as primitive. The number of observations, however, is not sufficiently copious to enable them to speak positively as to the faculty and the situation of the organ; yet they have been sufficiently numerous to render both more than probable. When too strong, excessive regret at the loss of a friend, or excessive uneasiness at leaving our country, or the disease called Nostalgia, is the result. When too feeble, men become anchorites and hermits. The situation of the organ is pointed out on the plate.

#### 5th, COMBATIVENESS.

This faculty has afforded much scope for ridicule, to persons who are little acquainted with human nature; but, for my own part, I am satisfied, by numerous observations, of its existence, and of the cor

rectness of the indication of the organ. The function of the faculty is to give the propensity to fight in general.

In consequence of this faculty pleasure may be felt in fighting. Hence, we see men who are amateurs of combats, and who are with difficulty restrained by a sense of their own dignity, and of the respect they owe to the sentiments of their own class in society, from entering the lists as combatants themselves. Allow me to request every peaceable citizen who may read this speculation, to examine his own feelings, and say, if any prospect of emolument would induce him to follow the calling of a prize-fighter on a public stage. Let me ask him, whether his own feelings do not restrain him from such practices as effectually, as if there were a law inflicting death upon him for engaging in them. If, on the other hand, there are other men who enter into such exhibitions, not only without reluctance, but with avidity and delight, is it not clear that there is some modification of feeling in their minds which is not in his? The difference is, that in him this propensity is feeble, while in them it is strong.

Individuals in whom this propensity is naturally strong, but who, when sober, restrain it by the higher faculties, often become unable to do so, when the activity of the organ is excited by strong liquors; and hence, such individuals then become pugnacious in the extreme. This illustration will be ridiculed by those who are unable to perceive the relation of

cause and effect. But to philosophic minds, I need scarcely observe, that intoxication, although it may *EXCITE pre-existing propensities*, can never *create* faculties of the mind, nor endow with desires ; and that the mere *suppression* of one power, for example, the power of reasoning, can never *inspire* with other powers, of a tendency totally distinct. The evidence of the existence of the faculty, however, is to be found in observation : And on the evidence obtained by observation alone, it is admitted.

The situation of the organs is indicated on the plate. Their existence and situation are ascertained. Courageous animals in general, have the head between and behind the ears very large. This is also an unfailing sign to distinguish or recognise, if a horse be shy and timid, or bold and sure ; and it has been long familiar to horse-dealers as such.

### 6th, DESTRUCTIVENESS.

The function of this faculty, is to produce the desire to destroy in general. A difference in the skulls of carnivorous and herbivorous animals, gave the first idea of the existence of such an organ. If we place a skull of any carnivorous animal horizontally, and trace a vertical line through the external meatus auditorius, a great portion of the cerebral mass is situated behind that line ; and the more completely an animal is carnivorous, the more considerable is the mass situated there.

In man, this propensity produces different degrees of feeling, according to its activity, from a mere indifference to the pain suffered by animals, to a positive pleasure in killing them, or seeing them killed. When the energy of the faculty is moderate, indifference at suffering and destruction is the result. When too weak and inactive, positive pain and poignant distress are felt at the sight of death, and destruction of every kind. We are surrounded every day by death in all its forms, and by destruction in every shape; and nature, by means of this faculty, steels our minds so far as is requisite to fit us for our situation, and to render scenes which our situation constrains us to witness not insupportable. A certain degree of obduracy of feeling, regardlessness of suffering, and indifference to the calamities of our race, is absolutely necessary, to render existence tolerable in this world of trouble. We often see individuals miserable from too feeble an energy of this faculty. Every object in a state of suffering, harrows up their feelings and lacerates their hearts, and produces a degree of continued suffering, scarcely conceivable by those of more flinty natures.

A great difference is perceptible in children, in regard to their sensibility to the pain suffered by other creatures. Some feel a pleasure in torturing animals, and in seeing them tortured or killed: others sicken at the sight of misery, and loath, with a deep abhorrence, the ferocious sports of such com-

panions. The same difference is perceptible in men.

The view of public executions is insupportable to some individuals, and delightful to others. In the field of battle, there is a great difference in the actions, according to the energy of this propensity. One soldier is overjoyed at the sight of the blood which he sheds, while another, moved by gentler feelings, gives uncertain blows, or delights to spare the vanquished, and stops the massacre of his own accord, when victory is secured. There are highway-men, who, not content with robbing, manifest the most sanguinary inclination to torment and kill without necessity. Others never injure the persons of the plundered.

When this faculty is excited to excess from diseased sensibility in the organ, the propensity to destroy becomes irresistible. Patients are sometimes insane in this propensity alone, and feel a frightful and involuntary impulse to kill, at which they themselves shudder, but which they are unable to restrain.

When this faculty is strong in an individual, and the faculty of Benevolence, which gives feelings of compassion, is also strong, the former will be generally gratified with destruction of inanimate objects. I have observed this to be the case in children. This faculty and the preceding, give the tendency to rage. I have observed their peculiar organs, fully developed in some individuals prone to outrageous bursts of violence and passion. When properly

directed, this faculty produces actions necessary and proper in themselves. When not properly directed, abuses are the result.

I have observed this faculty manifest itself in fearful acts of wanton destruction, when the organ was stimulated, and the reasoning powers suspended by intoxication. I have some reason to suspect also, although my observations are not so numerous as to authorise me to draw a positive conclusion, that the enthusiasm of the accomplished sportsman, is inspired by this faculty in no small degree. Other feelings also, no doubt, are gratified by the sports of the field ; but the individual who is inspired by a fell and intense enthusiasm to kill the game which he pursues, and who enters with his whole soul into the chace, appears to derive no inconsiderable portion of his pleasure from the gratification of destructiveness. And of this I am certain, that an individual, in whom this faculty is feeble, will never relish the sports of the field ; for the writhing agonies of the victims will penetrate his soul with an emotion of compassion which will destroy at once the pleasure of having succeeded in his aim.

### 7th, CONSTRUCTIVENESS.

The function of this faculty is, to produce the desire or impulse to construct in general. It does not form ideas of the objects to be constructed. The

skulls of animals which build, and those of others which do not build, present a remarkable difference at the place where the organ of this faculty is situated. In man, the energy of the propensity to construct, is found not to be in proportion to the endowment of the faculties which reason, or of any other faculties of the mind, but to be only in proportion to the intensity of a peculiar and specific impulse to construct. Those in whom the propensity is strong have the head about the temples much developed, as marked in the plate. Those who have no such desire have, in that situation, a small development of brain. When too energetic, the faculty produces abuses, or too strong a propensity to construct without adequate views of utility. Dr Spurzheim conceives this faculty and the organ of it to be ascertained.

### 8th, COVETIVENESS.

The metaphysicians have never admitted a faculty in the mind, the function of which is to produce the propensity to acquire, and which is gratified by the mere act of acquisition, without any ulterior object. Dr Hutcheson says, "Thus as soon as we come to apprehend the use of wealth or power to gratify any of our original desires, we must also desire them; and hence arises the universality of these desires of wealth and power,

“ *since they are the means of gratifying all other desires.*” In like manner, we are told by Mr Stewart, that “ Whatever conduces to the gratification of any natural appetite, or of any natural desire, *is itself desired, on account of the end to which it is subservient*; and by being thus habitually associated in our apprehension with agreeable objects, it frequently comes in process of time, to be regarded as valuable in itself, independently of its utility. It is thus that wealth becomes with many, an ultimate object of pursuit; though, at first, it is undoubtedly valued, merely on account of its subserviency to the attainment of other objects.” (Elements, page 388.)

Now, Gall and Spurzheim would never think of setting up arguments to refute the opinion of so great authorities; but they have gone into society and observed facts, and these facts are as follows: *First*, Those who manifest the most intense desire for acquiring property, are not, in general, those who appear ever to have felt other natural desires in a very powerful degree. On the contrary, the thorough miser is a being who, from the cradle to the grave, scarcely manifests any natural desire for wife or child, fame or power, but who appears to have had all his propensities absorbed in the single and unextinguishable thirst of acquisition. In the *second* place, The votaries of sensual pleasure, fame or power, rarely exhibit a regard for property, bearing any proportion to their desires for these

other objects of pursuit. In the *third* place, It is not conformable to nature to say, that any sane individual mistakes the means for the end ; and from a mere error in judgment, experiences the same intense desire for the means, with which nature has inspired mankind in general for the end. For example, we never find the vain individual attach himself to the decorations and trappings which excite the vulgar gaze, after he has ceased to value popular applause ; we never find the glutton and the drunkard setting their hearts upon the delicacies of cookery and the excellent products of the vineyard, after their appetites are palled with satiety, and their constitutions broken down with excess. And, in the *fourth* place, Gall and Spurzheim found, that the intensity of the desire to acquire, is always in proportion to the developement and activity of a certain portion of the brain, and not in proportion to the developement of the organs of any of the other faculties of the mind. On this last account, therefore, they state the faculty as an original principle of our nature.

The existence of the faculty and its functions are facts. When they are ascertained to be so, we may offer an opinion upon the utility of them ; and although that opinion should be erroneous, the facts will be neither the more nor the less real. It appears to me, therefore, that the intention of nature in giving this faculty, is to inspire us with the desire of acquiring ; so that, in consequence of its

activity, we may possess when the day of want comes ; and not be left to the uncertain provision which would be made from the mere dictates of reason, after tracing a long chain of consequences. There are long periods in the life of every individual ; namely, those of childhood, sickness, and old age, when labour is impossible. Unless, therefore, nature had implanted in us a desire to acquire more than is necessary for the wants of the moment, perhaps we would not lay upstores for the day of adversity, from the mere perception that that day might come, with so much earnestness and zeal as we do, when the act of acquiring is made pleasing in itself. This speculation, however, as already said, may be correct or erroneous ; but the fact, that the faculty exists, and that the function of it is to produce the propensity to acquire in general, is proved by observations ; and, therefore, is independent of speculation.

This faculty, when too energetic, and not controlled by superior powers, produces theft. The organs are ascertained.

### 9th, SECRETIVENESS.

There are some individuals who are never able to see the affairs of life, or the conduct of others, in a plain and simple point of view, who rarely manifest their real opinions, but who are fond of throwing a dense

covering of secrecy over all their sentiments and actions, even the most trifling and unimportant; and conceive, that the eye of the world is always looking into their breasts, to read the purposes and designs which are there hatched; but which discovery they are solicitous to prevent. In such persons there is a particular part of the brain largely developed; and the degree of the propensity is in proportion to the developement and to the activity of the organs.

The function of this faculty appears to be, to conceal in general without determining the object and the manner of concealing. Cunning persons conceal their opinions and intentions, and sometimes maintain in conversation, in writing, or in public, an opinion opposite to their own. The faculty gives the propensity, in poets, to construct interesting plots for romances and dramatic pieces; and it appears to inspire that compound of dissimulation and intrigue, which is designated *savoir faire*. In animals it produces slyness.

Dr Spurzheim considers the organs of this faculty as ascertained. I have seen some instances of the manifestations described, in concomitance with a full developement of the organ.

When the faculty is very powerful, it produces a slyness of look; a peculiar side-long, rolling cast of the eyes; and a stiffened approach of the shoulders to the head.

## GENUS II.—SENTIMENTS.

After mere propensities, follow another kind of faculties, which Dr Spurzheim calls *Sentiments*. Several of them are common to man and animals : others are peculiar to man. We shall first consider the former. *These faculties*, like those which we have already considered, *do not form specific ideas*, but produce merely a SENTIMENT ; that is, a propensity, joined with an emotion or manner of feeling, of a specific kind. When the faculty is powerful, great natural power of experiencing the sentiment which it produces, is possessed : when weak, the natural power is weak.

## 10th, SELF-ESTEEM.

This is one of the faculties which are generally attributed to external circumstances ; and philosophers have not thought of an organ on which its manifestations might be supposed to depend. Dr Gall first found the organ of it in a beggar. In examining the head of this person, he observed, in the midst of the upper posterior part of the head, an elevation which he had not before observed in so high a degree. He asked him the cause of his mendicancy ; and the beggar accused his pride as the cause of his present state, he having considered himself as

too important to follow any business : he had therefore only spent his money, and did not think of earning a livelihood.

The function of this faculty is to give the sentiment of self-esteem in general ; and the intensity of the feeling of pride is in proportion to the energy and activity of the faculty. I have often heard it observed, that musicians are exceedingly apt to become conceited of their art, scholars of their learning, philosophers of their philosophy, and the nobly born, of their rank. But, upon the most accurate observation of human nature, I am persuaded that the sentiment of pride is not in uniform proportion either to the possession or the want of these extraneous qualifications, but in proportion to the intensity of the special faculty of self-esteem. If a musician is eminently proud, he is so, not because he is eminent in his art as a musician, but because he is endowed with a sentiment of self-esteem naturally powerful. Had he been a shoemaker he would have been equally proud ; but his pride would have been otherwise directed. Every faculty, as has been often said, must perform all the functions attributed to it ; and hence, if the faculty of tune produce, besides music, the sentiment of pride, then every individual ought to be proud in exact proportion to the energy of that faculty ; and, in the same way, if the reflecting faculties, besides forming ideas, produce the sentiment of pride, then the intensity of that sentiment ought to be always in proportion to the per-

fection of these faculties also. But this is well known not to be the case. Hence the sentiment of pride must be experienced by means of other powers. Many attribute pride to want of sense; but, although want of sense may permit outward manifestations of pride, which sense, if possessed, would suppress, yet, *the want* of reflecting faculties, or sense, can never *confer a positive endowment* of a FEELING, such as self-esteem undoubtedly is.

Thus the feeling itself depends upon the special faculty alone, and the direction of it depends upon other circumstances. He who possesses powerful knowing and reflecting faculties, in conjunction with this faculty, in a powerful degree, will be proud of his knowledge and of his genius. He who possesses the faculty of tune with the same conjunction, will be proud of his talents as a musician. He who possesses the faculty of veneration, eminently powerful with the same conjunction, will be proud of his piety. He who possesses the faculty of Amativeness or Combativeness, powerful with the same conjunction, will value himself inordinately for sensuality or pugnacity.

This faculty, when active and energetic in excess, produces great abuses. It gives the desire of power, and disposes to tyranny. In private life, it produces arrogance and superciliousness of deportment. I have seen individuals mistake the impulses of it for the inspirations of genius; and, un-

der its influence, say stupid things with the airs which they supposed naturally to belong to genius. I have heard the musician, when under its excessive influence, embellish the tune with decorations of his own inventing, till its character was changed, and the melody destroyed.

An individual is predisposed to humility, when the faculty is too feeble. In such a case, too, a want of confidence, and of a due sense of one's own importance, are felt. Inferior talents, joined with a strong endowment of self-esteem, are often crowned with far higher success than more splendid talents, with this endowment in a feebler degree. Dr Adam Smith, in his *Theory of Moral Sentiments*, most justly remarks, That it is better, upon the whole, for an individual to have too much, than too little of this sentiment; because, if we pretend to more than we are entitled to, the world will give us credit at least for what we possess; whereas, if we pretend to less, the world will take us at our word, and rarely have the justice to raise us to the true point in the scale of dignity at which we are entitled to be rated.

This sentiment, when predominantly powerful, makes the individual carry his head high, and reclining backwards. The expression which it gives to the tone and manners, is cold and repulsive, and is, in a special degree, offensive to other individuals largely endowed with the same faculty. This fa-

culty, when not regulated by Benevolence and Conscientiousness, disposes to Envy and Jealousy.

The organ of the faculty is perfectly ascertained, and is situated at the crown, or that part of the head where the hair diverges in different directions. When the organ becomes diseased, the individual has sometimes believed himself to be a King, Emperor, a Transcendent Genius, or even the Supreme Being.

### 11th, LOVE OF APPROBATION.

The function of this faculty is to make us attentive to the opinions which others entertain of us. The object of its desire is Approbation in general, without determining the means, or the manner of acquiring it. It may be directed to things of the highest importance, to useful, to indifferent, or even to hurtful things, as the means of its gratification. A coachman, endowed with this faculty, is pleased if his manner of managing his horses be approved of; and a general is elated if he be applauded by his nation for leading an army to victory. In short, the object which this faculty seeks to attain, is Approbation; but it does not determine how that object is to be obtained.

The intensity of the feeling is in proportion to the endowment and activity of the faculty. We do not possess the capacity of being delighted with

applause, and grieved with censure, because we wish to have that capacity, but because Nature has bestowed on us the faculty of feeling in that manner. Indeed, so little is the power of feeling, or of not feeling, dependent on the human will, that we often feel pain at meeting with censure, or pleasure at meeting with applause, where we are satisfied that neither is deserved. Hence the opinion of our fellow men appears to be the object to which this faculty is naturally related.

There is a great difference in regard to the degree of endowment of this faculty, in different individuals. Some watch, with the most animated anxiety, every motion, and every look, and intuitively feel whether others approve or disapprove. When we approve, the eye sparkles, the countenance opens, and the individual approaches us with a pleasing courtesy, expressive at once of the pleasure he has received from our approbation, and of his desire to secure it. He, on the other hand, in whom the faculty is naturally feeble, shews, by the undisturbed fixity of his countenance, that our censure and applause are alike unimportant to him. When we censure, he stares us in the face with absolute indifference, or gapes in stupid wonder.

When powerful, and directed by superior sentiments, and the reflecting faculties, this faculty gives the love of fame, or of popularity, and it stimulates the possessor to make exertions for the benefit of

others, with a promptitude and an ardour which those who have not the faculty powerful can with difficulty conceive. Those who ask, What is the worth of fame? are answered, That it gratifies a feeling which those only can conceive who possess, in an energetic degree, the faculty which inspires it. This faculty is a powerful engine in the hands of a skilful parent, or preceptor, for the governing of youth. The child who has it strong, will suffer more from a frown, than from the pain of a blow. He will derive more pleasure from a smile of approbation, than from delicacies addressed to the palate. Such a one ought never, therefore, to be beaten; and if the teacher know his constitution, he will never find this necessary.

When this faculty is ill directed, it leads to vanity. Vanity is the love of approbation for trifling accomplishments. When this faculty is strong, and the endowment of conscientiousness weak, the love of praise, without regard to praiseworthiness, is the result. Every resource is brought forward for display, to attract the gazer's eye. He, on the other hand, in whom conscientiousness is powerful, receives as much pain from obtaining unmerited consideration, as he would feel at not meeting with the applause which he justly deserved.

This faculty is more active in women than in men, and even in certain nations more than in others. There is, accordingly, a greater number of women than of men alienated in mind by the in-

fluence of vanity. Dr Spurzheim met with only one madman, to whom insanity from this cause had occurred. The organs are ascertained.

### 12th, CAUTIOUSNESS.

We have already stated, that the want of one faculty never gives another. Every feeling which we experience is something positive in itself, and does not consist in the want of another feeling. Now, fear is a positive emotion, and not a mere negative quality, or the want of courage. We cannot create the power of feeling any emotion, by an act of the will: As, therefore, we have the power of feeling the emotion of fear, that power must have been given us by Nature. Accordingly, it is found by observation, that the faculty of experiencing this emotion is always in proportion to the development of a particular part of the brain, which appears to be the organ by which the faculty manifests itself. Dr Spurzheim names the faculty "Cautiousness," and considers the function of it as producing the instinctive impulse to "take care." Its existence, like that of every other ascertained faculty, was discovered by observation, and not inferred by reasoning.

It appears to me that the faculty gives an emotion in general, and that this emotion is Fear. In giving it this name, I believe that I differ from

Dr Spurzheim in words, but not in substance. The tendency of it is to make the individual in whom it is strong, hesitate before he acts, and, from apprehending danger, to lead him to trace consequences, that he may be assured of his safety. Hence, when too powerful, it produces doubts, irresolution, and wavering. When deficient in energy and activity, the individual is never apprehensive about the results of his conduct, and often proceeds to act without mature consideration.

The internal and involuntary activity of this faculty, in those in whom it is too powerful, produces internal sensations of dread and apprehension, without an adequate external cause. Such feelings are often exceedingly distressing to the individual, and ridiculous in the eyes of common spectators, who believe that the feelings of the mind depend on the dictates of the understanding, or the resolutions of the will, and that the individual, if he would allow himself to be convinced of the groundlessness of his apprehensions, might, by an act of volition, lay aside the feelings which appear to them so absurd. Such notions argue great ignorance of human nature. As easily could we remove a pain from our leg by resolving to be quit of it, as the unhappy sufferer under diseased feelings, could remove these feelings by an act of the will. A great and involuntary activity of this faculty appears to produce a *panic*,—or a state of the mind, in which it is

hurried away by an irresistible emotion of fear, for which no adequate external cause exists.

Too great an endowment, and too great activity of this faculty, predispose to self-destruction. The faculty does not produce suicide as a specific act; but when excited to excess by disease of the organs, it gives birth to feelings which produce a sense of internal misery, and thus indirectly predisposes to suicide. Hence the fact, that often the best of men, and those in whose external circumstances no adequate motive is to be found, are led to that fatal deed. Let no one suppose such an act done from mere error in judgment. It proceeds always from internal and involuntary feelings of a diseased nature; of the misery and torments of which, no man, who has never felt any thing similar, can form an adequate conception. The great ignorance of mankind regarding the state of mind which predisposes to self-destruction, has arisen from philosophers never having studied the *natural constitution* of the faculties, and the kind of feelings which they produce when the organs are in a state of health; and, in consequence, from their not attending to the circumstance, that the disease of the organs deranges the character of the sane feeling, and often renders it independent of the will.

The organs of this faculty are perfectly ascertained.

13<sup>th</sup>, BENEVOLENCE.

Gall and Spurzheim, on going into society, found that the emotion of Benevolence, and the desire to do good, are not manifested in proportion to the activity of any of the other faculties of the mind, but that the energy of that desire is in uniform proportion to the developement and activity of a specific portion of the brain. They therefore admit a special faculty, the function of which is to produce the feeling of Benevolence in general, and of which the particular part of the brain indicated on the plate, is the organ.

There is a great difference betwixt individuals in regard to their natural powers of feeling benevolence. Some have the sentiment so weak as scarcely to know what a generous emotion is; others have it so strong, as to have their minds constantly overflowing with kindness.

We easily distinguish kindness flowing from this feeling, from acts of attention dictated by the love of approbation, or more interested motives. There is a simplicity of manner, and a directness of purpose, in this faculty, that touch the mind at once. We feel its character, and we call it true, genuine, and unalloyed goodness, flowing from no source but the impulse communicated by the faculty, and centering on no end but the good of the object. While,

on the other hand, there is generally an air of constraint and force attending acts of kindness done from interested motives, betraying the source from which the actions flow. We see the secret spring, and the ulterior object, notwithstanding the efforts made to conceal them. St Paul gives a beautiful description of the genuine character of this faculty in his account of Christian charity, "Charity suffereth long, and is kind; charity envieth not; charity vaunteth not itself, is not puffed up." The good Samaritan, mentioned in Scripture, is a most delightful representation of the sort of character formed by the genuine inspiration of this faculty.

A deficiency of energy in this faculty does not produce cruelty, or any positively bad sentiment. It only produces indifference to the welfare of others, and leaves the selfish faculties to operate with less restraint. When this faculty is too vigorous, and not properly restrained, it produces profusion. This kind of facility is not the effect of mere weakness of reasoning power, or of intellect. The want of one faculty never produces positive feelings or positive powers of another kind; and the defect in such persons is, an over-ready disposition to give, without an adequate motive or consideration, except the pleasure of giving. Such a disposition appears to arise from too great an endowment of benevolence, joined with weakness in the reflecting faculties, which ought to controul it.

I have mentioned before, that stimulating liquors, by exciting the organs, give energy to the feelings or propensities which depend on these organs for the means of manifesting themselves. Now, some individuals become excessively profuse when intoxicated. They would then give the world away ; or, if they had the power, they would create a new one, in which every individual should have a world of happiness to himself. On the principle, that intoxication can never *create* any feeling, I am inclined to think that such persons have naturally a large endowment of benevolence, the organ of which faculty is thus stimulated to excessive activity by strong potations. This, however, is only a conjecture.

This faculty does not form ideas of the proper mode in which it ought to be gratified, or of the objects on whom its influence ought to be exerted. It is the business of the reflecting faculties, and other sentiments to direct it. Indulged without consideration, it produces the worst consequences. Witness the effects of indiscriminate donations of charity to beggars in the streets, and at our doors. Witness also the results of the compulsory assessments for the support of the poor. It can never be sufficiently inculcated, that the functions of the different faculties of the mind are distinct, and that the faculties which feel, give merely an impulse in general, and that Nature has intended that the direction of them should be placed un-

der the faculties which reason. Hence, the individual who instinctively feels a vivid compassion for every object in distress, ought to be aware that this impulse is not the voice of inspiration directing him *to the mode* in which it ought to be indulged. On the contrary, the stronger the emotion is, the power of direction is not unfrequently so much the weaker ; because the emotion is in itself of so excellent a character, and so delightful in sensation, that the man who is inspired by it is the last to suspect the necessity of much consideration to direct it properly. On the other hand, however, it must also be remembered, that the faculties which reason, do not feel benevolence, and that, hence, that individual is most fitted to mature wise plans of benevolence, to whom Nature has given most of the faculty which feels this emotion, with most of the faculties which trace consequences, and direct it.

This faculty exists in animals ; and in them it appears to produce docility and meekness. The mild and good-natured animals have the place of their forehead corresponding to the organ of benevolence in man, elevated and prominent, while the ill-natured present a hollow.

The organs are ascertained.

## ON THE SENTIMENTS WHICH ARE PROPER TO MANKIND.

Dr Spurzheim says, "Hitherto we have considered Man so far as he is animal. All the organs and special faculties I have spoken of, are common to man, quadrupeds, birds, &c. ; and in this respect man is even the most perfect of them all : he possesses all those faculties which are more sparingly distributed among different kinds of animals. Besides this prerogative, every faculty is susceptible of many more modifications ; and its energy is greater in man than in animals. Moreover, man is endowed with sentiments which constitute the human character, and of which animals are entirely destitute. Till the present time, no system of philosophy has thus clearly indicated the line of demarcation between man and animals. It was for a long time believed, that man differs from animals by being endowed with memory, judgment and imagination ; but a great number of facts prove, that animals possess all these faculties. Others again, consider reasoning as a particular attribute of human nature, I shall here treat only of the sentiments proper to man ; and in speaking of the intellectual faculties, I shall also point out which of them are common to animals and man, and which are peculiar to mankind."

These faculties produce only a manner of feeling or sentiment, in general, and do not form ideas.

#### 14th, VENERATION.

The sentiment of piety, devotion, or veneration, is not an act of the understanding, but an *emotion* of the mind. The natural capacity of feeling this emotion, is not in proportion to the perfection of the understanding; nor is the perfection of the understanding in proportion to the natural tendency to piety. But the natural vivacity of the sentiment of piety, is in proportion to the developement and activity of a particular portion of the brain; and no other sentiment or faculty is in the same uniform proportion to the developement and activity of that particular part. Gall and Spurzheim, therefore, admit a faculty, the function of which is to inspire the sentiment of veneration in general; and they point out the special organ by which the faculty manifests itself. If the sentiment of veneration depended on the faculties which reason, then the more energetically these faculties were employed, the stronger ought to be the emotion of piety. But the fact is otherwise. When we are deeply engaged in reasoning, even on the sublimest attributes of the Deity, we feel no emotion either of one kind or another, but perceive the relation of necessary consequence alone. It is when we cease to reason, and merely contemplate the objects, that the emotion arises.

This faculty, as already mentioned, gives only the tendency to venerate in general, and does not judge what ought to be venerated. The vivacity of the sentiment of veneration is in proportion to the energy and activity of the faculty; but the propriety of the selection of the object to which it is directed, is in proportion to the enlightened state of the understanding: for example, Brahma, Mahomet, the Virgin Mary, the True God, or any other object, would be worshipped with a degree of fervour corresponding to the activity of the sentiment; but the selection of one of them in preference to the others, as the object of veneration, will depend on the correctness of information, together with the enlargement of the reasoning powers. Hence it ought to be kept in view, that, in cultivating the sentiment of piety, we do not necessarily cultivate the reasoning powers; and that in cultivating the understanding, we do not necessarily increase the activity of the sentiment of veneration.

The organ of this faculty is perfectly ascertained.

### 15th, HOPE.

Hope is a positive sentiment *sui generis*, and manifests itself by means of a special organ. Dr Spurzheim has found, that the power of experiencing this sentiment is in proportion to the development and activity of a special part of the brain, and that no other sentiment or faculty is in uniform

proportion to the energy of this faculty. It gives the sentiment of hope in general, and does not form specific ideas of its objects.

There are great differences among individuals in their power of experiencing the fascinating influence of this sentiment. It gives feelings the reverse of cautiousness. It inspires with gay, fascinating, and delightful emotions, painting futurity fair and smiling as the regions of primeval bliss. It gilds and adorns every prospect with shades of enchanting excellence; while cautiousness hangs clouds and mists over distant objects, seen by the mind's eye. Hence, he who has HOPE more powerful than CAUTIOUSNESS, lives in the enjoyment of brilliant anticipations, which are never realised: He who has CAUTIOUSNESS more powerful than HOPE, lives under the painful apprehension of evils, which rarely exist but in his own internal feelings. The reflecting faculties ought to regulate both.

In religion, this faculty cherishes faith. Too great an endowment of it gives the individual a tendency to be credulous.

Dr Spurzheim says, "The organ of hope seems to be situated on the side of that of veneration; but it requires future examinations before it can be admitted, though I have many observations which support this organ." I have made several observations myself, which tend to support Dr Spurzheim's opinion as to the existence of the faculty, and the situation of the organs.

## 16th, IDEALITY.

This is a sentiment also ; it gives only a manner of feeling, and does not form ideas. It produces the feeling of exquisiteness or perfectibility, and is delighted with what the French call “ *Le beau* “ *Ideal*.” It is this faculty which gives what is called *inspiration* to the poet. The knowing and reflecting faculties perceive qualities as they exist in nature ; but this faculty desires for its gratification something more exquisitely perfect than the scenes of reality. It desires to elevate, and to endow with a splendid excellence every object presented to the mind. It stimulates the faculties which form ideas to create scenes, in which every object is invested with the qualities which it delights to contemplate, rather than with the degree of excellence which nature usually bestows. It is this faculty which inspires exaggeration and enthusiasm, which prompts to embellishment and splendid conceptions. It gives a manner of feeling and of thinking, befitting the regions of fancy more than the abodes of men. Hence, those only on whom it is powerfully bestowed, can possibly be poets, and hence the proverb, “ *Poeta nascitur, non fit*.”

Individuals differ exceedingly in regard to the endowment of this faculty which they possess. According to the energy and activity of it, poetry is prized or relished. I have met individuals who de-

clared, that they could perceive no excellence in poetical compositions, and could derive no gratification from them ; and yet such individuals were endowed with every degree of understanding and penetration, according as they possessed the other faculties, strongly or weakly, and were not uniformly deficient, either in moral sentiments or judgment in proportion to their want of poetic fire.

This faculty gives a peculiar tinge to all the other faculties. It makes them, in every thing, aspire to ideality. In common life we may easily distinguish those who have, from those who have not, a considerable endowment of it. The former speak in general in an elevated strain of language, and when animated, shew a splendour of eloquence, and of poetical feeling, which the latter are never able to command. It gives to conversation a fascinating sprightliness and buoyancy, the very opposite of the qualities expressed by the epithets dryness and dullness.

The organ of this faculty is ascertained, and I am satisfied in regard to it myself, by many observations. It is not without a degree of scrupulous delicacy, that I mention such a fact on such an occasion ; but I may state, that from the strong manifestations of this faculty in his works, I described what the configuration of the head of a celebrated pulpit orator ought to be, before I had seen him ; and that the gentleman to whom the description was given, found it to coincide remarkably with the fact.

## 17th, CONSCIENTIOUSNESS.

This faculty gives a sentiment also, that of justice ; but does not form ideas of what is just. For example, when any action is presented to the mind, the motives and the object of which are distinctly perceived by the understanding, an involuntary sentiment arises, that the action is just or unjust ; but the degree of the sentiment is not in proportion to the acuteness of the understanding, but in proportion to this in connection with the energy of the special faculty which we are now considering. Dr Spurzheim found, that the manifestation of this particular sentiment is in proportion to the development and activity of a certain part of the brain ; and, on this account, he states it as a special faculty. In his work, he states it as only probable ; but I am convinced, by numerous observations that it exists, and that Dr Spurzheim's indications of its functions and organ are correct.

There are great differences among individuals in respect to the endowment of this faculty. When it is powerful, the individual appears to regulate his conduct by the nicest sentiments of justice ; and there is a degree of integrity, honesty and truth in his manner, which gives us the most perfect confidence in his actions. Such an individual is disposed to act justly from the love of justice, unbiassed by fear, interest or inclination. He is delighted with the ob-

servance of right, and disgusted with the doing of wrong. Nor is the activity of this sentiment indicated only by a respect to the property and legal rights of others. Those individuals in whom it is strong, have a natural disposition to do justice to others, in the judgments which they form of their motives, their conduct and capacity; and, in short, to regulate every sentiment by conscientiousness. They are scrupulous, and as ready to condemn themselves as to find fault with others.

When the faculty, on the other hand, is weak, the power of experiencing the sentiment of justice is feeble, and the individual will generally be ready to do an unprincipled action, if excited by inclination or interest. He experiences a difficulty both in perceiving the quality of justice itself, and in conceiving the imperious obligations of duty, arising from its dictates. When it is weak, the deficiency is shewn in the general sentiments of the individual, although the absence of temptation may prevent any actual infringement of the law. The conduct of others is apt to be unfairly judged of, their motives misinterpreted, and their talents falsely estimated, just as the pride, vanity, interest or affection of the individual who is deficient in conscientiousness, may lead him to regard them for the time. He is not scrupulous; and fears other evils much more than that of being himself in the wrong. He is, therefore, not much inclined to examine his own conduct and condemn it.

The faculty being independent in itself, is found with weak intellect and with strong intellect ; with much benevolence, and little benevolence ; with much piety, and little piety ; with much covetiveness, and little covetiveness. It is here as in other cases of the greatest importance to attend to the independent existence and distinct functions of the several faculties of the mind. No mistake is more generally committed than that of supposing that by cultivating the faculty of veneration, we cultivate those of benevolence and justice. A man may be pious and not just, or just and not pious, in the same manner as he may be blind and not deaf, or deaf and not blind. The want of veneration is not profanity ; so that, although an individual will scarcely be found who is profane and at the same time just, yet many will be found who are just and not pious.

This faculty when powerful, is attended with a sentiment of its own paramount authority over every other ; and it gives its impulses with a tone which appears like the voice of Heaven. It may appear unphilosophical, on the present occasion, to allude to a novel for the illustration of the functions of the faculties of the mind ; but the faculties of the mind are known by their manifestations in actions ; and when the action represented in a novel is true to nature, philosophy may be better illustrated by reference to that action, than to the mystic speculations of metaphysicians. It appears to me, therefore, that the scene in the *Tales of my Landlord*,

in which Jeany Deans gives evidence on her sister's trial at the bar of the High Court of Justiciary, affords the best illustration of the functions and authority of this faculty, when supported by piety, that could be given. A strong sense of the imperious dictates of duty, and of the supreme obligation of truth, leads her to sacrifice every feeling of interest and affection, which could make the mind swerve from the paths of duty; and we perceive her holding by her integrity, at the expence of every other feeling dear to human nature. So much is the manner of feeling influenced by the different degrees in which this faculty is possessed, that I venture to say, many individuals, on reading that passage, have thought within themselves, that this young woman might have sacrificed the truth without great imputation of blame; while other readers have approved of her conduct with the strongest internal delight, and regarded it as an example of every thing that is excellent and heroic. If the former individuals will examine their heads, they will find the organ of this faculty not prominent in size, while the others will find it more so in them.

This faculty gives the sentiment of gratitude; which is merely a sense of deeds done to us above the measure of justice, and above our deserts; and, of course, a sense that we owe an obligation. Repentance or remorse are consequences of this faculty.

Dr Spurzheim divides our sentiments of duty into three kinds. *First*, Into *natural* or *absolute* sentiments, which arise from the dictates of this faculty, in unison with the dictates of all the other faculties proper to mankind; while all the faculties common to man and animals, are held in subordination, and not allowed to mingle their influence. *Secondly*, Individual, particular, or relative sentiments, which result from the dictates of the special faculty of justice which any individual possesses; modified by the influence of the other faculties which predominate in himself; for example, the faculty of justice, joined with an energetic faculty of benevolence,—will produce feelings of justice different from those which would be produced by the same faculty of justice, joined with a strong covetive propensity. Hence the reasons why mankind differ so much in their moral judgments are, these. Because they have not all the same powerful faculty of conscientiousness; and because the judgment formed on any case in which the individual is concerned, is influenced by the disturbing force of his other faculties, whether propensities or sentiments. And, in the *third* place, Into positive sentiments, which are fixed by legislation, whether divine or civil, as by the commands, “Thou shalt not eat meat on Fridays or Saturdays,—Thou shalt go to church every Sunday.”

*intention:* Dr Spurzheim's account of the faculty of conscientiousness appears to me to coincide very closely with

Dr Hutcheson's doctrines as to a moral sense. The faculty now spoken of, however, must be admitted, not in consequence of metaphysical reasonings, but in consequence of the observation of actual facts. Dr Gall has not yet admitted it.

### 18th, FIRMNESS.

Dr Gall observed, that persons of a firm and constant character, have the top of the brain much developed. Lavater had distinguished the same configuration in concomitance with that kind of character. It is difficult to distinguish the special functions of this faculty. Its effects are often called Will; but they are not strictly acts of volition. It appears to give constancy and perseverance; and when too energetic, to produce obstinacy, stubbornness and infatuation.

Dr Spurzheim specifies the organ as ascertained. I am satisfied myself also, in regard both to the general nature of the faculty, and the correctness of the indication of the organ. When eminently powerful, it gives a stiffness and uprightness to the gait, as if the person were transfixed with an iron rod; and it gives a peculiar emphatic tone to the voice. When weak, the individual is prone to yield to the impulses of his predominating feelings, and with difficulty resists solicitation.

## ORDER II.—UNDERSTANDING OR INTELLECTS.

### GENUS 1.—KNOWING FACULTIES.

Dr Spurzheim observes, “ The first genus of  
 “ this order contains those faculties by means of  
 “ which we know the existence of external bodies  
 “ and their qualities. Strictly speaking, the five ex-  
 “ ternal senses belong, in some measure, to this ge-  
 “ nus of faculties. I have, however, already treat-  
 “ ed of the knowledge which men and animals ac-  
 “ quire by their assistance; and I shall now exa-  
 “ mine the organs necessary to acquire certain  
 “ kinds of knowledge, which the five external senses  
 “ cannot produce. The first conception which our  
 “ understanding must have of external beings, is,  
 “ no doubt, that of their existence; and in order to  
 “ acquire this conception, the external senses are  
 “ not sufficient, although without an impression on  
 “ them, this conception cannot be determinate.  
 “ Thus, the organ which procures knowledge of ex-  
 “ ternal beings, must be considered as the first in  
 “ respect to the order in which the faculties ope-  
 “ rate.

“ The knowing faculties may farther be divided  
 “ into two sections. Several make us acquainted  
 “ with every individual object, and its physical qua-

“lities ; and others consider the different relations  
“of various objects.”

The faculties now to be treated of, therefore, form ideas each of a certain kind. The activity of these faculties is attended with a sensation of pleasure ; but the sensation (except in the case of the faculty of tune,) is weak, compared to the emotions produced by the faculties already treated of ; and the higher the functions of the faculties rise, the less is the emotion attending their activity. One great difference betwixt these faculties, and those already treated of, is, that the former are subject to the will ; and whatever ideas are formed by means of them, may be recalled by an act of volition ; while we cannot directly call a single one of the latter into activity, or recall a feeling which we have experienced by a mere act of volition.

### 19th, INDIVIDUALITY.

Dr Gall observed, in society, different persons who, though not always profound, were learned, had a superficial knowledge of all the arts and sciences, and knew enough to be capable of speaking on them with facility. He found, that in such men as are deemed brilliant in society, the middle of the lower part of the forehead was very prominent ; and, consequently, that the anterior inferior part of the brain was much developed.

Persons endowed with this faculty in a high degree are attentive to all that happens around them, to every object, to every phenomenon, to every fact; and hence also to motions. The function of this faculty, therefore, appears to be, to know existence in general. It neither learns the qualities of objects nor the details of facts; these are known by the assistance of other faculties and organs. This faculty, moreover, has knowledge of all internal faculties, and acts upon them.

The organ of this faculty is early and prominently developed in children. I have observed myself, that the degree in which a child is acute and attentive to what passes around him, is in proportion to the developement of this organ.

This faculty exists in some measure in animals. Animals recollect what has happened to them. A dog resists its instinct to run after a hare; because it recollects the beating which, on that account, it formerly received. Similar facts might be indefinitely multiplied; and it is consequently evident, that the actions of animals are not subjected to an absolute necessity, but that they are, in a certain degree, susceptible of education, partly by the organ in question, and generally by the faculties situated in the whole of the forehead.

This is a faculty which a metaphysician would never admit; but the authority for it is irresistible, when we are able to say, that experience demonstrates its existence and functions. As we have al-

ready observed, it would be wise to lay aside that pride of understanding, which prompts us to endow man with faculties upon speculation, and to seek rather to learn by observation, the faculties with which nature has endowed him. It is certainly as philosophical to study faculties and functions by observing manifestations, as it is to study the qualities of matter, by observing the properties they possess. A metaphysician endowing the mind with faculties upon speculation, is fully as likely to err as a chemist who should endeavour to demonstrate *a priori*, the simple substances which form a compound, without analyzing it. We can only say, therefore, that such and such faculties exist; and that the evidence of their existence is to be found in observation; and leave those to deride who have a higher opinion of their own capacity to endow the human understanding, than of our capacity to observe the endowments of nature.

### 20th, FORM.

It is an undeniable fact, that certain individuals have a natural capacity of perceiving and conceiving form, out of all proportion to their capacities of perceiving and conceiving the other qualities of bodies. In those in whom this power is eminently great, the developement of the brain betwixt the eyes is pro-

portionally great; and it is small in proportion as the faculty is weak.

The organ of form seems to be placed in the internal angle of the orbit; and if this part of the brain be much developed, it pushes the eye-ball toward the external angle; that is, a little outward and downward. The eyes derive from it a squinting look.

I have evidence of the existence of this faculty and of the organ, by observations. It appears to give a tendency to draw or cut figures in general. It appears also to enter as an important constituent, into the endowment of a mechanical genius. I have seen several persons known for their great taste and talent for mechanical inventions; and in every one of them, the organ of this faculty was largely developed. It is well known, that some children shew, at an early period, a great tendency to drawing; such individuals will be found to have this organ particularly large. The most obvious indication of it is a great distance betwixt the eyes.

Dr Spurzheim says, persons endowed with this faculty in a high degree, are fond of seeing pictures; and if they make collections, they collect portraits. Expertness in crystallography is the result of this faculty; and it seems to him, that the conception also of the smoothness and roughness of bodies belongs to it. It is certain, that vision and touch are not sufficient to make us acquainted with these qualities of bodies; they furnish only the im-

pressions, while an internal faculty forms these conceptions. There is also no proportion between this faculty and the perfection of these two external senses.

This is one of the faculties, the organs of which the opponents allege cannot be discovered, by observing the developement of the skull, owing to the existence of the frontal sinus. The reader is referred to what is said on this subject, on page 25. In addition to what is there stated, it may be mentioned, that the medical gentleman there referred to, in a letter received since the former passed through the press, says, “ I have found the frontal sinus in a “ man near sixty, extending exactly to the root of the “ nose. On dissecting his brain, I found the external elevations of the skull to correspond with the “ internal depressions ; and most evidently the organ of *form*, of which I had some doubts.” I may mention also, that in a skull in my own possession, the existence of this sinus does not prevent the true developement of the organ of form from being perceived.

### 21st, SIZE.

The faculty of distinguishing form differs from the faculty of size ; because there is an essential difference between the idea of size and that of form. The form may be the same, and the size quite different ; or the size the same and the form dif-

ferent. One of these kinds of knowledge may exist without the other; and there is no proportion between them. Besides, as formerly mentioned, the nerves of touch and the organ of sight do not form ideas of any kind; so that the power of conceiving size cannot be in proportion to the endowment of them. Dr Spurzheim, therefore, *conjectures* that there may be a faculty, the function of which is to perceive size; but the evidence is not such as to authorise him to state the faculty otherwise than as *conjectural*. The organ of it is presumed to be near to the organ of form; but the fact not being ascertained, the situation of the organ is not marked on the plate.

A gentleman of this city lately informed me, that Dr Spurzheim discovered the organ fully developed in his head; and that, in point of fact, he has a great facility in perceiving and judging of size.

## 22d, WEIGHT AND MOMENTA.

Dr Spurzheim says, “The ideas of weight and  
 “resistance of the momenta, of consistency, density,  
 “ductility, softness and hardness, cannot be attri-  
 “buted to the sense of feeling. Though previous  
 “impressions take place on the muscles, yet these  
 “peculiar conceptions are the results of an internal  
 “operation of the mind; and we must, therefore,  
 “admit a particular faculty for these. Its organ  
 “also, must be situated in the neighbourhood of

“ the organ of form and size. I grant that this is  
 “ only conjectural ; but from the general proofs of  
 “ the plurality of the organs, I am convinced, that  
 “ these peculiar operations of the mind depend on  
 “ a peculiar cerebral part, though I cannot yet ab-  
 “ solutely determine it. The conceptions of form,  
 “ size, weight, colour, are certainly as different as  
 “ the various feelings of which I have spoken.”

### 23d, COLOURING.

We have already shewn, that although the eyes are affected agreeably or disagreeably by the different modifications of the beams of light or by colours, yet they do not conceive the relations of different colours, their harmony or discord, and that they have no memory of them. Certain individuals are almost destitute of the power of perceiving colours, who yet have the sense of vision acute, and readily perceive other qualities in external bodies, as their size and form. This fact has been remarked by Mr Stewart. He says, “ In the power of  
 “ conceiving colours, too, there are striking differ-  
 “ ences among individuals : and, indeed, I am in-  
 “ clined to suspect, that in the greater number of  
 “ instances, the supposed defects of sight in this  
 “ respect, ought to be ascribed rather to a de-  
 “ fect in the power of conception. One thing,  
 “ is certain, that we often see men who are per-  
 “ fectly sensible of the difference between two co-

“ lours when they are presented to them, who can-  
 “ not give names to these colours with confidence,  
 “ when they see them apart ; and are, perhaps, apt  
 “ to confound the one with the other. Such men,  
 “ it should seem, feel the sensation of colour like  
 “ other men, when the object is present ; but are in-  
 “ capable (*probably in consequence of some early*  
 “ *habit of inattention,*) to conceive the sensation  
 “ distinctly, when the object is removed.” Elements,  
 ch. III.

In this quotation, we have a specimen of the usual mode of conducting metaphysical speculations. When the most curious and striking phenomena of the mind are mentioned, and when we look anxiously for an explanation of them, *habit* or *association* is dragged in to solve the difficulty ; and this often merely in a parenthesis, as if no difficulty existed. By this procedure, the wished-for information is thrown only the more into the shade. Have all the individuals here referred to, equal *natural* power of conceiving colour, or have they not ? If they have, then shew us instances of those who have had great difficulties in recalling the conceptions of colour, becoming eminently capable of doing so by acquired habits of attention. If they do not all possess equal natural power, it is absurd to overlook the natural difference, and to conceal our ignorance, by recurring at once to habit, instead of acknowledging and seeking to remove it.

In point of fact, those in whom the power of perceiving colour is naturally great, have a great development of that part of the brain situated in the midst of the arch of the eye-brows. In the Chinese, the developement of the organ is conspicuous. The faculty is generally more active in women than in men. In this as in other faculties, it is necessary to discriminate between the nature of the general function and the degree of activity of the faculty. There are individuals and nations who are fond of colours, but who have no feeling of their harmony or discord, that is, have no judgment or taste regarding them. This observation will be understood, when we come to speak of judgment in general.

It is probable that the lower animals may be possessed of this faculty, although they do not paint. The function of this faculty, is simply to perceive colours and their shades. In order to produce pictures by the application of colours, the faculties which trace the connection betwixt the means and the end must be possessed; and of these faculties the lower animals are destitute.

Dr Spurzheim states this faculty as *probable*.

## 24th, LOCALITY.

It happened, says Dr Spurzheim, that, though Dr Gall had always good eyes, he could not again discover places where he had been before. On the other

hand, one of his fellow students, called Schiedlier, had a surprising facility of recollecting localities and particular places. Schiedlier had a large development of that part of the brain which is marked as the organ of this faculty, and Gall had not. Numerous observations confirmed the inference which was drawn from this first fact. The faculty seems to give the capacity of perceiving space, distance and localities; it inspires the traveller and practical geographer, and is an ingredient in the endowment of a genius for landscape-painting.

Those in whom this faculty is powerful, form vivid and distinct conceptions of situations and scenery which they have seen or heard described, and they have great power in recalling such conceptions. When the faculty is active from an internal excitement of the organ, such conceptions are presented to them involuntarily. It gives the desire for travelling\*.

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\* This faculty is manifested very powerfully by the mysterious author of *Waverley* and the *Tales of my Landlord*. Whoever he be, if the organ is not largely developed in his head, this system is in danger. It is a fact worth noticing, that this author's descriptions of localities are tiresome and uninteresting to some readers, while to others they afford a great source of delight. The former have a natural deficiency of the power of conceiving space, while the latter have that power in an eminent degree. I have observed a marked difference of development of the organs of locality in these different classes of persons. Those who have the organ large and active, are almost as much delighted by a perusal of the author's descriptions, as by a tour made by themselves amid highland scenery; while those in whom it is small and inactive are incapable of conceiving his scenes.

The organ and general functions of this faculty are ascertained. An instinct similar in its nature to this faculty, appears to inspire animals with the propensity to migrate. This is another faculty, the organ of which the opponents say cannot be discovered, owing to the frontal sinus. This point we have already sufficiently discussed. The faculty is considered as ascertained.

### 25th, ORDER.

It is a well known fact, that every arrangement of external objects is not equally agreeable to the mind. We might infer, that there is some power, the special function of which is to perceive order in general, and to be gratified with arrangement, and displeased with disorder; because it is an indisputable fact, that the capacity of being delighted with order, and distressed by disorder, is not in proportion to the endowment of any other faculty of the mind. There are individuals who are absolute martyrs to the impulses of this faculty, who are distressed beyond measure by the sight of confusion, and highly satisfied when every thing is well arranged. And such individuals have no other faculties in uniform proportion to the perfection of this one. Hence we might infer by reasoning, the existence of a faculty of order; but in this system no faculty is admitted on that basis; and it was only the observed fact of concomitance

betwixt the power and a particular developement in several instances, that suggested its existence and functions as probable, and the faculty is stated only as such. The sort of arrangement, however, inspired by this faculty, is different from that philosophical method which is the result of the perception of the relation of things. The faculty of which we here speak, gives method and order in arranging objects, as they are physically related; but philosophical or logical inferences, the conception of systematizing or generalizing, and the idea of classifications, are formed by the reflecting faculties. The Sauvage de l'Aveyron at Paris, though an idiot in a very high degree, cannot bear to see a chair or any other object out of its place; and as soon as any thing is deranged, he, without being in any way excited to it, directly replaces it.

This faculty, and the organ of it, are stated by Dr Spurzheim as probable. The organ is so small, that the observation of it is difficult.

### 26th, TIME.

The power of conceiving time, and of remembering circumstances connected by no link but the relation in which they stand to each other in chronology, is very different in different individuals. Dr Spurzheim *conjectures*, therefore, that there is a special faculty on which this power depends. Observations,

however, are wanting, and the faculty and organ are stated as conjectural. The situation of the organ is supposed to be between Nos. 19. 24, 25. 28. and 31.

### 27th, NUMBER.

Some individuals, remarkable for their great talent of calculating, excited the attention of Dr Gall. He found even children who excelled in this faculty. Thus, a boy thirteen years of age, born at St Poelton, not far from Vienna, excelled his school-fellows surprisingly in this respect. He learnt with facility a very long series of numbers, made the most complicated arithmetical operations from memory, and very soon found their true result. Mr Mantelli, a counsellor of the Court of Appeals at Vienna, took a particular pleasure in the solution of arithmetical problems; and his son of five years of age, did nothing but calculate during the whole of the day. In such individuals, the arch of the eyebrow is either much pressed downward, or there is an elevation at the external angle of the orbit. This sign is the result of a greater developement of the part of the brain situated behind this place.

I have some evidence of the existence and functions of this faculty, from instances which have fallen under my own observation. I have met with individuals whose natural capacity for calculation was great; and the organ in them was largely deve-

loped. The special function of the faculty seems to be calculation in general. Dr Spurzheim is of opinion, that arithmetic, algebra and logarithms belong to it; but the other branches of mathematics, as geometry, &c. are not the simple results of this faculty. The organs are ascertained.

### 28th, TUNE.

The organ of tune bears the same relation to the ears, as the organ of colour does to the eyes. The ear receives the impressions of sounds, and is agreeably or disagreeably affected by them; but the ear has no recollection of tones, nor does it judge of their relations: it does not perceive the harmonies of sound; and sounds, as well as colours, may be separately pleasing, though disagreeable in combination. In treating of the sense of hearing, we have already discussed this question.

Every one knows how very different the endowment of this faculty is in different individuals. A great developement of the organ enlarges the lateral parts of the forehead; but its form varies according to the direction and form of the convolutions. Dr Spurzheim observes, that “ in Gluck, Haydn  
“ and others, this organ had a pyramidal form; in  
“ Mozart, Viotti, Zumsteg, Dussek, Crescentini  
“ and others, the external corners of the forehead  
“ are enlarged, but rounded.

“ The heads and skulls of birds which sing, and  
“ of those which do not sing, and the heads of the  
“ different individuals of the same kind, which  
“ have a greater or less disposition to sing, present  
“ a conspicuous difference at the place of this organ.  
“ The heads of males, for instance, and those of fe-  
“ males of the same kind of singing birds, are easi-  
“ ly distinguished by its different developement. In  
“ short, we consider this organ as established, by the  
“ immense number of observations which prove its  
“ existence.

“ There is a striking analogy between colours  
“ and tones, and their respective organs ; colours  
“ being perceived by the eyes, and sounds by the  
“ ears ; there are primitive colours, and such also is  
“ the case with tones. There is an agreeable suc-  
“ cession of colours, as there is of tones ; that is,  
“ there are colours and tones which agree with one  
“ another, and others which do not. Colours may  
“ harmonize, and tones may be concordant. Last-  
“ ly, the concordance both of colours and of tones,  
“ may be considered by the faculties of order and  
“ number. In this manner, indeed, colours and  
“ tones are calculated ; and thus are the principles  
“ of painting and music established.”

A way to discover the developement of the or-  
gans of this faculty is, to place the head in a line  
betwixt us and the light, directing the eye along  
the brow immediately above the external angle of  
the eye. If the organ be well developed, there will

be no hollow perceptible there, but sometimes an elevation. If the organ be small, a depression or deficiency of developement will be perceptible.

### 29th, LANGUAGE.

We have already mentioned, that Dr Gall had, in his youth, great difficulty in fixing in his memory a moderate number of words, while several of his school-fellows learned by heart with great facility, a multitude of words, which they even did not understand. Such individuals had a larger development of that part of the brain which lies above the upper half of the orbit of the eye, which is denoted by the prominence of the eyes, and their depression towards the lower part of the orbit.

Some persons learn easily the spirit of different languages, without having a great memory of words, while others easily acquire words without knowing the spirit of any language; yet it appears to Dr Spurzheim, that the memory of particular words, and philology in general, are grounded upon the same special faculty. Before it is possible to understand the special function of this faculty, it is necessary to consider, that the faculties may be internally active, by the excitement of the organic apparatus; and that thus, a being may have an inclination, a sentiment, an idea, or reflection, vividly existing internally, without expressing them outwardly by any

sign whatever. Now, a sentiment or idea being formed by the internal activity of the faculties, the superior intellectual faculties form conceptions of artificial signs, by means of which to indicate them. Therefore, the sensations, ideas and reflections, must exist, before arbitrary signs can be invented in order to indicate them ; and, of course, signs will be multiplied and modified, according to the number of the sensations and conceptions of the mind, till there are artificial signs for all the operations of the faculties. Now, there is a particular faculty which learns these signs. The faculty which learns the arbitrary signs, is quite different from those which produce them ; and also from those which produce the sensations and ideas. There is, indeed, no proportion between these different faculties. Animals do not produce arbitrary signs ; yet they learn the significations of them, in as far as they are endowed with the faculties which produce the sensations and ideas signified. Hence, tame animals learn in every country, the arbitrary language of their masters ; they may acquire even the significations of different sounds in different languages. In passing the frontier from France into Germany, I heard the same conducteur speak to the horses of one stage in French, and to the horses of the next in German : and he said, in answer to an inquiry, that they would not have understood him otherwise. Some horses of the district, however, he said, understood both languages.

It is thus possible to have many ideas without possessing the faculty of learning the arbitrary signs which express them, and to know many words without having many ideas. Thus, the function of this faculty is to make us acquainted with arbitrary signs, to give us the memory of them, to enable us to judge of their relations, and to produce a propensity to the employment of them.

This is Dr Spurzheim's account of the functions of this faculty; but I confess, that there is a difficulty in conceiving, how the reflecting faculties should invent signs; and there should be a separate faculty, the one now treated of, for learning and remembering them after they are invented. Perhaps the same faculty may both invent, learn and remember them. Of the fact, however, there is no doubt, that many individuals have a great facility in learning and remembering words, who do not appear to possess a stock of ideas coextensive with that of their vocables; and in such persons, the part of the brain which Dr Spurzheim regards as the organ of the faculty of language, has been found to be largely developed. These two facts are of the chief importance in the philosophy of the mind; for minute distinctions regarding the functions of the faculties, must necessarily partake of the uncertainty of metaphysical speculation; because such distinctions are founded on suppositions of what must be, rather than on observations of what is.

This faculty is considered as established.

## GENUS II.—REFLECTING FACULTIES.

Dr Spurzheim observes, “ I propose to call *ideas*, “ the conceptions only of the *knowing* faculties, and “ to call *reflection* every function of those faculties “ which compare,” and of which faculties we are now to treat. These faculties minister to the gratification of all the others ; and distinguish man in an eminent degree from the lower animals.

## 30th, ORGAN OF COMPARISON.

Dr Gall observed various persons, who, in order to convince others, had, in every conversation, recourse to examples, similitudes and analogies ; and seldom to reasoning and philosophical argument. In them he found, in the midst of the superior part of the forehead, an elevation which presented the form of a reversed pyramid ; and he named this organ according to its functions, the organ of Analogy.

The activity of this faculty is very important. It compares the sensations and ideas of all the other faculties ; and points out their difference, analogy, similitude or identity. It compares, for instance, the functions of the five external senses with the functions of the internal faculties : and hence it of-

ten happens, that the same vocal signs or expressions are applied to both kinds of functions; so that the same expressions are sometimes positive, and sometimes figurative. For this reason, the language of every nation proves, whether this organ is much or little developed in the greatest number of its individuals. If they have this faculty in a high degree, their language is replete with figure.

This faculty attaches us to comparison without determining its kinds; for every one must choose his analogies from his knowledge, or from the sphere of activity of his other faculties. He who has the faculty of locality in a high degree, derives thence his examples; and another from figure, or from any other faculty in which he excells.

### 31st, CAUSALITY.

The function of this faculty is to trace the relation of cause and effect. It is the chief ingredient in a truly philosophical understanding. When powerful, it gives deep penetration, and a strong perception of logical consequence in argument, by which the speech and writings of the individual will be eminently distinguished. When weak, there is a difficulty in perceiving the connection betwixt premises and conclusions; an incapacity of thinking deeply; and a mental blindness to the merits of all abstract and philosophical disquisi-

tions. In short, when it is weak, the authority, and consequently the importance and value of abstract and profound principles in philosophy, science, morals, politics, or religion, cannot be perceived. This faculty gives a genius for metaphysics and for deep reasoning of every kind. In short, it may be styled the faculty which penetrates both things and men.

The organ of it is completely ascertained ; and I do not recollect of ever meeting with an instance in which it was largely developed, and the power wanting ; or in which the organ was deficient, and the power eminently great.

### 32d, WIT.

Wit is called by the metaphysicians a habit of association. But what gives the power of associating ideas, so as to produce in others the perception and pleasurable feeling of wit ; or, after ideas are associated, what produces in us the power of experiencing the well known piquant emotion which arises from the exhibition of such associations ? The metaphysicians leave us always in the dark at this point of philosophy. The natural power of forming such associations, and of experiencing that emotion, is not in uniform proportion to any other faculty of the mind ; and yet, if the mind manifest but one power, or if wit be an act of the faculty

which traces the relation of cause and effect, wit ought always to be in proportion to these other powers. Hence we might infer by reasoning, and what is more to the purpose, experience shews that there is a special faculty, the essence of which is to produce gaiety and laughter, and which perceives the qualities of objects, and the relations of ideas fitted by Nature to gratify it.

It is the possession of this special faculty, therefore, which constitutes a wit, and not any habit of loosely connecting ideas. Persons in whom the faculty is strong, are able to make wit out of every thing; and the point of their wit often consists as much in the appropriate tone and manner of delivering it, which the faculty inspires, as in the particular relation betwixt the ideas expressed. I have observed such a habitual tendency to wit in persons in whom the faculty is powerful, that it has been difficult to tell, even in the ordinary intercourse of life, when they were in jest, and when in earnest. Those individuals, on the other hand, in whom the faculty is weak, are deficient in the natural power of manifesting this mode of thought. They are as unable to produce wit, as a person destitute of the faculty of tune, is to produce music; and it would be as easy to inspire the latter with a genius for music, as to make the former splendid in wit, by attempting to give them habits of association. Voltaire, Sterne, Piron, John Paul, &c. made wit of every thing, because they possessed the fa-

culty in an eminent degree. The organ of this faculty is perfectly ascertained.

### 33d, IMITATION.

Dr Spurzheim observes, that “ there is in the  
“ brain, an organ of a faculty for which Gall never  
“ would have spontaneously thought of seeking.  
“ It seems to be a faculty *sui generis*. One of  
“ Gall’s acquaintance, who possessed the faculty of  
“ imitating in a surprising degree, and was indeed  
“ a perfect actor, desired Gall to examine his head,  
“ because he had a transverse furrow in the midst  
“ of it. Gall accordingly found the hollow place ;  
“ but he at the same time observed before it, at the  
“ superior part of the forehead, a considerable elevation,  
“ of a hemispherical form. Some time after,  
“ Gall observed also, in the institution for deaf  
“ and dumb persons, an individual, who, the first  
“ time he put on a mask at the carnival, imitated  
“ perfectly well all the persons who frequented the  
“ institution ; and he found the configuration of the  
“ upper and fore part of his head, to be the same  
“ with that of his acquaintance. In comparing  
“ many persons endowed with this faculty at Vienna,  
“ and during our travels, we have always found  
“ that the developement of this organ coincides  
“ with the energy of the faculty of imitation. We  
“ therefore admit this organ as demonstrated.

“ It seems to me, that this faculty has a great sphere of activity. This organ is in general more developed in children than in adult persons ; and it is also known that children learn a great number of things by imitation. They do what they see done by others : they repeat what they hear told. Is it not the same with a great number of adults ? Those who possess this organ much developed, do not only mention a fact, or an action, but they also imitate, as far as possible, the gestures and voice of the person and animals they describe. In constructive arts, it gives what is called expression, motion, and life.”

## GENERAL OBSERVATIONS.

Having thus completed the enumeration of the faculties, the specification of their functions, and the indication of the organs, by means of which they manifest themselves, I proceed to offer a few General Observations.

*First*, No “ argument” can be offered to prove the existence of any faculty, or the organs of it. Every faculty and organ which are stated as ascertained, have been admitted only after an extensive series of observations of concomitance betwixt the manifestations and developement described. I have endeavoured, in the First Essay, to shew that consciousness gives us no evidence of the existence of

the organs ; and that dissection is incapable of revealing their functions. Hence it follows that the profoundest philosopher, and the most skilful anatomist, if they have not compared manifestations and developement together, are perfectly unprepared to give an opinion, entitled to any serious consideration, regarding the truth or falsehood of the system. The profoundest philosopher is incapable of demonstrating, *a priori*, that the alleged facts are *impossible* ; and he cannot shew that they are *untrue*, except by making observations himself. On self-observation, therefore, the conviction of every sensible person must rest ; and if the system be tried by comparing it with Nature, it will be found to be completely supported by facts.

In the *second* place, If the system be true, the facts which it teaches are part of the order of creation ; and a knowledge of the works of GOD can never lead to harm. Those who propagate a knowledge of it, must of course be responsible for every evil consequence which can be shewn to arise from it, if it be false ; but the establishment of its truth is a sufficient answer to those who allege that it is dangerous ; because, if the brain has really been made the organ of the mind by the Creator, the legitimate presumption is, that it has been well and wisely made such, and that those persons who see danger in a knowledge of what has been well and wisely done by the Creator, must be mistaken in their views. On the truth of the system, therefore, its supporters

take their stand. If it be found untrue, I shall be the first to renounce it. But believing that it is true, and that its consequences will be highly beneficial in giving us enlightened views of human nature, I venture to recommend it to public attention \*.

In the *third* place, let it be observed, that the great objects of investigation in this system, are the FACULTIES and their FUNCTIONS, and the ORGANS by means of which the faculties manifest themselves. The functions of the faculties depend upon their constitution, and the power of manifesting them depends upon the organs. The functions of the faculties cannot be changed by the human will. For example, the faculty of benevolence, will, when active, always give the specific emotion of compassion, in virtue of its constitution. The faculty of wit, when active, will always produce wit. The faculty

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\* Some persons suppose the doctrine, that the faculties are innate, and that their functions have been appointed by Nature, to be dangerous, because they conceive it to be inconsistent with the doctrine of human responsibility. But this idea is erroneous, as will afterwards be shewn; and, in point of fact, the doctrine is too obvious to every observer of Nature, to admit of dispute. Accordingly, no less an authority than that of Dr Chalmers is to be found in support of it; and if it had been either dangerous or untrue, it would not readily have found a place in his writings. In his Fourth Sermon preached in the Tron Church of Glasgow, (pp. 132, 3, 4 & 5), the doctrine of innate dispositions is very beautifully and forcibly stated. To save the reader trouble, the passage is printed in the Appendix, No. II.

which traces cause and effect, will penetrate into things, and seek to discover the relation of necessary consequence ; and no differences in the faculties themselves arise, from differences in the particular objects to which each may be directed. Ideas, therefore, and the relations of ideas, are of subordinate importance in the philosophy of the mind. Faculties, and their functions, and the laws which they observe in their action, are of chief consequence ; and it is when we know these thoroughly, that we shall be perfectly acquainted with this branch of philosophy. He who possesses any faculty which gives a propensity or sentiment, in a powerful degree, is able to feel that propensity or sentiment with great intensity, no matter in what country, or in what age he is born. He who possesses in a powerful degree a faculty which forms a particular class of ideas, or which traces the relation of cause and effect, is able to perform the functions of that faculty with eminent effect, whether fortune may have placed him at the plough, or at the helm of a State. Ideas depend on the circumstances in which the individual is placed, but the power of forming ideas depends upon Nature alone.

The object of this system is to investigate the number and the functions of the primitive powers of the mind. It is a subject of high importance, and one of great difficulty ; and there is more room for surprise, that Gall and Spurzheim have done so much, and done it so correctly, than that they have

done no more, or have fallen into some errors. In ascertaining the number and functions of the faculties, a great difficulty undoubtedly arises from the following circumstances. We may find an individual eminently excelling in the capacity of performing certain acts of thought; and we may find a particular part of his brain largely developed; but the natural capacity which he possesses is not to do *specific acts*, like the instinct of bees to construct cells, but a *general power*, specific only in its kind, but general in its application, to a great variety of pursuits. For example, the faculty of ideality gives us a specific power of feeling emotions of an elevating, enthusiastic, and sublime description; but this faculty may be variously manifested; as in composing sublime poetry, in executing sublime pictures, or in designing splendid palaces. Thus although the power is general in its application, each manifestation of it is of necessity confined to particular acts; and the difficulty is, to determine accurately the nature and extent of the *general power*, from observing it displayed in these particular acts. Besides, no action is the result of a single faculty alone; and hence the difficulty is increased, of determining, from actions flowing from various faculties, the precise sphere of activity of each faculty which inspires them. Every one who is acquainted with the philosophy of the mind, will see how much accurate observation and deep penetration are requisite to perfect the system in such a way; and every one will see what an interesting and important body of science the system

must comprehend, when thus completed. Great, however, as the difficulties are, they are by no means insuperable; and the mode of proceeding followed by Dr Spurzheim, mentioned on page 133, seems fully adequate to surmount them.

In the *fourth* place, as to the organs. “It must be recollected, that the organs are not confined to the surface or convolutions of the brain; but that they extend from the surface to the basis, or medulla oblongata. The degree in which they are expanded at the surface, where they form the convolutions, will indicate, in general, the relative magnitude of the whole organ. Practice, with a certain natural delicacy of tact, is necessary to qualify a person to make observations with success. Our aim ought to be, to distinguish the size, and not the mere prominence of each organ. If one organ be much developed, and the neighbouring organ very little, the developed organ presents an elevation or protuberance; but if the neighbouring organs be developed in proportion, no protuberance can be perceived, and the surface is smooth.” These are the directions of Gall and Spurzheim, expressed in the words of the author of *Cranioscopy*. The language is precise, and the ideas accurately transferred; and I avail myself of the passage with pleasure.

Allow me to add, that the eyes appear not to be always situated in the same position, relative to the external passage of the ear, in all individuals.

When the orbits are high, an appearance of less brain in front will be produced, than there really is. The line connecting the two *meatus auditorii*, therefore, should be taken as an axis; and the proportions of brain lying in different directions around it, taken as the measure of the development of the different organs. If the mass of brain betwixt the ear and the forehead is large, the organs of the knowing and reflecting faculties are fully developed. If that which lies behind and immediately above the ears, is great, the organs of the propensities common to man and animals are large. And a large quantity of brain in the upper and horizontal region of the skull, indicates, that the organs of those faculties which manifest the sentiments proper to man, are voluminous.

Let it be recollected also, that the *activity* of the organs exerts a powerful influence on the manifestations. A brain of moderate size, and great activity, will produce more vivid manifestations, than a large brain with little activity. Hence the fact, that hard labour, and exposure to bodily suffering, diminish the power of manifesting the faculties, while a sedentary employment, with moderate exercise, are favourable to the display of mental activity. Hence, too, the effects of education are accounted for. Organs never exercised perform their functions with difficulty; while those subjected to vigorous training act with energy and effect. It has been said by the enemies of the system, that Gall and Spurz-

heim state the effects of activity as a back-door to escape from the difficulty, when powerful faculties, with a small brain, are presented. But Gal and Spurzheim state only what they find in Nature: and the doctrines which they teach, are as independent of them, as the laws of gravitation were of Sir Isaac Newton. They, therefore, have no motive for providing any means of escape; for they have nothing to escape from. Accordingly, they state the effects of activity as matters of fact. If their opponents think this set of facts inconsistent with the other facts, they may reject both if they please. But it is with the brain, as with the bodily system in general; size is a general, but not an infallible indication of power. A grenadier company in a regiment displays more physical strength, as a body, than a company of light infantry, because the mass of organization in the one, is larger than in the other: yet one individual might be picked out of the light infantry company, who would excel in strength and activity, a particular individual who could be selected from the grenadiers. If, therefore, the logical faculties of any one, lead him to draw the conclusion from this fact, that the size of the muscular organs is in general no criterion of strength, he is at perfect liberty to conclude also, that the size of the brain affords no general indication of the power of manifesting the faculties. Select a hundred men with large foreheads, and another hundred men with small foreheads, from the

same rank and profession in life, and the superiority of mental power will be as great in the former, in comparison to the latter, as the strength of the grenadiers is to that of the light infantry. But it is proper to notice also that, if in each individual the activity of all the organs be the same, the largest organs will still produce the most powerful manifestations.

An ingenious gentleman of this city, who has studied the system deeply, and made many observations, informs me, that he has found activity pretty generally indicated by the *prominence* of the organs. In some individuals, the developement of the head is regular, and the surface smooth, like the portions of a regular sphere. In others, the developement is irregular, and the surface rises into eminences, and sinks into depressions. The former, in the opinion of this gentleman, indicates inactivity, and the latter activity of the organization.

Every one possesses all the faculties; but the power of manifesting them, is different in different individuals.

In this account of the faculties, I have endeavoured to adhere as closely to the spirit of Dr Spurzheim's observations as I could; and have, in many instances, adopted his language. I have, at the same time, endeavoured to render the functions of each faculty as intelligible to popular readers as possible. It has not been my intention to dissent

from him in any important particular : for no one will be, for a long time, so able to teach the system as he ; so that, in every instance where I may be found in opposition to him, I must be presumed to be in the wrong. I cannot sufficiently recommend to those who wish to study the system, to consult Dr Spurzheim's own works. They will find the doctrines there accurately laid down ; and the more these works are studied, without prejudice, and with a philosophic purpose, the more will excellent sense be discovered in them. The object of the present publication is not to supersede them. Such an attempt would be absurd. It is only to make them better known, and more popular ; and I have borrowed from them largely in this Essay, that I might furnish the reader with an outline of the system itself ; without which he could not judge of the discussions relative to its principles and merits.

It may be proper to mention here, that Dr Gall and Dr Spurzheim differ in some of their views. Both agree about the fundamental facts of the system ; namely, that particular cerebral parts are organs for manifesting particular faculties of the mind. Their chief differences are respecting the functions and laws of the faculties ; or, in short, regarding the Metaphysics of the system.

Dr Gall speaks only of specific ACTIONS, as concomitant with particular kinds of developement ;

and he never considers the nature of the GENERAL FACULTY, which produces the actions. For instance, he observed a particular part of the brain to be fully developed in thieves; and as he considered only the actions which he found in concomitance with this developement, he called this part of the brain the Organ of Theft. Dr Spurzheim, on the other hand, considered actions as indicating mental powers, specific in their nature, but general in their application; and he named the faculties according to the general power, and not according to determinate actions. Thus, what Dr Gall calls the Organ of Theft, Dr Spurzheim denominates as the organ of the faculty of Covetiveness; because the desire to acquire is the general propensity, which, when abused, may lead to stealing; but he does not conceive, that there is an organ for producing determinate acts of theft. In like manner, Dr Gall speaks of the Organ of Poetry, because it is developed in poets; while Dr Spurzheim considers the general sentiment manifested by this organ, without regard to the special modes in which it may be manifested, and names it Ideality.

Dr Gall conceives that different actions are the result of modified states of the faculties; for instance, that justice is the effect of a modified state of the organ of benevolence. In short, what Dr Spurzheim calls abuses of the general faculties, and often the effect of their mutual influence, Dr Gall considers as the result of modified organs individu-

ally. For that reason, he names the organs by their most striking and determinate actions.

In like manner, Dr Gall rejects the difference betwixt feelings and intellectual faculties; and he attributes memory and judgment to the feelings. He still continues to admit also negative faculties. Fear, for instance, as the result of the absence of courage.

These differences are distinctly mentioned by Dr Spurzheim, in his work, entitled "Physiognomical System," pages 260 and 420, of the 2d edition.

Several opponents have represented these differences betwixt Dr Gall and Dr Spurzheim, as evidence that the system is not founded on facts as they represent, but the mere effusion of their imaginations. Those, however, who have studied the system, perceive, that such a representation is unfounded, and only calculated to mislead. On the leading facts of the system, as already mentioned, and on the substance of the doctrines, Gall and Spurzheim, and all their followers, are perfectly agreed; and it is chiefly as to metaphysical functions that they differ. On these points, it will probably be long before certainty is attained; and till then, differences of opinion regarding them is to be expected; but such differences, when their true extent ~~are~~ known, do not derogate from the general certainty of the facts on which the system is founded.

So far is Dr Spurzheim from wishing to impose on the world by any thing that can be called quackery, and so little is he desirous of representing the science as more advanced than it really is, that on learning that I meditated the present publication, he suggested the propriety of my noticing the differences betwixt Dr Gall and himself. In a letter, dated *Paris, 10th June 1819*, he says, “You are obliged to state how far Dr Gall and I agree or not. He has declared against my additions since the publication of my work on Phrenology, where I mention the improvements I proposed, and which have been spoken of favourably in several journals. You cannot be mistaken, since the differences of our opinions are clearly stated in my work. I am not sorry for Dr Gall’s declaration with respect to myself; because he declares by his opposition what is not belonging to him. Examine and propagate what you think true. I never did depend on *verba magistri*, but give up every error and prejudice.”

I need scarcely say, that Dr Spurzheim’s additions appear to me to be great improvements; and that the system in his hands has assumed a much more philosophical character than it had attained in the hands of Dr Gall.

## SECT. III.

OF THE MODES OF ACTIVITY OF  
THE FACULTIES.

Every faculty when in action, from whatever cause, produces the kind of feeling, or forms the kind of ideas, which depends on its natural constitution ; but some of the faculties may be excited to activity by an effort of the will, while others cannot.

The faculties which produce PROPENSITIES and SENTIMENTS, cannot be excited to activity by a mere act of volition ; but the KNOWING and REFLECTING faculties, which form ideas, may be so excited. For example ; we cannot conjure up the sensation of SENSUAL DESIRE, or the emotions of FEAR, COMPASSION or VENERATION, by merely willing to experience them ; but we can recall an idea of a tree, or the notes of a tune, or the steps of logical argument, by a simple act of volition.

The faculties which produce PROPENSITIES and SENTIMENTS may enter into action from an internal excitement of the organs ; and then the desire or emotion which each produces is experienced, whether we will to experience it or not. For example, the faculty of amateness being internally active, produces the feeling of desire ; and we can-

not avoid the feeling if the faculty be active. We have it always in our power to permit or restrain the manifestation of it in actions; but we have no option, if the organs be excited, to experience or not to experience the feeling itself. The case is the same with the faculties of FEAR, HOPE, VENERATION, and the others. There are times when we feel involuntary emotions of fear or hope, or awe, arising in us, for which we cannot account; and such feelings depend on the internal activity of the faculties of these sentiments.

In the *second* place, these faculties may be excited to activity, independently of the will, by the presentment of the external objects fitted by nature to excite them. When an obscene object is presented, the faculty of amateness starts into instantaneous activity, and produces the feeling dependent on its constitution. When an object in distress is presented, the faculty of benevolence starts into activity, and produces the feelings which depend upon it. When an object threatening danger is presented, cautiousness gives an instantaneous emotion of fear. And when stupendous objects in nature are presented, ideality gives an instantaneous emotion of sublimity. In all of these cases, the power of acting or of not acting, is completely dependent on the will; but the power of feeling or of not feeling, is not so, if the faculty be possessed.

In the *third* place, The faculties of which we are now speaking, may be excited to activity, or

repressed, *indirectly*, by an effort of the will. For example: The knowing and reflecting faculties have the function of forming ideas. Now, if I employ these faculties to conceive internally the objects fitted by nature to excite the propensities and sentiments, the faculties of the propensities and sentiments will start into activity in the same manner, but not in so powerful a degree, as if their appropriate objects were externally present. The vivacity of the feeling, in such cases, will be in proportion to the vivacity of the conception, and to the energy of the faculties of the propensities and sentiments together. For example; if I conceive an obscene object, the faculty of amativeness will start into activity. If I conceive inwardly an object in distress, and benevolence be powerful, tears will sometimes flow from the emotion produced. In like manner, if I wish to repress the activity of amativeness, I cannot do so by merely willing that that propensity be quiet; but if I conceive objects fitted to excite veneration, fear, pride, or benevolence, these faculties will then be excited, and amativeness will sink into inactivity.

Hence, he who has any propensity or sentiment powerful in his mind, will have his intellect filled frequently with conceptions fitted to gratify it. If amativeness predominate, the inward thoughts will too often be polluted; if fear predominate, the inward thoughts will be directed to dismal objects; if benevolence predominate, the inward conceptions will

be of plans for removing distress; if veneration, the thoughts will be of religion; if covetiveness predominate, the thoughts will be of plans for saving and accumulation; if ideality predominate, the thoughts will be of splendid scenes, superior to all known realities.

As the faculties of the Propensities and Sentiments do not form Ideas, and as it is impossible to excite or recall the feelings or emotions produced by them, directly, by an act of the will, it follows, that these faculties have not the attributes of Perception, Conception, Memory, Imagination: They have the attribute of SENSATION alone; that is to say, when they are active, a sensation or emotion is experienced. Hence SENSATION is an accompaniment of the activity of all the faculties which feel, and of the nervous system in general, but sensation is no faculty in itself.

The laws of the KNOWING and REFLECTING FACULTIES are different: These faculties FORM IDEAS, and PERCEIVE RELATIONS; they are subject to the will; and they minister to the gratification of the other faculties which only feel.

1st, These faculties may be active from internal causes, as well as the former, and then the kinds of ideas which they are fitted to form, are presented involuntarily to the mind. The musician feels the notes flowing on him uncalled for. A man in whom NUMBER is powerful and active, calculates by a natural impulse. He in whom FORM is power-

ful, conceives figures by internal inspiration. He in whom CAUSALITY is powerful and active, reasons, while he thinks, without an effort. He in whom WIT is powerful and active, feels witty conceptions flowing into his mind spontaneously, and even at times and places when he would wish them not to appear.

*2dly*, These faculties may be excited by the presentment of the external objects fitted to call them into activity : and,

*3dly*, They may be excited to activity by an act of volition.

When excited by the presentment of external objects, the objects are PERCEIVED, and this act is called PERCEPTION. Perception is the lowest degree of activity of these faculties, and if no idea is formed when the object is presented, the individual is destitute of the power of manifesting the faculty whose function is to perceive objects of that kind. Thus, when tones are produced, he who cannot perceive the melody of them, is destitute of the power of manifesting the faculty of tune. When the steps of an argument are logically and distinctly stated, he who cannot perceive the relation betwixt the steps, and the necessity of the conclusion, is destitute of the power of manifesting the faculty of causality : and so on. Thus perception is a mode of action of the faculties which form ideas, and implies the lowest degree of activity ; but perception is no separate faculty.

When these faculties are excited by an act of the will, the ideas which they had previously formed are recalled: This act is named **MEMORY**, and it is the *second degree of activity* of each of these faculties; but is no faculty itself.

When the faculties are powerfully active, from internal excitement, whether by the will or from natural activity, the ideas they have previously formed are vividly and rapidly conceived, and the act of forming them is styled **CONCEPTION** or **IMAGINATION**. The train of ideas which is constantly flowing through the mind, depends on the internal activity of the faculties, and not on bonds of association betwixt particular ideas themselves. When the faculties are vigorous and active, the succession is rapid; when weak and inactive, it is slow. During profound sleep, when the organs are entirely at rest, it ceases altogether. Conception and imagination, therefore, are not faculties themselves, but result from the *third degree of activity* of every faculty which forms ideas.

And, lastly, **JUDGMENT** belongs to the **REFLECTING** faculties alone. The **KNOWING** faculties may be said, in one sense, to judge; as, for example, the faculty of tune may be agreeably or disagreeably affected, and in this way may be said to judge of sounds; but judgment, in the proper sense of the word, is a perception of relation, or of fitness, or of the connection betwixt means and an end, and

it belongs to a class of faculties entirely separate, viz. the reflecting faculties. These faculties have perception, memory, and imagination also. He who possesses them powerfully, perceives and conceives, remembers and imagines, processes of deduction, or ideas of abstract relations, with great facility.

On these principles we are able to explain why individuals may manifest a great power of perception, memory or imagination, and little judgment. If an individual have the power of manifesting several *knowing* faculties vigorously, he will have those powers in an eminent degree, while, if he be deficient in the power of manifesting the faculties which reason, he will be deficient in judgment. If philosophers would but examine mankind, they would find that a great memory or great imagination in any individual, is generally limited to particular classes of ideas, for, in general, no individual has *all* the knowing faculties powerfully bestowed. They would find, moreover, that each of these individuals has always great power of *forming* the classes or kinds of ideas which are the objects of his imagination or memory; and that in every case where an individual is deficient in judgment, he has extreme difficulty in perceiving, conceiving, and remembering ideas of abstract relations; or, in other words, that in respect of such classes of ideas, he is equally deficient in the powers of *conception* and *memory*, as he is in *judgment*. And, as the con-

verse of this fact, they will find, that an individual who manifests much reasoning power, has always a great memory for abstract principles, and for the steps of a logical argument. In short, if they would observe mankind, they would learn that an individual has often great natural powers of conception, attention, association and memory, as to one particular class of ideas, while he is extremely deficient in those powers as to another. He may have the faculty, for instance, which perceives *form*, powerful, and be deficient in that which perceives *melody*. He may have the faculty which forms ideas of *number* powerful, and be deficient in that which perceives *colours*; and, in every case where the power of perception is deficient, the powers of imagination, memory and association, will be found to be so too. Such deficiencies or uncommon endowments are *natural*, and there are individuals on whom no cultivation or habits will confer the power of forming, imagining and remembering, certain classes of ideas with facility, while they naturally possess these powers in great perfection with regard to other classes.

ATTENTION is not a faculty of the mind; but merely consists in a vivid application of the faculties which form ideas. Unless a faculty be possessed, the objects of which it takes cognizance cannot be attended to by an effort of the will.

Here, again, let me be permitted to repeat, that these views are founded not on theories of imagi-

nation, but on the observation of real facts. It was the fact, observed so completely as to be beyond the possibility of doubt, that there are *natural* differences in the powers of different individuals to form certain classes of ideas, or to perform certain mental acts, that first led Dr Gall to think of the causes of them. It was after having found in actual life individuals possessing naturally the powers of conception, imagination and memory, as to one class of ideas, who were utterly destitute of these powers as to other classes, that he and Dr Spurzheim formed the ideas of the faculties now detailed.

CONSCIOUSNESS means the knowledge which the mind has of its own operations, but of course it is not a separate faculty. Consciousness gives us no intimation of the distinct existence and separate functions of the faculties, and does not perceive the existence of the organs. It reveals only the kind of feelings, and the kind of ideas, which the faculties form, and it aids us in discovering their laws. It is a curious and important fact, in the human constitution, that from this blindness of consciousness to the distinct existence and functions of the faculties, arises a mental blindness to the effects which the faculties of the propensities and sentiments when active, produce upon our manner of perceiving and judging: For example: An individual under the influence of a strong covetive faculty, is not himself aware how forcibly that propensity influences his manner of perceiving and

thinking. His own conduct appears to him natural and proper, while the influence continues, and it requires a great exertion of the superior faculties to discriminate the effects of the propensity, to make allowance for them, and to act from the dictates of the higher faculties in opposition to desire. But present to such an individual the spectacle of a counterpart of himself hoarding and griping, and plodding after wealth, which he never seeks to enjoy, and he immediately perceives in this individual the absurdity of the same conduct which in himself appears perfectly proper. The reason is this: He judges of the conduct of others by the dictates of the higher faculties alone, and he makes no allowance for the influence of the covetive faculty in that individual's manner of thinking, because he does not feel the impulses which it gives, and because even in himself he is not aware of the effects of the influence which it actually exerts.

The case is similar with the proud man, the vain man, the passionate man, and every other who is under the domination of particular propensities or sentiments. The proud man is not aware that the special delight which he feels on contemplating himself, arises from the internal impulses of a powerful faculty of self-esteem, and that the splendid appearance of his actions in his own eyes, is not a little influenced by the feelings communicated by this sentiment. In like manner, the vain man is not aware that his anxiety to shine in our eyes is

inspired by a powerful faculty of the love of approbation, nor does he perceive, that under the unguided influence of this inspiration, he is rendering himself absurd, when he thinks that he shines most conspicuously. Impartial spectators always see the delusion, because they judge by the reasoning faculties alone, not blinded or encumbered by the disturbing influence of the sentiments or propensities which inspire the person observed. Hence a person in love sees objects in a light in which none else can perceive them; because his intellectual faculties are fascinated in performing their functions, by the excessive activity and delightful impulses of the propensities and sentiments within himself; but these impulses not existing in the impartial spectator, the conduct of the lover is seen with other eyes. Thus, one important use of this system is to make us acquainted with ourselves, and to open our eyes to the true nature of the impulses which incite us to action.

Hence the glaring inadequacy of exclusive reflection on the subjects of our own consciousness, as a mode of studying the Philosophy of the Mind; for, as we have already seen, consciousness gives us no intimation of the independent existence and separate functions of the faculties, and, besides, when the faculties which *feel* are energetically active, reflection is impracticable; and when the faculties which reflect are in a state of intense activity, feeling is repressed.

PLEASURE and PAIN are affections of every faculty. Every faculty, when indulged in its natural action, feels pleasure; "when disagreeably affected, feels pain; consequently the kinds of pain and pleasure are as numerous as the faculties. Hence one individual delights in generously pardoning offences, and another in taking revenge. One is happy in the possession of riches, and another glories in disdaining the vanity of mankind." Thus, "pain and pleasure are the result, and not the cause of the particular faculties."—*Spurzheim's New Physiog. Syst.* p. 468.

PASSION is the highest degree of activity of any faculty, and the passions are as different as the faculties: Thus, a passion for glory is the result of a high activity of the faculty which produces the LOVE OF APPROBATION. A passion for money is the result of a high activity of COVETIVENESS. A passion for music is the result of a high activity of the faculty of TUNE. A passion for metaphysics, the result of a high activity of the faculty of CAUSALITY. Hence there can be no such thing as *factitious* passions, although such passions are spoken of in various books. Man cannot alter his nature, and every object that he can desire must be desired in consequence of its tending to gratify some natural faculty.

"Locke and many modern writers maintain, that children are destitute of passions; and it is true that there is in adults one passion which is not

“ observed in children, the passion of love. There  
 “ have been, however, some individuals who, at  
 “ three or four years of age, have felt passionately  
 “ this propensity ; and in general the greater num-  
 “ ber of inclinations manifest themselves with ener-  
 “ getic activity in children. The opponents of our  
 “ doctrine, for the most part, confound the subjects  
 “ upon which the particular faculties act at differ-  
 “ ent ages, with the inclinations themselves. Chil-  
 “ dren, it is true, have no inclination to defraud  
 “ the orphan of his inheritance, or to conquer king-  
 “ doms ; but they sometimes deceive one another  
 “ for a bird’s nest ; they fight for play-things, and  
 “ they are proud to occupy the first place at school.  
 “ Young boys are even more grieved by the loss of  
 “ a bird, than when grown up they are by that of  
 “ a horse. Some faculties are even more active in  
 “ children than in adults, while other faculties are  
 “ more energetic in adults than in children. Hence  
 “ passion, in the signification of the highest degree  
 “ of activity, in general takes place in children ;  
 “ and very few faculties are quite inactive in them.  
 “ This is also the case with other faculties in adults.  
 “ Thus, it is necessary to speak more precisely, and  
 “ to indicate the faculties which do not act passion-  
 “ ately at different ages ; but it is false to say ge-  
 “ nerally, that children have no passions. Chil-  
 “ dren have also passions in the sense of affections ;  
 “ for who has not observed in them anger, jealousy,  
 “ envy, shame, affliction, joy, &c. Hence children

“have passions as well as adults.” *Spurzheim*, p. 470.

ASSOCIATION is not a faculty itself; it expresses only the mutual influence of the faculties. The metaphysicians, not keeping sufficiently in view the distinction betwixt the mind and the ideas which it forms, have overlooked *the association of FACULTIES*, while they have written volumes on the association of ideas. Now, the formation, and consequently the association of ideas, depend, in the first place, on the *natural faculties* which form them, and, in the second place, on the casual circumstances which give occasion to these faculties to act. Without the faculties, the ideas cannot be formed, and of course cannot be associated; but if the faculties be possessed, the formations, and consequently the combinations of individual ideas, may be as numerous and as various as the possible combinations of the sands of the sea. It is in vain, therefore, to expect to find any law or principle regulating the association of individual ideas. But the mutual influence of organs by association, is determinate, and a knowledge of these associations, and of the functions of the faculties manifested by the organs, gives us a full view into the philosophy of the association of ideas.

As already said, the organs of the knowing and reflecting faculties alone appear directly subjected to the will. Let us inquire, then, what other organs of our constitution in general, are placed at the com-

mand of these faculties, by association with those cerebral parts which are the organs of these faculties, and what not. In the *first* place, The nerves of voluntary motion are so ; while the nerves of the five senses are not. For example : I can at any instant reproduce, by an act of the will, any motion I have voluntarily made before ; but I cannot reproduce a single sensation or impression, experienced by means of the organs of sense, by merely willing to do so. The organs of sense may be employed by the will to examine external bodies ; but it appears to me, that in all such cases, it is the nerves of motion which obey the will, and which act as the instruments for applying the organs of sense. For example : The nerves of motion employ the fingers to feel, and the tongue to taste, open the nostrils to smell, prick up the ears to hear, carry forward the head to look ; but the organ applied is passive, and its action is not dependent on the will. When we wish not to see, we draw the eye-lid over the eye ; but we cannot close up any of the other senses by similar means, nor indeed by any means at all. We rouse the internal faculties to attend earnestly and deeply to the impression made on the organ of sense, that we may judge more correctly ; but still, this effort does not take place in the organ of sense, but in the internal faculties. In these views, I may appear to differ a little from Dr Spurzheim, who appears to think, that there is an active as well as passive state of the five senses. But, per-

haps, the difference is more in words than in substance.

From the organs of sense being thus independent of the will, arises the circumstance of our being unable to recall a feeling of pain, a taste, a sound or a smell, formerly experienced; and our inability to sympathise with such impressions when experienced by others, unless experienced also by ourselves.

In the *second* place, The organs of the propensities and sentiments, *are associated* with the organs of the knowing and reflecting faculties; and the respective organs, of course, exert a mutual influence. For example: By conceiving an object in distress, I can raise the emotion of pity in my mind; by conceiving an obscene object, I can raise a feeling of another kind; by conceiving a splendid scene in nature, I can excite the emotions produced by the faculty of ideality; and so on with every one of the faculties which produce desire and emotion.

In the *third* place, The organs of the knowing and reflecting faculties are associated with each other, and assist each other in their action. For example, The faculty of tune is the only one which perceives the impressions of melody; but, in reading music, this faculty makes use of the faculties of form and colour to perceive and distinguish the signs of the notes as written upon paper. I have no doubt, although I do not speak from observation, that there are great differences in the powers of different individuals to read music with facility, and

to play written music extempore, founded on differences in the facility of perceiving form. One, for instance, who has the less powerful faculty of tune, but the more powerful faculty of form, will read and play extemporaneously, with greater facility and correctness, than one who has a more powerful faculty of tune, but a weaker faculty of form. Or take another example: The REFLECTING faculties alone reason; but the KNOWING faculties perceive qualities, or furnish the data on which reasoning proceeds. Now, he who has powerful faculties of Form, Colour and Ideality, and moderate Reflecting Faculties, will reason better on Painting as an art, than he who has powerful Reflecting Faculties, but limited Faculties of Form, Colour and Ideality; because with the data, moderate faculties may reason well; while, without a correct perception of the data, the most powerful reflecting faculties can never arrive at a sound conclusion.

What we have now stated, applies to the association of the organs of the *faculties* with one another. But we have yet to consider the associations which may be formed betwixt the faculties and *signs*. For example: *Nature* has formed an association betwixt the external appearance of misery and the faculty of benevolence; so that, on the presentation of the appearance, the faculty enters into activity, and generates the emotion of pity. Nature, in like manner, has connected the faculty of tune with the impressions called sounds, by a link of such a na

ture that a certain sound produces a certain feeling and perception. Nature has associated the faculty of wit with external objects ; so that, on the presentation of certain circumstances, instantaneous laughter is excited. Now, in such cases, the Association betwixt the faculty and the sign or external object, is natural ; and on this association natural language is founded. The sign requires only to be presented, and it is understood in all countries, and by all nations.

But, as we have already seen, mankind possess the power of inventing and establishing arbitrary signs, to express particular inward feelings, or particular conceptions. For example : The words Love, Compassion and Justice, are mere conventional signs, by which we, in Britain, agree to express three different internal feelings or sentiments of the mind ; but there is no natural connection whatever betwixt the signs and the things signified.

Now, the way in which we learn the signification of these signs, is this. Shew us a person in a rage, and express his state of mind by the word “ Rage,” and every time the word is used afterwards, we understand it to mean that state of excitement of the mind. In the same way, point out the object I now write upon, and call it a *Table*, and every time the word is mentioned, I conceive the thing signified by it. Hence, to be able to comprehend the meaning of a word, we must be able to feel the propensity or sentiment, or to form the conception, of which the

word is the sign. For example : A child of three years old, is unable to conceive the meaning of the word Lust; because, at that age, the child has not the power of experiencing the propensity signified by it. But he can conceive the meaning of the word Table, because he is then quite able to form a conception of that piece of furniture when presented to him. A child of three years old cannot form a conception of what we mean by the words logic, syllogism, necessary consequence, abstract principle, and so on ; because the reflecting faculties, which conceive the things signified, are in him not yet developed. Or a person who is destitute of the faculty of tune, can never conceive fully what we mean by the word Melody.

Hence, the human mind is so constituted that any *indifferent* object may be selected and used as the arbitrary sign of any propensity, feeling or conception whatever. I say *indifferent* object ; for if the object stands already in a natural relation to any faculty, it cannot be made the arbitrary sign of an emotion of any opposite faculty. For example : We might, by a mutual understanding, constitute a square figure, thus , the artificial sign of the emotion termed Rage. After the agreement was understood, that figure would suggest the idea of rage to us, just as well as the letters R,a,g,e, which are mere marks placed in a certain order. But if we were whimsical enough to make the figure of a sweet and smiling countenance, which likewise is merely

a species of form, the sign of the emotion called Rage, we could never, by any efforts, come to associate the idea of rage with that figure, with facility ; for it stands already in the situation of the natural sign of emotions entirely opposite. In the same way, we might associate feelings of veneration, pity, affection or grief, with soft and slow notes of music ; because these notes, which produce emotions of a specific kind of themselves, may become arbitrary signs of any other emotions of a *homogeneous kind*, which we please to attach to them. But no association could ever be formed, by which soft, slow, and delicate tones, would become the artificial signs of violent rage, jealousy and fury ; because the *natural* character of such tones is directly opposite to the natural character of such feelings.

Hence, the circumstance of an object being already the natural sign of a propensity, sentiment or conception, of a certain kind, appears to be the only limit to our power of associating with it propensities, and conceptions of every other description, so as to make the artificial signs suggest the feeling or conception signified, to those who are acquainted with the convention.

The rapidity and vivacity with which a feeling or conception is excited on presentation of the sign, will be in proportion to the natural perfection of the faculties and the degree in which they have been exercised, but not in proportion to *either* of these circumstances singly.

Let us apply these principles to explain the phenomena of actual life, and we shall understand them better. For example,

A person in whom Amativeness is powerful, will associate ideas of obscene objects, stories and circumstances, with great facility, and will recollect them long, because they gratify this propensity. Here, the only link of association betwixt the different ideas forming the group, is their common subserviency to produce the general effect. A person in whom Combativeness is powerful will associate the ideas connected with a battle, and he will recollect and detail them with the minutest accuracy. He in whom that faculty is weak will neither attend to the fight, associate the ideas, nor recollect them so well as the other. He in whom Veneration is powerful, will attend to the ideas of a pious exhortation, associate them, and recollect them, while he in whom veneration is weak will probably forget them all. He in whom Tune is powerful will with facility, associate, recollect and reproduce the impressions of musical notes, while he who has not the power of manifesting that faculty, will be utterly incapable of doing so. Farther, he who has tune, and also veneration, conscientiousness and cautiousness powerful, faculties which produce grave and sedate characters, will, with delight, associate notes which, in their natural character, harmonize with these feelings, while he will with difficulty, associate such as are more adapted to wit, hope and ideality, if he does not

possess these faculties as powerfully as the others. He who possesses constructiveness, form and causality powerful, will associate with facility ideas of mechanical contrivances, while he in whom these faculties are weak will be wholly unable to recollect them.

I have seen the strongest evidence of the correctness of these principles, in the different effects produced by the same book on different minds. The particular scenes fitted to gratify the faculties which were most energetic in each individual, took hold of his memory, while the others were forgotten ; and every one gave an opinion of the merits or demerits of the book, as the author had succeeded in gratifying his particular faculties or not. He in whom combativeness was powerful was charmed with the battles ; he in whom covetiveness was powerful, was delighted with the maxims of frugality ; he in whom benevolence was powerful was delighted with the traits of generosity ; he in whom locality was powerful was delighted with the descriptions of scenery, and so on ; each having associated readily the kinds of ideas which were related to his own most active faculties.

Hence, the principles of association must be sought for in the constitution of the faculties, and not in the relations of particular ideas. In using association, therefore, as an instrument of artificial memory, we ought to keep always in view, that every individual will associate with greatest facility,

ideas with things which he has the greatest natural facility in perceiving. For example: He who has Number most powerful, will associate words most easily with numbers. He who has Form most powerful, will associate words most easily with figures. He who has Locality most powerful, will associate words most easily with space. He who has Tune most powerful will associate words most easily with musical notes.

Hence, also, the influence of Associations on our Judgment is easily accounted for. He in whom Veneration is powerful, and to whom the image of a saint has been from infancy presented as an object to be venerated, experiences an instantaneous and involuntary emotion of veneration every time the image is presented to him, or a conception of it formed, because it is now a sign which excites in him that emotion, and which emotion excludes the reflecting faculties from performing their functions. Hence, until we can break this association, and prevent the conception of the image from operating as a sign to excite the faculty of veneration into activity, we shall never succeed in bringing his understanding to examine the real attributes of the object itself, and to perceive its want of every quality that can justly be venerated. In the same way, when a person is in Love, the perception or conception of the object beloved stirs up the faculties which feel into such vivid emotion, and that emotion is so delightful, and the reflecting faculties

have so little consciousness of the real source of the fascination being in the faculties which feel, that it is impossible to make the lover see the object with the eyes of a disinterested spectator. If we could once break the association betwixt the object and the faculties which feel, the reflecting faculties would then perform their functions faithfully, and the object would be seen in its true colours. But, while we are unable to break this link, and to prevent this fascination, we may reason *ad sempiternum*, and our conclusions will never appear to be sound, because the premises, that is, the appearance of the object, will never be the same to the party most interested in the argument, and to us.

Thus the associations which mislead the judgment, and perpetuate prejudices, are associations of words or things with *feelings* or *sentiments*, and not associations of conceptions with conceptions, or merely of ideas with ideas. The whole classes of ideas formed by the knowing and reflecting faculties, may be associated *ad infinitum*, if these ideas do not become linked with the propensities and sentiments, and no moral prejudices will arise. Ideas of form, colour, order, and impressions of melody, may be associated in ten thousand ways, and faults in taste may perhaps be the consequence; but unless the association embrace feelings and sentiments also, what is called the heart, in common speech, is not misled.

Thus, in studying the Laws of Association, we must go beyond the ideas themselves, and consider the faculties which form them. If the faculties be kept in view, the whole phenomena of association will appear lucid and intelligible, and we shall find Nature confirming our principles, because they will be founded on Nature. We shall find the individual who has the REFLECTING FACULTIES most powerful, associating ideas according to the relation of necessary consequence. We shall find him who has the KNOWING FACULTIES most powerful, associating ideas according to the relations of time, place, and circumstances; and, in every case, we shall find each individual associating those ideas with most facility, and recollecting those ideas most perfectly, which minister to the gratification of his most powerful propensities or sentiments. If we seek only for relations among individual ideas themselves, or for general laws according to which ideas are associated in all individuals, our researches will never be crowned with success;—ideas being uniform only in kinds, but varying as to individuality, in every individual of the race. No stronger proof of this fact could be found, than in the circumstance that, although different individuals will use the same process of reasoning to produce the same conviction, yet no two will state their arguments in the same words, or make use of the same illustrations. The general identity of the reasoning process depends on the identity of the constitution of the fa-

culties which reason ; but the difference in words and illustration depends on the individual circumstances in which the reasoner has been placed, and which have afforded his faculties the particular materials which he uses. If we should suppose an architect to look for the cause of the figure of a Grecian temple, in the particular way in which each stone is placed upon another, instead of searching for it in the faculties of the designer, we should have an exact representation of a philosopher who seeks to discover the principles of association, by examining the relations of particular ideas themselves. The individual stones forming the temple, might have been arranged in millions of different ways, and still the temple have been the same. In like manner, individual ideas may be associated in an endless variety of combinations, and still the general expression of sense be the same. The ideas which compose Milton's *Paradise Lost*, for instance, might have been arranged in numberless ways, besides the one which he has adopted ; or the ideas themselves might even have been varied ; and yet if the same breathing spirit of ideality and veneration, and the same energy of the faculties which conceive, had presided in the construction of the poem, it would have been in every respect as excellent as it is.

The vigour of one man's style, and the spiritlessness of another's, arise, not from the former stringing up ideas and words, by one rule, and the other by a different one ; but from the former putting

*mind* into his words, which the latter cannot do, because he does not possess the faculties so powerfully as the other. In the last place,

SYMPATHY is not a faculty, nor is it synonymous with moral approbation. The same notes sounded by ten instruments of the same kind harmonize with one another, and blend softly together to form one peal of melody. The cause of this is to be found in the similarity of the constitution and state of the strings. Each faculty of the human mind has a specific constitution; and, in virtue of that constitution, produces specific kinds of feelings, or forms specific kinds of ideas, just as much as a string produces specific tones in virtue of its constitution. I do not mean to say that the human mind is merely a passive instrument, like a violin; but whoever regards man with a philosophic eye must perceive that his constitution is, to a certain extent, determinate by Nature, as well as the constitution of every other object on earth; and the knowledge of Man is nothing else than an acquaintance with this constitution, so far as it is fixed and determinate. The resemblance betwixt man and an instrument goes so far that, on the presentment of certain circumstances, certain feelings will arise, or certain conceptions will be formed, as invariably, and as independently of the will, as certain notes will issue from the strings of a violin on the strings being excited by the hand. Dr Hutcheson says, most justly, “ We cannot raise esteem, where no excel-

“hence appears in the object; neither fear, where  
 “no danger appears; nor pity, where no suffering;  
 “so neither can we raise good will by an effort of  
 “the mind.”—(p. 44.) And the converse holds  
 equally good, that where danger does appear, we  
 cannot avoid feeling fear; or where suffering ap-  
 pears, we cannot avoid feeling pity, if the faculties  
 which respectively give these emotions be possessed.

Now, wherever similar faculties are active in different individuals, similar feelings are experienced by each, and similarity of feeling is sympathy. Hence he who is under a strong feeling of Amativeness will sympathize with another individual in the same state. He who is under a strong feeling of Destructiveness will delight to join with others in schemes of devastation. He who is under a strong feeling of Veneration will join in adoration with the most glowing fervour. He who is under a strong feeling of Benevolence will join in schemes of charity with a melting soul. He who has powerful Reflecting Faculties will seek the society of those who reason and reflect. He who has Tune in an eminent degree will seek the company of those who will gratify it by producing pleasing sounds. He who has the Knowing Faculties most powerful will seek the company of those who converse, but exercise little reflection: and the reason of the sympathy in each case is to be found in the similarity of the constitution of the faculties in the particular individuals who sympathize.

But, in the human mind, the faculties proper to man bear sway over those common to man and brutes: and hence, in treating of sympathy, we must keep in view that, if one of two individuals have covetiveness, for instance, strong, and conscientiousness weak, while the other of the two has covetiveness strong and conscientiousness strong also, these two individuals may not sympathize in their modes of gratifying the inferior propensity; for conscientiousness produces feelings of justice in the one, which the other, from the weakness of that faculty in him, does not experience.

We *approve* of the actions produced by the lower faculties of others, only when these faculties are guided by the faculties proper to man: For example, We never approve of lust in its naked deformity; nor of combativeness when indulged for the mere pleasure of fighting; nor of destructiveness when gratified for the mere delight of being ferocious; nor of covetiveness, when directed to the naked purpose of accumulating wealth. But we approve of the action of all these faculties when directed by justice and understanding. On the contrary, we approve of the action of the sentiments proper to man, even when unmingled with any other motive. For example, We approve of benevolence, from the mere glow of charity; of veneration, from the mere inward feeling of devotion; of justice, from the mere dictates of conscientiousness. And, indeed, actions done apparently from the impulses

of these faculties lose their character of purity and excellence, in our estimation, in exact proportion to the alloy of the inferior faculties which we perceive to be mingled with them. Kindness, in which we perceive Interest, is always less valued than when pure and unadulterated. Activity in the service of the public loses its merit, in our eyes, in exact proportion as we perceive the motive to be the love of approbation, unmingled with conscientiousness and true benevolence.

These facts prove the accuracy of Spurzheim's doctrine, that the higher faculties are made to govern the lower; and it proves the curious circumstance, that man is conscious of feelings, necessary, no doubt, in themselves, but of the gratification of which, when undirected by the superior powers, he himself disapproves. Even the higher sentiments, however, must act conformably to the understanding to be approved of; and excess of veneration, of benevolence, or of scrupulosity, is always regarded as weakness, just as excess of any lower propensity is regarded as vice.

There are some faculties also, which, from their constitution, do not sympathize in different individuals in whom they are equally active. We have seen that two individuals under vivid impulses of amateness, combativeness, or covetiveness, may sympathize, even although the higher faculties do not controul or direct the actions so as to make each individual *approve* either of his own conduct

or of his neighbour's: but two individuals under vivid impulses of Self-esteem or Love of Approbation do not sympathize in any case. Two proud men or two vain men repel each other, like the similar poles of a magnet. There is something so engrossing in these two faculties, that different individuals under the unrestrained influence of them are extremely offensive to each other. I speak this from observation, and have often been amused to see each perceiving the conceit and vanity of his counterpart, while he was utterly blind to his own.

#### SECT. IV.

### MODIFICATIONS OF THE MANIFESTATIONS OF EVERY FACULTY.

It is of importance, in the next place, for those who mean to study the system philosophically, to attend to the mutual influence of the faculties. The manifestations which any faculty produces, will always partake of its specific character, but they will be considerably modified by the other faculties with which it may happen to be combined in the same individual. For instance, a powerful faculty of Covetiveness combined with a weak faculty of Conscientiousness, may produce theft, while the same faculty of covetiveness joined with a powerful faculty of conscientiousness, would produce keen ef-

forts to acquire property, but directed according to the dictates of Justice. A strong faculty of destructiveness combined with a weak faculty of benevolence, would be apt to produce cruel and ferocious actions, while the same faculty of destructiveness, if combined with strong faculties of benevolence, firmness and justice, might be altogether restrained from producing outward manifestations. A powerful faculty of combativeness combined with weak faculties of justice and benevolence, might produce violent and unprovoked attacks on others ; while the same faculty of combativeness combined with justice and benevolence, in a state of energy, would produce only great personal bravery and defensive prowess. A powerful faculty of love of approbation combined with weak reflecting faculties, will be apt to produce vanity, while the same love of approbation joined with justice, benevolence, and strong reflecting powers, will produce only honourable ambition and the love of fame. The faculty of self-esteem, when powerful, and combined with little justice and little benevolence, will produce intolerable pride and envy ; while the same faculty combined with much justice and much benevolence, will produce a high-minded and noble deportment.

Some excellent observations on this subject will be found in Dr Spurzheim's *Physiognomical System*, Section Second, of PRACTICAL CONSIDERATIONS. He there says, " I am convinced, that

“ even different philosophical systems are the re-  
 “ sult of the different combinations of faculties.  
 “ He who has more of the faculty of individuality  
 “ will never neglect facts. . . He who possesses this  
 “ faculty in a low degree, and those of comparison  
 “ and causality in the highest, will begin to philo-  
 “ sophize with Cause, and construct the world, in-  
 “ stead of observing its existence. He in whom,  
 “ on the contrary, the faculty of causality is less  
 “ active, will reject this kind of consideration, and  
 “ think that it is unphilosophical to admit a pri-  
 “ mitive cause. If, in a philosopher, the superior  
 “ sentiments be very energetic, his mind is directed  
 “ principally toward moral principles. This cir-  
 “ cumstance explains the various systems of virtue  
 “ and morality. One makes virtue consist in pru-  
 “ dence, another in benevolence. One considers  
 “ whatever is done, as being done from a love of  
 “ praise or commendation, or from vanity; and  
 “ another, as the effect of self-love. Hence phi-  
 “ losophers, as well as all other persons, think differ-  
 “ ently; and every philosopher also considers his  
 “ own manner of thinking and feeling as the best.  
 “ It seems to him to be right, because his conscious-  
 “ ness tells him so; but I think he is wrong in  
 “ considering himself as the measure of the abso-  
 “ lute nature of man. I am of opinion that, in  
 “ examining the nature of man, we ought to make  
 “ an abstraction of our manner of feeling and think-  
 “ ing. We never ought to admit in man a feeling

“ as the strongest, or a manner of thinking as the  
 “ best, solely because they are conformable to ours ;  
 “ nor ought we ever to deny in others what we do  
 “ not possess : We ought only to observe the ope-  
 “ rations of the human mind, in the conviction that  
 “ all essential kinds of manifestations of the mind,  
 “ that is, all particular faculties, are inherent in its  
 “ nature by creation, and to observe how every fa-  
 “ culty acts and can act, and under what circum-  
 “ stances it does act. In this manner, I think it  
 “ possible to determine the absolute nature of man,  
 “ and the infinite modification of individuals.”

## SECT. V.

### PATHOGNOMY, OR NATURAL LAN- GUAGE.

This subject is treated of at some length by Dr  
 Spurzheim, in Chap. III. of his octavo work. I  
 introduce it here, for the sake of connection, and I  
 select only a few of his observations, recommending  
 a study of his chapter to those who wish to enter  
 into the subject.

Pathognomy consists in the motions of the soft  
 and mobile parts of the body, and these motions  
 indicate the activity of the dispositions of the mind.  
 We have already seen, that the nerves of volun-  
 tary motion are placed at the command of the will,

and hence it follows, that when any feeling which we wish to communicate, is powerful within, we make use of the nerves of motion to express it, and these nerves produce not only sounds of the voice, but looks, attitudes and gestures. There is room to believe, that the natural external expressions of every faculty are as determinate as the special faculty itself. Dr Spurzheim lays down the principles on which Pathognomy is founded. On the present occasion, I only notice a few of the individual instances, which will show the importance of the study. In general, the motions are in the direction of the organs of the faculties.

Self-esteem draws the head and the whole body upward and backward, and keeps them stiff. The eyes are open and staring; all the motions are measured; and the voice is slow and brief. The inactivity of this faculty, or humility, is indicated by quite opposite signs. The head and body are then bowed forward; and its highest degree is marked by prostration of the body. In love of approbation, all the expressions of the face, voice and motions, are pleasant; the face is smiling; the lips are softly closed; sometimes the mouth is a little pointed; the voice is engaging; and the motions light, agile and caressing. This faculty gives the wish to be looked at, and hence all its decorative signs. Cautiousness lifts the head up and a little backward, puts every sense into activity, and commands attention. We listen and look around us.

In benevolence, all the expressions are lively, quiet, soft, free, peaceful, and without constraint. Adoration directs the head upward and forward, in the direction of the organ; the eyes and arms take the same direction; and the fingers are opened as if to receive a certain influence from above. If we need the assistance of GOD, we call on him, stretch out our hands, close them together, as if we would keep the Divinity, and say, Do not leave us, we hang on thee.

If we hear music, or play on any musical instrument, we listen and make various motions forward and sideward, according to the cadence. If we reckon internally, we look downward and sideward, still in the direction of the organ. In deep reflection, we put all the external senses in activity, and we keep the hands before the forehead, the seat of the organ.

## SECT. VI.

### MORAL LIBERTY.

On this subject I must refer to Dr Spurzheim's larger work, under the head of "Moral Considerations," for an excellent elucidation of Moral Liberty, and an account of the source of moral evil. To understand his observations, it is necessary to be acquainted

with the functions of the faculties, and to be satisfied that these functions are real. This, as often said, can only be the case after the system has been studied, and observations made ; but when the mind is so prepared, no account of the above difficult and intricate subjects, will be found more interesting and more satisfactory than that of Dr Spurzheim. I shall here merely sketch the general principles, for the sake of readers not familiar with such inquiries, which will enable them to see the nature of his data and his conclusions. He approaches very near the general principles of Dr Hutcheson and those of Bishop Butler, in his *Analogy of Natural and Revealed Religion*.

Dr Hutcheson says, that “ we prosecute ends  
“ by an immediate disposition, or determination of  
“ the soul, which is prior to all action,” (p. 38).  
“ There are kind affections ultimately terminating  
“ on the good of others ; and these constitute by na-  
“ ture, the immediate cause of moral approbation,”  
(p. 43.) “ We cannot raise esteem by an act of  
“ the will, where no excellence appears in the ob-  
“ ject, neither fear, where no danger appears, nor  
“ pity, where no suffering ; so neither can we raise  
“ good will by an effort of the mind. The natural  
“ cause must be presented,” (p. 44.) “ The *moral*  
“ *faculty* is an original determination or sense in  
“ our nature, not capable of being referred to other  
“ powers of perception,” (p. 53.) “ Reason is only

“ a subservient power to our ultimatedeterminations,  
 “ either of perception or will. Reason can only di-  
 “ rect to the means, or compare two ends previous-  
 “ ly constituted by some other immediate powers,”  
 (p. 58.) “ To each of our powers we seem to have  
 “ a corresponding taste or sense, recommending the  
 “ proper use of it to the agent, and making him re-  
 “ lish or value the like exercise of it by another.  
 “ This we see as to the powers of voice, of imitation,  
 “ designing, or machinery, motion, reasoning; there  
 “ is a sense discerning and recommending the pro-  
 “ per use of them,” (p. 59.) ‘This moral sense, from  
 “ its nature, appears to be designed for regulating  
 “ and controlling all our powers,” (p. 61.)

Now, according to Dr Spurzheim, moral liberty is accounted for as follows.

Each faculty produces a specific internal impulse or capacity of a certain kind; and it is a steady and permanent operating influence in the constitution. Being free, is the opposite of being forced; and hence, the first requisite of liberty, is having the power to permit or restrain the manifestations of these impulses in actions by the will. Accordingly, no one will deny that, although he feels desire, he may refrain from indulging it; although he may wish to make music, he may abstain from doing so; and so on with all the other impulses of our nature. Hence we possess the first requisite of liberty, the power of restraint.

The next ingredient in freedom, is *will*. Mere *desire* is not will ; because, as we have just seen, we often desire to enjoy certain gratifications, and yet *will* not. We must enquire, therefore, in what will consists.

In order to have *will* to decide *for* or *against*, we must have the power of *comparing* actions with results. For example: If I desire my neighbour's horse, and have no faculty of comparing the consequences of taking it with those of not taking it, I can have no will ; I must just yield to the strongest impulse. But, if I can compare, and see death or transportation as the consequences of taking, and a mere suppression of desire as the consequence of not taking, then I have the power of *willing* not to take, or the power of choosing betwixt motives ; and I may refrain from indulging my desire by an act of the will. Hence, *will* begins with the knowing and reflecting faculties, or with the understanding ; and, therefore, the will of every animal is proportionate to its understanding. Man has the greatest freedom, because his will has the greatest extent ; and this is the case, because he has the greatest understanding.

Thus, *will* is the decision of the understanding upon the *motives*. But we must now inquire whence the motives arise. The motives are furnished by the faculties ; for every faculty gives an impulse to act in conformity to its own nature ; and hence, the motives are as numerous as the faculties.

Thus, liberty requires will, motives, and the influence of the will upon the actions. This is, indeed, the only true idea of liberty; but this liberty is not yet moral liberty; and it consequently remains to be examined, where the morality of our actions begins.

If the impulses given by the different faculties appeared all equally elevated, excellent and authoritative in themselves, then there would be no difference of actions in point of morality; because every action would be merely a gratification of one faculty or another. But, if nature has made the faculties appear to the understanding not all to possess equal intrinsic dignity and authority, but has made some appear clearly and decidedly inferior and subservient in their nature to others, then it is clear that morality begins with these faculties of superior authority. Now, the faculties which produce the propensities common to man and animals, appear to the understanding of every rational being inferior in their nature to the faculties which produce the sentiments proper to man, as conscientiousness, veneration, hope. Hence, all the motives which result from faculties common to man and animals present no morality, they suppose no idea of conscience or duty, nor any idea of sin; for no animal is susceptible of these feelings, and conscience begins with the sentiments proper to man. An indulgence of coveniteness in opposition to the dictates of conscientiousness implies guilt; for here, the lower propensi-

ty acts in defiance of the dictates of a higher sentiment. But the fox, when it preys in the poultry yard, has no consciousness of guilt ; for it does not possess a faculty which produces the sentiment of justice or of duty ; and hence, it cannot compare the action with the dictates of such a faculty, and of course, cannot perceive the opposition betwixt them. Hence, as liberty begins with understanding, so morality begins with the faculty of duty or justice. Absolute conscience thus results from the motives produced by the faculties proper to man ; and moral liberty is will, applied to absolute conscience. Absolutely good or moral actions, therefore, result, when the will acts according to the motives proper to man ; and whatever is not conformable to will, applied to the motive of absolute conscience, is absolute evil. Man, then, has not only the greatest liberty, for he has the greatest will and the greatest number of motives ; but he alone possesses moral liberty.

Thus, we may easily conceive, how moral evil has come into the world, or what is its origin. It consists in actions which are not conformable to the whole faculties proper to man. As soon as any faculty acts without being directed by all the faculties proper to man, these declare that the actions are abuses, or are morally evil. Thus, moral good is any action conformable to the faculties proper to man, which are the directing faculties ; and moral

evil is any action which is not conformable to them. Now, the cause is clear, why moral evil has always existed, and probably will always exist. For the inferior faculties exist, and are inherent in human nature: their use is necessary to the preservation of man; but their energy easily goes farther than the faculties proper to man permit; and then it produces abuses. Hunger and thirst will always exist; therefore, at all times, man may eat and drink more than the preservation of his body requires, and gluttony and drunkenness may easily take place. But hunger and thirst are not bad in themselves; they only lead to evil consequences when satisfied in an improper manner. In the same way, the faculties which produce the lower propensities are not bad in themselves; but, as they may act with greater energy than the faculties proper to man approve of, abuses or moral evil may result from their disproportionate activity.

Those who have charged this system with leading to Fatalism, because it teaches that the faculties are innate, must have done so in extreme ignorance of the doctrines of our best divines on the subject of moral liberty. In Bishop Butler's "Analogy of Religion, "Natural and Revealed, to the Constitution and "Course of Nature," we meet with the following, among many other similar observations. "Together  
"with the general principle of moral understanding,  
"we have in our inward frame various affections to-  
"wards particular external objects. These affec-

“ tions are naturally, and of right, subject to the  
“ government of the moral principle, as to the oc-  
“ casions upon which they may be gratified; as to the  
“ times, degrees, and manner, in which the objects  
“ of them may be pursued : but then, the principle  
“ of virtue can neither excite them, nor prevent  
“ their being excited. On the contrary, they are  
“ naturally felt, when the objects of them are pre-  
“ sent to the mind ; not only before all considera-  
“ tion, whether they can be obtained by lawful  
“ means, but after it is found they cannot. For  
“ the natural objects of affection continue so : the  
“ necessaries, conveniences, and pleasures of life, re-  
“ main naturally desirable ; though they cannot be  
“ obtained innocently : nay, though they cannot  
“ possibly be obtained at all. And when the ob-  
“ jects of any affection whatever cannot be obtained  
“ without unlawful means ; but may be obtained  
“ by them : such affection, though its being excit-  
“ ed, and its continuing some time in the mind, be  
“ as innocent as it is natural and necessary ; yet can-  
“ not but be conceived to have a tendency to incline  
“ persons to venture upon such unlawful means ;  
“ and, therefore, must be conceived as putting them  
“ in some danger of it. Now, what is the general  
“ security against this danger, against their actual-  
“ ly deviating from right ? As the danger is, so  
“ also must the security be, from within ; from the  
“ practical principle of virtue. And the strengthen-  
“ ing or improving this principle, considered as prac-

“tical, or as a principle of action, will lessen the  
 “danger, or increase the security against it. And  
 “this moral principle is capable of improvement,  
 “by proper discipline and exercise.” (Analogy,  
 Part I. ch. v. pp. 112.–13. Edition printed at  
 Edinburgh 1804.)

“Let the assertion be despised, or let it be ridi-  
 “culed, it is undeniably true, that moral obligations  
 “would remain certain, though it were not certain  
 “what would, upon the whole, be the consequences  
 “of observing or violating them. For these obliga-  
 “tions arise immediately and necessarily from the  
 “judgment of our own mind unless perverted, which  
 “we cannot violate without being self-condemned.”  
 Part I. c. vii. p. 164.

“One cannot proceed one step in reasoning up-  
 “on natural religion, any more than upon Christi-  
 “anity, without laying it down as a first principle,  
 “that the dispensations of Providence are not to be  
 “judged of by their perversions, but by their genu-  
 “ine tendencies: not by what they actually do seem  
 “to effect, but what they would effect, if mankind  
 “did their part; that part which is justly put and  
 “left upon them. It is altogether as much the lan-  
 “guage of one as of the other, *He that is unjust,*  
 “*let him be unjust still; and he that is holy, let*  
 “*him be holy still,* (Rev. xxii. 11.) The light of  
 “reason does not, any more than that of revelation,  
 “force men to submit to its authority: both admo-  
 “nish them of what they ought to do and avoid,

“ together with the consequences of each ; and after  
 “ this, leave them at full liberty to act just as they  
 “ please, till the appointed time of Judgment.  
 “ Every moment’s experience shews, that this is  
 “ GOD’s general rule of government.” Part II. c. i.  
 p. 186.

The reader is referred also to Butler’s Dissertation on the Nature of Virtue ; and his Sermons on Human Nature, where doctrines similar to those taught by Dr Spurzheim are laid down in every page. The following, for example, among many others, might have been adopted by Dr Spurzheim himself.

“ There is a principle of reflection in men, by  
 “ which they distinguish between, approve and dis-  
 “ approve their own actions. We are plainly con-  
 “ stituted such sort of creatures, as to reflect upon  
 “ our own nature. The mind can take a view of  
 “ what passes within itself, its propension, aver-  
 “ sions, passions, affections, as respecting such ob-  
 “ jects, and in such degrees : and of the several ac-  
 “ tions consequent thereupon. In this survey it ap-  
 “ proves of one, disapproves of another, and towards  
 “ the third, is affected in neither of these ways, but  
 “ is quite indifferent. This principle in man, by  
 “ which he approves or disapproves his heart, tem-  
 “ per and actions, is conscience ; for this is the strict  
 “ sense of the word, though sometimes it is used so  
 “ as to take in more.” Sermon I. upon Human Na-  
 ture.

These doctrines coincide exactly with those of Dr Spurzheim; and it would be extremely desirable, that those who are disposed to attack the Doctor's views, should themselves favour us with some other theory, that we might ascertain the merits of the one with more facility, by comparing it with the other. I make this observation, from having observed, that those individuals are ever loudest in clamouring against the system as leading to fatalism, who do not themselves possess a single philosophical idea on the subject of Moral Liberty; and I am convinced, that the best way of enlightening the understandings of such individuals, is to induce them to endeavour to form a theory of their own, even in imagination; because they will then find, that they must always recur to innate dispositions, as the basis even of their imaginations on the subject.

## SECT. VII.

### FACTS ILLUSTRATIVE OF THE SYSTEM.

Hitherto, when statements of particular facts have been brought forward in support of the system of Drs Gall and Spurzheim, the opponents have, in every instance, represented them as untrue; and stigmatized them as either the deliberate falsehoods of de-

signing quackery, or the result of the miserable delusions of a weak credulity. Such representations cannot be philosophically answered; being altogether gratuitous, they cannot be met by argument. The proper mode of treating them, is to regard them with contempt. But as we ought, in every case, to profit by experience; and as authenticity in facts tends powerfully to advance the progress of truth, it will be proper in future to bring forward cases, supported by all the evidence that can be obtained, and as free from suspicion as possible. In proportion as the number of witnesses to any set of facts is increased, the chances of incorrect evidence being given, from imperfect observation or deliberate design to delude, are diminished. Accordingly, although I have made many hundred observations myself, I have endeavoured, rather than state these, to obtain written statements of the observations of other individuals; and now present the latter to the reader as less liable to suspicion, than observations depending entirely on either my own veracity or judgment for their credibility. The gentlemen who have written these communications, do not, indeed, permit me to add their real signatures to their letters; but I pledge myself that the communications are genuine, and that the cases reported are real. To these cases many more might have been added; but to the philosophical inquirer nothing is less interesting than mere details; and to the popular reader, too many facts are liable to appear fatiguing.

It is proper to add, also, to prevent misconception, that the facts now to be brought forward are presented not as data from which the reader is expected to conclude, without farther enquiry, that the system is founded in nature, or as the only grounds on which I have ventured so strongly to recommend it to his attention. They are laid before him merely as evidence to convince him that there are facts in nature in support of the system, which he may himself observe, if he will qualify himself to do so; and that the clamorous imputations, on the part of the opponents, of quackery and delusion against the supporters of the system, may be presumed to have arisen in no small degree from the ignorance of the opponents themselves on the subject. The facts now to be mentioned may, no doubt, like those which have already been presented, be made a subject of ridicule and contempt, by persons whose wit is greater than their judgment. But, as formerly observed, the ridicule in such a case attaches to Nature, and not to those who merely observe her constitution.

The first communication requires no preliminary observations.

“ SIR,

22d June 1819.

“ You are right in believing, that truth is most likely to be obtained from one, who was formerly a thorough despiser of Dr Spurzheim’s doctrine; but who, from self-examination, and a patient in-

vestigation of facts, was led not only to believe that the Doctor was right, but that all that had been previously taught of the Philosophy of the Human Mind, was emptiness. No apology was necessary for the request you have made, to be possessed of the history of my conversion, which I shall proceed to detail; and I am glad of the opportunity you have given me, not only to serve the cause of science by describing my own case, but of communicating the result of some observations on the indication of one faculty, that of language and verbal memory, inattention to which has led to some mistakes.

“That provoking word *Craniology*, which has misled so many, deceived me. I considered the system, without examination, as an extension of the whims of Lavater; and believed that it was just as possible to tell, from the appearance and shape of the fingers, whether a person had a delicate sense of touch, as to discover from the appearance of the skull, which is hard bone, whether a man was wise or foolish. In this state of mind, and at the time when the critique on Dr Spurzheim’s work appeared in the *Edinburgh Review*, I was attacked on the subject, by a lady very well known for her uncommon talent. As soon as she discovered that I had not read the Doctor’s book, she ceased to argue, and asked, as a personal favour, that I would take the first opportunity of hearing the Doctor lecture, and of becoming acquainted with him.

This opportunity occurred, not many months after I had promised to give the Doctor a fair and patient hearing. His introductory explanation of the objects of his system, and of the foundation on which it was built, at once secured my attention, and arrested my whole thoughts. I sought an introduction to him, and resolved not only to listen to his lectures, but to converse with him as often as I could find him disengaged.

“ Having some peculiarities of character, and some propensities sufficiently remarkable to have roused my exertions to overcome them, long before Dr Spurzheim had been heard of, I considered my own case as fully sufficient to determine whether the Doctor was a true philosopher or a quack. I had not forgotten some symptoms of destructiveness that had manifested themselves in my conduct, and the recollection of which always made me shudder. On examination, I found the organ of that propensity fully developed ; and I think it is a remark of Dr Spurzheim’s, that this organ is most active in childhood, the higher faculties which afterwards controul it, not arriving at maturity till later in life. I never could learn to repeat either prose or verse ; and at school, I always experienced the greatest difficulty in getting my tasks by heart. In concomitance with this fact, I found the external indication of the organ of verbal memory or the organ of language, small. This defect is particularly distressing to me on many occasions ; for I cannot speak in public, though my imagination is lively enough ; nor can I

recollect long what I read, nor write down readily any thing I have designed. I feel this defect, together with a deficiency in the organ of number, in another respect. Having the organ of music pretty well developed, I can, with the greatest facility, compose music, but I lose it almost instantly, from my inability to remember the notes. I have forgotten the name of a friend; but I never forgot a face, nor a picture, nor scenes of nature; and in coincidence with this latter fact, form and locality are well developed. I may mention likewise, that the propensity to construct is strong, and the organ well marked; and I can exhibit on my hands numerous scars, the consequences of my youthful exertions with sharp tools. I am still very fond of designing and constructing. These, and many other peculiarities, I found most distinctly indicated on my head. If, then, any man will appeal to his own conscience, and examine his head in private, according to the rules laid down by Dr Spurzheim, and after having compared several heads or skulls, he cannot fail to be convinced.

“ Let any one when he meets another, known to be a linguist, or who has written on language, observe the configuration of his eyes. Poets must have this as well as ideality, well developed, and I have remarked them in several. Almost every one who is zealous in the pursuit of natural history in any of its branches, possesses strong indications of verbal memory, as well as of form. Travellers have lo-

cality well developed. These are obvious signs, together with that of music.

“ In regard to that kind of memory which retains words, allow me to mention, in order to guard you against mistakes, into which I have myself fallen, that, although a full and *prominent* eye at once indicates a strong verbal memory, and a facility in learning languages; yet small eyes, when in a particular position, relatively to the eye-brows, that is, somewhat distant from and below them, also indicate strong verbal memory. But when the eyes are deep seated, and near or close to the eye-brows, or upper part of the socket, then a defect of memory may be almost relied on. Also, when the eye is of a moderate size, but close up to the eye-brow, as in my own case, deficient memory is indicated. These configurations depend on the degree of depression of the brow forming the upper part of the socket, occasioned by the size of the portion of brain immediately above it. It is exceedingly difficult to become an adept in observing the smaller organs in living subjects; and to be able to do so, the organ of comparison must be in good order. But, for the mere purpose of confirming the principles of the system, there are a sufficient number of organs, the prominence and size of which, can never fail to convince every one, who is not too wise in his own conceit, or who is not afraid of self-condemnation.

“ You ask me respecting a child whom Dr Spurzheim selected, at sight, from among several other

children who were very fond of music, as having the musical faculty in a superior degree, and of whom the Doctor prophesied that he would not only be remarkably fond of music, but that he would be most partial to the music of Mozart. The boy is not yet arrived at a time of life to shew any thing decided as to his taste ; but I can say that some one or more of Mozart's airs, is sure to be heard from him every day, and sung with a precision of intonation, of which a child's voice is seldom capable. Dr Spurzheim mentioned, that as Mozart's music had more philosophical combination than Beethoven's, which is more under the influence of imagination, he considered that the former would be the favourite with the boy, as he saw the indication of those powers which are necessary for that combination, in his head. I have observed, that the boy referred to, seems particularly pleased with such airs as have an expression of mildness and benevolence, such as that beginning, " Batti, Batti, O bel Masetto ;" and these dispositions are not only most evident in the configuration of his head, but in his behaviour and manner.

" I am not yet prepared to state particular cases ; but, as far as my observation has gone, I think it very evident, that the peculiar taste in music of each individual, will be found to indicate certain peculiarities of his feeling and character, and which will be seen also in the form of the head.—If I have not answered your inquiries with sufficient

minuteness, have the goodness to inform me ; as I am ready to satisfy you in every particular."

The next letter is from a medical gentleman of this city ; and his statement will, perhaps, be received with the greater confidence by some readers, when I mention, that he has not yet studied the system himself in detail, so as to form an ultimate opinion on its merits. In consequence, he cannot be regarded as viewing the facts which he states with the supposed partiality of a convert. His letter regards a son, who has a very uncommon developement of the organs of the reflecting faculties and of form, and who has shewn talents uncommon for his years. I have seen the boy myself.

" DEAR SIR,

*July 9. 1819.*

" In compliance with your wishes, I shall state to you such particulars as have appeared most striking in my son's turn of mind, and in the form of his head. He is now eight years of age.

" His head is altogether larger than the average. The part most particularly prominent, is the upper part of the forehead. His eyes are rather large, and remarkably distant from one another.

" In his conversation, he evinces a remarkable degree of mechanical curiosity, and a wish to account for the form and qualities of objects. He is fond of devising processes for the production of effects, that are either known to him, or strike him as practicable. When very young, he was often in the habit of putting various substances in the fire,

to see whether they would melt, or burn, or remain unchanged.

“ One of his favourite amusements is natural history ; and the chief talent which he has discovered, is that of tracing the forms of animals, with any sort of drawing materials, and cutting them on paper, which he has long done. He produces striking resemblances in this manner, with the scissors, without any previous outline being traced, and without coming back, or altering his work. These are taken from Nature and artificial figures indiscriminately ; and, where his materials strike him as deficient when used in the ordinary way, he often employs ingenious contrivances for completing his resemblances.

“ He at one time conceived a passion for etymologies, in which he sometimes hit the truth, but for the most part shewed merely his good will to that pursuit, pleasing himself with vague and ridiculous derivations of words, under the disadvantages attending the confinement of his literary knowledge to his mother tongue.

“ It is not easy to express in precise terms the *degree* in which these mental phenomena have appeared. I may, however, state, that his talent in drawing and cutting figures, has appeared to many individuals quite singular and incredible, and that nearly all his voluntary conversation is occupied in the manner above described. I am,” &c. B.

The next letter is from a gentleman whose first strong impressions in favour of the system, arose

from the exact correspondence betwixt the developement of his own head, and the dispositions of which he was conscious.

“DEAR SIR,                    *Edinburgh, July 15. 1819.*

“I very willingly comply with your request. I am aware, indeed, that I cannot bring forward any facts that will be considered as decisive, respecting the truth of Spurzheim’s System. You know that it is not long since my prejudices were so far overcome, as to allow me to compare facts with theory; and my opportunities of observation have not been very great. But the facts which I have observed, few and inconclusive as they are by themselves, will, I hope, meet the object you have in view. I may mention, in the first place, that I found the developement of my own cranium correspond with the most wonderful exactness to my character. The very degree of my sentiments and intellectual faculties is denoted with the utmost precision. Every person who wishes to become acquainted with the science, naturally begins by examining his own developement. But nobody ought to satisfy himself with comparing his cranium with the cast. Craniology is an *art*, and before one can be expert in it, a time must be served to it, as to every other art. Recourse, therefore, should be had to some experienced observer, who will point out the situation of the different organs. I know that I made several mistakes, when comparing by myself the cast

with my own head: And this, for a considerable time, I employed as an argument against the system. But my mistakes were at length rectified by a Spurzheimite who knew nothing of my character.— The most curious case that I have met with, is that of a boy whose brow sinks into a furrow immediately above the eyes, and rises into a ridge immediately under the hair. His character corresponds exactly with this developement. He has a total want of order; his clothes and books are scattered over the whole house; he scarcely knows north from south; hates travelling; has no taste for the beauties of external nature; and is so absent to the common objects around him, that one would suppose he had an indistinctness of vision. But then his understanding is far above his years. He reasons like a philosopher. The account which he gives of any thing he has been reading, is a model for an abstract. Though he has a bad memory for the words of a language, (his eyes by the way are small and pressed upwards,) it is quite astonishing how he unravels a knotty passage. His dispositions are as exactly denoted by the developement of the organs of his propensities and sentiments; but as there are some by whom the likeness might perhaps be recognized, it may not be quite fair to mention them. I have met with a number of gentlemen who have No. 24., Locality, strikingly developed, and I have uniformly found them given to travel, delighted with descriptive poetry, and anxious to know the

relative situation of places. A friend of mine is well known by all his acquaintances as an excellent arithmetician. He can resolve a very complicated question in the least time, without having recourse to his peneil. When I first began to direct my attention to this science, I resolved to examine his organ for Number, the first time I should meet with him; and I was happy to find the protuberance at the external angle of the eye very remarkable. You must have observed this organ very strikingly developed in Dr C.; and you know he was once more admired as an eminent Mathematician, than as a Pulpit Orator. I unluckily am not acquainted with any person who is an eminent designer or architect; but I know many who are utterly destitute of all constructiveness; and in them all I have found a hollow in No. 7. I have made many more observations; but I shall not trouble you with the details. I may mention in general, that I have found the developement of Nos. 12. 31. 11. 20. and 29\*, accompanied with corresponding manifestations. I only know of one instance where No. 9. Secretiveness, is much developed; and the individual shews, in his side-long look, all the slyness that is said to lurk in that organ. In the course of my observations, I have found several facts which I cannot reconcile to the system. But while there is such a mass of facts on the other side, I am disposed to ascribe these ano-

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\* Cautiousness,—Causality,—Love of Approbation,—Form, and Language.

malies, partly to my want of expertness in examining the cranium, (I have a sad want of No. 20. Form, and do not easily perceive differences in form,) and partly to the counteracting power of other propensities. If I find that this is not the case, I shall not give up the great principles of the system, which I now consider as established; but shall merely modify it according to the newly observed facts. I expect, indeed, that there will be much of this modifying: for, though Gall and Spurzheim have perhaps done as much as it was possible to expect, yet it is not to be supposed that any *two* individuals, whatever may be their talents and opportunities of observation, could form a system upon a subject of such difficulty, that would not require to be in some respects altered, improved, and enlarged. I am," &c. C.

The communication next in order, is from a gentleman who is but little acquainted with the system himself; but whose observations are not unimportant, so far as they go.

“DEAR SIR, 20th June 1819.

“Although I know exceedingly little about Dr Spurzheim’s system, yet I shall, in compliance with your request, state with pleasure, the facts which have come under my observation.

“1st, I recollect distinctly, that you told me, that the head of the celebrated Dr C. ought to be very broad, at the upper and lateral parts of the forehead; and when I saw him, I found it to be

exactly so. I think you said, that the organs which he ought to have large, were those of ideality. At this time I had not seen Dr C.; and you said you had not seen him either.

“*2dly*, I recollect also, that on one occasion, when the system was spoken of, I mentioned, that there was a man on my premises, who approached very nearly to the state of an idiot. He was able to lay turnips before cattle, clean a stable, or do any piece of work that required mere labour and no skill; but he was incapable of doing any thing that required the smallest portion of reflection. On examining his head in presence of a number of gentlemen, we found it altogether very small; so much so, that the hat, which fitted him exactly, stood on the crown of the head of every one of the gentlemen present; and the forehead in particular, did not rise more than an inch above the eye-brows; so that the upper part of it was wanting. The forehead was also remarkably narrow, and sloped suddenly backwards.

“*3dly*, On the same occasion it was mentioned, that Dr Spurzheim had said, that tractable and good natured animals might be distinguished from intractable and vicious ones, by the former having full and broad foreheads, while the latter had the forehead small and narrow; and I said, that this observation could soon be put to the test; because I had two horses, the one of which was remarkable for do-

cility, while the other was as remarkable for ill nature and intractability.

“ When the two animals were brought out, the difference betwixt their heads was very conspicuous. The forehead of the former was an inch broader, immediately below the eyes, than that of the latter, and also considerably fuller in the middle.

“ In the last place, I may mention, that my acquaintance with the situations of the organs is so limited, that my observations have, in consequence, been confined to the organ of amativeness. I easily recollected the situation of this one, from several facts regarding the lower animals, which were familiar to me before I had heard any thing of Dr Spurzheim’s doctrines. These were, that male animals, which had not been castrated, had thicker necks than those which had undergone that operation.

“ If the other organs be founded as strongly in facts as this one, both in the human race and the brute creation, I am perfectly certain, that the system will bear the strictest comparison with nature ; and that the conviction of its truth will be irresistible. I am,” &c. D.

The next communication requires no preliminary observations.

“ DEAR SIR,

*2d August 1819.*

“ Though accustomed to regard Dr Spurzheim’s system with no small degree of scepticism, I confess,

that some of the *facts* by which I have seen it illustrated have at least inclined me to give it a candid examination; and, as far as my limited powers of observation extend, I have found it uniformly confirmed by facts. You may remember my surprise, when you told me some time since, that I am susceptible in a very high degree of the influence of hope; and this merely, from examining my head, when the short term of our acquaintance had given you very little opportunity of observing, otherwise than by your *eye*, any of my peculiarities. If I have one tendency more decided than another, it is to view things in their fairest light; and my whole life has been cheered by the influence of this happy *sentiment*. On comparing my head with one of Dr Spurzheim's casts, I find the organ of Hope fully developed. You told me also that I had the organs of Locality and Order large. On a similar comparison, I find, that, in this respect likewise, you were quite correct; and I can safely say, that scenery in nature and descriptive poetry, give me great delight, and that I am fond of *localities*. I am distressed to see things in disorder; and on farther consideration I find, that I am well entitled to have that tendency particularly developed, as I shall explain at greater length when I have the pleasure of seeing you. I am," &c. E.

The writer of the following letter is well acquainted with the doctrines.

*“Edinburgh, 4th June 1819.”*

“As you have requested me to write down such facts illustrative of the truth of Dr Spurzheim’s system as have fallen under my observation, I make you welcome to the following, if they can be of any service.

“I am well acquainted with several young persons, who are little prone to conceal their true dispositions; and I thought it a good test of the system, to try if the shape of their heads corresponded with their characters. The eldest youth, of whom I shall now speak, is about fifteen. He was by no means a good scholar; but he is remarkable for correctness of feeling, and what is called good common sense. On examining his head, I found that his eyes are not prominent, and that they lie rather up in the socket than down. This configuration I see from Dr Spurzheim’s book, which I have read, marks a small organ of language. The organs of conscientiousness, firmness, cautiousness, love of approbation and benevolence, are full; and this, I think, is exactly in correspondence with his character. He is remarkably modest, rather approaching to bashfulness, obliging in his dispositions, and very candid.

“The immediate younger brother of this youth, is in some respects different. He, too, is not eminent as a scholar; and his eyes resemble his brother’s. But while his brother is very sensible to the approbation or disapprobation of others, he cares very little about what we think of him. He is fond

of money, however, which he carefully accumulates. His head is very decidedly less than his brother's at the seat of the organ of the love of approbation ; but I cannot say that it is so much fuller at that of Cove-tiveness, as the difference of dispositions is great.

“ Another of the same family, now about eight years of age, is a good scholar ; he is very fond of approbation ; is quick in feeling offence ; is somewhat obstinate if provoked ; and altogether has an air and carriage different from that of his two brothers, and what would be called more genteel. His eyes are more prominent ; and the organs of self-esteem, firmness, conscientiousness and love of approbation are very fully developed ; all which appear to me to correspond with what Dr Spurzheim says such kinds of individuals should have.

“ A fourth of these boys is remarkable for a large developement of the organ of form, apparent by the great distance at which his eyes are placed, and he shewed a passion for writing before he was put to school, and he draws on paper and fashions in wood a great many objects of his own accord.

“ One of the girls also has a very remarkable head. She has very large organs of cautiousness, conscientiousness and firmness, with little hope ; and she is one of the most serious, sedate-looking children that can be seen. She shews great timidity in her manner, and yet at times the most determined obstinacy, when her feelings are roused. She is now only about five years old, so I cannot speak of her talents.

“ To these cases I could add many more, but suppose you have enough. The system of Dr Spurzheim has afforded me a great deal of insight into character, and I am sure I know both others and myself better in consequence of it, although, in truth, I know but little of its merits.

“ *P. S.*—I do not mean to give you an account of my own head; but I may mention, that the organs of locality are by no means prominent, and that I am not fond of travelling, and do not conceive descriptions of local scenery with facility.” F.

“ DEAR SIR,      *Edinburgh, 3d August 1819.*

“ I have no hesitation in stating, that I know various instances of the correctness of Dr Spurzheim’s system. A friend of mine whom you know, notwithstanding the limited opportunities he has enjoyed of improving his mind, discovers great depth of thought, and in his head the organs of causality are largely developed. I may give myself also as an instance. I have considerable difficulty in distinguishing shades of colours, and have often been laughed at for mistaking a dark shade of brown or green for black. I do think that the organs of colour are rather small in my head, and others, better able to judge, have said so likewise. I have no defect of sight otherwise. I am,” G.

‘The following communication was sent to me from Paris, by the medical gentleman mentioned in a

former part of these essays. It has already appeared in the Literary and Statistical Magazine for Scotland; but as it is of considerable importance, and as I can answer for the authenticity of it, a place is given to it here.

“ *Paris, 13th December 1818.*

“ I mentioned to you formerly the case of a suicide who was brought to the Hotel Dieu. His case appeared to me very interesting, and I had him in my eye from the beginning to the end, and paid him the most particular attention. I took notes as the circumstances occurred, and I now transcribe them, that you may see every thing I saw or heard at the man’s bedside, and also at Dr Spurzheim’s lectures, and I give you *nothing* of which I was not a witness. I omit the medical treatment, symptoms of the disease, &c. as that is nothing to the present purpose. My note-book, then, bears as follows :—“ 14th November 1818, Hotel Dieu, 74. Salle St Bernard.—To-day a man aged about fifty years, is entered at the hospital, having a wound betwixt the seventh and eighth ribs, inflicted with a knife, at the most convex part of these ribs. The cause of it is as follows : He had been a soldier, but for *some fault or crime* (he did not tell which) he had been condemned to an infamous punishment, and consequently banished from Paris to Orleans, where he was to remain under the surveillance of the Police. He had been bred a barber to trade.

At Orleans, every one from whom he solicited employment, discovered his condition, and refused to employ him. He remained there for some time; but having taken it into his head that his wife, who remained at Paris, acted in concert with the Police to keep him banished at a distance from the capital, and in disgrace, he formed the resolution of coming to Paris to avenge himself *by killing his wife*, and afterwards to kill himself. He walked to Paris, a distance of about twenty-two leagues, and on arriving, attacked his wife with the intention of killing her. But she, being stronger than he, saved herself, and thereupon he gave himself a stab with a knife between the ribs. He is in a state of great irritation. He says he still wishes to kill his wife. He is excessively impatient." (Here follows the medical treatment, which I omit, only mentioning that he was bled six times, and had a great number of leeches applied, &c. ; but he died.)

" M. Dupuytren, in telling us his opinion of him, insisted much *sur le mauvais moral* of this man, which rendered the danger ten times greater, and on his impatience against all remedies. He was obliged to put a strait waistcoat on him for a few days, and I heard the man say, when Dupuytren prescribed bleeding, *On ne me saignera plus*. He shewed the most determined resistance to all remedies and measures adopted.

" After death, the dresser of the Hotel Dieu took out his brain, and sent it *anonymously* to Dr Spurzheim, on his lecture night, saying, There is the

brain of a man, what were his dispositions? The Doctor, of course, laboured under disadvantages, as the brain changes a little in its shape on being taken out, but he said he would give his opinion on what appeared. (I quote again from the notes I took at the Doctor's lecture.) He would not speak of his *actions*, as a person might be excited to an act by an accidental circumstance, but he would speak of his dispositions. With an active temperament, then, (said the Doctor) he thought that this man had *strong dispositions to physical love, and that he had the organs of all the inferior propensities common to man and animals*, (such as destructiveness, combativeness, &c.) *strongly developed*; that he was *un mauvais sujet*; that he would by no means speak of his actions, but that he was one to whom the *law* was necessary as a guide, as his natural tendency was not to virtue. He remarked also, that the organs of Self-esteem and Firmness were large. I remarked myself, on seeing the brain, that the posterior lobes of the brain were very large, and that there was a great developement of the organs of Firmness and Self-esteem. *He had very little brain in front*, or in the anterior lobes, where the organs of the *reflecting faculties* are situated\*.

“ Dr Spurzheim did not know the man nor his history; but, after the lecture, a young gentleman came forward, and told whose brain it was. The

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\* The organs are not numbered precisely in the same order in Dr Spurzheim's works, published in London and in Paris. My correspondent uses the Parisian order; but, to prevent mistakes, I have here given the names of the organs. His No. 22, mentioned on page 25, is our 19, or Individuality.

Doctor's indications of his dispositions were most evidently correct, for the man's whole life appears to have been a series of manifestations of the lower propensities of our nature, and his end the most frightful conclusion of the whole. All the developement of which I speak was very striking. When will people learn that Spurzheim does not teach craniology, as it is called, or attribute functions to the skull? Where was the skull here? Lying at the Hotel Dieu, and Spurzheim never saw it."

I conclude the enumeration of cases with the following letter from a gentleman who has studied the system with great attention, and who is able to boast of having made an extensive series of observations upon it. H.

"DEAR SIR,

24th July 1819.

"I am ashamed that I have been so long in answering you, nor do I well know how I shall be able to do so as I could wish in the compass of one letter. To give any idea of the way in which my opinion has been formed, and grown to the firm and unshaken settlement of conviction, that the views of Drs Gall and Spurzheim have Nature for their support, would be impossible. Circumstances through life have strengthened and confirmed my inclination and interest in the study of character, and for some years past the situation in which it has either been my fortune or misfortune to be placed, have enabled me to make *examina-*

*tions* not only to a very great extent, but in a way that was as little liable to entangle my judgment as can be well conceived possible. They were almost wholly among strangers, and among all descriptions and degrees of character, often in manufactories of several hundred persons, in hospitals and lunatic asylums; and in these instances, as professed trials of the truth of the system, I proceeded without any previous theory to support, any fixed belief on the subject, or any wish to believe in one way rather than another, unless truth was there.

“ In fact I had formed a pure and steady resolution, that my conviction either for or against the system should be the result of personal observation and personal experience. And I now declare, that I have not yet found one single exception to the agreement of character with the configuration of the head; and until I find such a disagreement, my mind rests as fully satisfied of its truth, as it does that we see with our eyes, and hear with our ears; in fact, as it does in any well known function of the senses. And I defy any one to pass through the same process, without coming to the same conviction.

“ The usual test of the system is, in my opinion, very unfair and inconclusive,—that of taking any single organ as a test of its truth. We do not judge of a character by one feature in particular, but by those general features which result from the assemblage of all those talents, and sentiments,

and dispositions, and actions, and manners, which form the characteristics of man, and of that class, in particular, in which the individual, the object of our scrutiny, happens to move ; so, in the same manner, this system must be proved by trying whether the character agrees in reality with that which you form *a priori* from the combined comparison of the whole head. Not but I conceive that when one organ is relatively more prominent than any other, then we may safely peril our belief in the system, by trusting to it as the sure indication of a certain prominent feature in the character. But what I mean is, that we should never infer this, without an examination of the whole head : for, without such an examination, we can neither judge how far this organ is in reality more prominent than the rest, or how far there may not exist a fulness in one or more organs besides, and a fulness indicating both activity and power, and an activity and power of a nature and form which will infallibly prevent the unrestrained operation and exhibition of the one we hastily pronounced upon.

“ But, in compliance with your request, I shall confine myself to stating a few, out of an immense number of striking examples which have fallen under my observation.

“ I know several families who have the character of caution, taciturnity and timidity, and who have the organ of cautiousness very greatly developed ;

and those individuals in these families, who are singled out by the world as exceptions from this general character of their relations, want this configuration of the head; and this I have found to be the case with every other organ. Families distinguished for their pride in the world, I have invariably found to possess a fulness in the organ of self-esteem. I conceive nothing can be more certain than this fact, that as families have their peculiarity of character, so there are most decidedly family heads.

“ An old clergyman at Stonehaven, who, during his lifetime, was particularly delighted with reading travels, fancied, in his dotage, that he had actually travelled in every part of the world, and talked of his travels with great minuteness and fluency: in every other respect, he was perfectly sane. The organ of *locality* was *very unusually large*. I know several instances, where locality is very full, accompanied with a love of wandering. This is particularly the case with a gentleman, a Lieutenant in the army, now living *occasionally* at Montrose, and who is remarked for this by all his friends.

“ A whole family of whitesmiths, near Stonehaven, are all remarked for the correctness of their eye, as exemplified in squaring or rounding any piece of work without instruments; and they are distinguished by a prodigious distance between the eyes. A gentleman, a particular friend of my own,

who was inclined to laugh at the system, has this prodigiously great ; and I found he possessed the power of recognizing faces he had seen when a child between five and six years of age ; and could draw any objects he had ever seen, either singly or in groups ; if in groups, they are all made to possess their relative places. In his case, there was a most striking correspondence between the configuration of the head, and his whole character, in every minute particular. This, with the examination of several of his friends at the same time, astonished and silenced his opposition. I could relate to you a very great number of cases of the same kind.

“ You have heard me declare, in conversation, that I have invariably found the heads of females much more regular and better equipoised than males, and almost invariably indicating more activity, but less power ; and that veneration, love of approbation, and adhesiveness, and philoprogenitiveness were seldom defective. I do not remember more than two instances of the first three being defective, and only one of the last ; and all these instances exhibited striking defects in the feminine character.

“ I know a whole family in Breehin and Montrose, whose genius for music is pre-eminent ; and they all have a very great and unusual fulness in that part of the head.

“ But the examinations which turn upon the general and combined view of the whole head, with that

of the general features of the character, are the most interesting and conclusive. In visiting the Montrose Asylum, with several medical men, I was overwhelmed with the wonderful accordance between the configuration of the head, and the features of the partially insane. This examination continued for several days in succession. In one female, I found veneration, conscientiousness, and cautiousness, very full ; with hope, self-esteem, and reasoning powers defective ; with some other organs full. Here I found religion, melancholy, and self-condemnation, the prominent features. Another had hope, veneration, and self-esteem, full ; with cautiousness, conscientiousness, and animal organs defective : in this instance, it was religious rapture and delight, with self-complacency, &c. These results I stated as that which I should suppose *a priori*, were the distinguishing characteristics ; and, in every instance, I found this correspond with the testimony of the superintendant.

“ I may add, that I have always observed, that when one organ predominated, it was always shewn by peculiarity of deportment and movement of the body, corresponding with the seat of the organ. In fact, there can be no doubt, but the soul of man is held forth in every movement of the frame, as the most interesting, and most fascinating object of public inspection, and studious contemplation. We are struck with it only in these more striking instances ; and they are more striking, from the circumstance of their being less modified by a mixture

of other features, and of course less difficult to detect and understand. The correctness of this observation, will appear very evident to those medical men who witnessed the examinations in the Montrose Asylum; and especially as exemplified in one case of a young lady, whose disposition for friendship spoke through the sound of her voice, through her tears, and through her smiles, and through every movement of her body, and was most completely and wonderfully confirmed by the inimitable beauty of her speeches. But it seems to me such a perfect waste of words to give cases to those who want candour to examine for themselves, on the one hand, and equally so to those who have candour to examine on the other, that I shall content myself with what I have already given. All that you or I can do in the way of enumerating cases, is perfect mockery of that which every one may do for himself. I am," &c. M. A.

I here close the communications from my correspondents. I may add, that the the reader will find a source of amusement and instruction in examining the busts and portraits of illustrious men, with the view of comparing the development of their heads with their characters and genius, as manifested in their works. Busts and portraits, however, cannot, in every instance, be relied on as expressing accurately the actual form of the head of the illustrious originals; because, while artists were ignorant, which many of them still are, that the configuration of the skull is indicative of

character, they sometimes added fanciful heads to the features of the face which they copied from Nature. In general, however, they have copied accurately; and it is easy for a person acquainted with this science to trace an exact and interesting correspondence betwixt the developement and manifestations of many of the illustrious dead.

I perceive, in a portrait of the Admirable Crich-ton \*, a developement of forehead as astonishingly great, as the genius of that individual was universal and transcendent. The portraits of Buonaparte shew an immense developement of the head above the eyes. It is recorded in Ecclesiastical History, that Mahomet was distinguished by a full and liberal developement of forehead. In going through Westminster Abbey, every tyro in the system could point out, at once, the busts of the poets from the great developement of ideality in their heads, although he were entirely unacquainted with the illustrious names which adorn the literature of England. The best portraits of Shakespeare shew a prodigious developement of ideality, and also of imitation; and, on this last faculty, I suspect, has depended, in no small degree, the universality of his power of representing human characters of every age, rank, and degree of intelligence, with the full features of actual and individual existence. The eminent men

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\* Prefixed to the Account of his Life by Mr Tytler, just published, and said to be engraved from an original picture.

of the present day also afford ample confirmation of the system in the developement of their heads ; but delicacy forbids direct references to them. If the reader will compare their portraits together, he will find as great differences in the forms of their heads as in the styles of their works. The shape of Byron's head appears, from the portraits of him, to be as different from the form of Thomas Campbell's as his manner of feeling and thinking is different.

Travellers could not present a more valuable tribute to science, than by observing and describing accurately the prevalent forms of the head, and the comparative dispositions and capacities of the nations which they visit. In Humboldt and Bonpland's " Personal Narrative of Travels to the Equinoctial Regions of " the New Continent," vol. iii. c. 9., some interesting observations are made, quite incidentally and without reference to the system of Gall and Spurzheim, on the physical constitution and manners of the Chaymas, in which the form of their heads is partially mentioned, and also their mental peculiarities. The following coincidences betwixt developement and mental power, occurring in a remote region of the globe, and mentioned by an author who appears to have been wholly unaware of their application to the present system, must strike every reflecting person as interesting and remarkable. The author informs us, that the Chaymas have " foreheads small " and but little prominent," and he notices the

small progress that they have made in civilization under their Spanish instructors. He describes their eyes as "black, *sunk*, and very long;" and he tells us, that "nothing can exceed the difficulty with which the Indians learn Spanish." He informs us, that "the corner of the eye is sensibly raised *up* toward the temple," and that the Chaymas "have great difficulty in comprehending any thing that belongs to *numerical* relations," and "the more intelligent count in Spanish, with an air that denotes a great effort of mind, as far as thirty, or perhaps fifty."

In closing these details of cases, I am fully aware of the objections which may be made against them. One opponent will probably observe, that no testimony is so little to be depended upon as that of individuals, when they certify their own endowment of faculties of the mind. Another will say, that the evidence of converts to the system is extremely suspicious; for, even with the best intentions, we are too apt to perceive facts as we wish to see them, rather than as they really are, when we have a theory to support. A third will be ready to observe, that in the cases mentioned, the dispositions and capacities described may probably be susceptible of explanation, by extraneous circumstances in the education of the individuals, which are here altogether omitted, as easily as by the configuration of their heads. A fourth will perhaps add, that as no instances of exceptions are given, it is

impossible for the reader to judge how far the concomitance betwixt the dispositions and developments described was uniform, and how far accidental ; and that unless it were ascertained to be uniform, no philosophical conclusion whatever could be drawn from it. On the strength of such observations, and many more of a similar nature which could be added, opponents of even moderate ingenuity may be able to rear up a very plausible argument to shew, that no credit whatever ought to be given to the cases now detailed, and no conclusion drawn from them in favour of the system.

I shall not fatigue the reader with a formal answer to such objections. The cases are given, as already mentioned, only with the view of stimulating the reader to make inquiries and observations to satisfy his own mind, and not as philosophical evidence, on which the system ought to be believed, without farther investigation. In the next place, if the advocates for the system are disqualified, by their partizanship, for giving credible evidence in its favour, the opponents are equally disqualified, by their hostility, for giving credible evidence against it ; and hence the opinion of every one, of its truth or falsehood, must, even according to the rules of evidence laid down by the opponents themselves, be founded on his own observations,—which is precisely what every friend of the system anxiously desires. In the third place, If I have succeeded, in showing, in the first Essay, that conscious-

ness gives us no intimation of the existence of the organs, and dissection no information respecting their functions, I have demonstrated the necessary and unavoidable ignorance, in regard to the truth or falsehood of the doctrines, of every opponent who has not himself compared manifestations and developement together. And as no opponent has ever brought forward observations of his own against the system, while its advocates found their belief on observations alone, the whole weight of the testimony is in favour of the doctrines, and there is not a shadow of substantial evidence against them. And, in the last place, I readily admit, that I have met with cases presenting difficulties and apparent exceptions, but these have been so few compared with the numerous instances of indubitable conformity betwixt the dispositions and developement described as concomitant, that I cannot doubt of the concomitance depending on philosophical connection, and not on accidental coincidence. Besides, greater skill in observing, and greater knowledge of the mutual influence of the faculties, would probably have enabled me to explain even the few anomalous appearances which occurred. But the best evidence which the reader can obtain regarding the nature of the concomitance, is to appeal to Nature himself; which I again request him to do \*.

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\* See Appendix, No. III.

## ESSAY III.

## ON THE UTILITY OF THE SYSTEM.

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INTRODUCTION.

AFTER what has been said, the reader will probably be able to form his own opinion of the utility of the system under consideration. It is a system of the philosophy of Man, and treats of the innate powers of feeling and of thinking conferred upon him by nature, and on which education and external circumstances are destined to act. It unfolds to us also many interesting views regarding the apparent connection betwixt the immaterial principle of the mind and our organic constitution ; a connection, the influence of which we feel every day of our lives, but the Philosophy of which has hitherto been enveloped in the deepest mystery.

No study appears more fascinating, and at the same time of higher importance, than that of hu-

man nature. When we see unfolded to us the nature of man as he comes from the hand of his Creator,—when we see what his innate propensities to action, and his innate powers of thinking are, then we shall be able to tell how far the actual character of individuals and of nations, is to be attributed to circumstances over which we possess controul, and how much is unalterably fixed by the fiat of nature's God. No doubt, every accurate and philosophical observer is at present practically acquainted with human nature, because the subject is before him, and his mind insensibly draws the conclusions to which the facts obtruded on his notice naturally lead. Before Sir Isaac Newton explained the theory of the tides, the practical navigator knew that the sea ebbed and flowed; and before the chemists explained the theory of chemical affinities, the practical farmer was aware that manure increases the produce of the fields. In like manner, every intelligent observer of human nature was practically acquainted with the phenomena of the mind, and with the apparent connection betwixt it and our organic constitution, before Gall and Spurzheim discriminated the number and functions of the innate faculties of man, and discovered that each faculty manifests itself by means of a special organ. Gall and Spurzheim, therefore, may be said, in some respect, to have discovered only the philosophy of facts previously well known to the world. But the importance of this discovery can be fully appreciated only

after attending to the previous state of the knowledge even of intelligent men, in regard to the constitution and faculties of the mind. Among the metaphysicians it is not yet settled what a faculty is, or how the existence and functions of the faculties are to be ascertained. Among the practical observers of mankind, every one has always been prone to invest human nature with the peculiarities of his own mind, or with the dispositions and capacities which have fallen most frequently under his own observation. Hence one represents human nature as an assemblage of degrading propensities, and of miserable capacities, without one good quality to redeem the bad. Another individual, on the other hand, represents it as yet resplendent with the bright image of the Deity, and as still endowed, amid all its earthly weakness, with no small portion of those moral powers and intellectual capacities which we have reason to believe are the attributes of beings placed in the highest scale of created existence. And each class of individuals supports these different views by a confident appeal to facts, and a pertinacity of argument, as if the opinions were as indubitable as the demonstrations of science.

The same partial conceptions concerning the nature of man, prevail in the public practical business of society. Let any scheme be proposed for ameliorating the condition of the poor; for conferring the blessings of education on the uninstructed; or for reforming criminal legislation; and instantly

conflicting theories respecting the consequences of our proposed operations, rise on every side ; some shewing the result to be a final termination to human misery, and others shewing an incalculable increase of evil, as the only consequences that can ensue. One represents the human character as altogether the creature of circumstances, and dreams of eradicating vice and misery by acts of Parliament, Lancasterian schools, and Utopian regulations. Another maintains, that misery is the ordination of nature, and that ignorance best fits man to support it ; and hence, he concludes, that as instruction and refinement multiply the susceptibilities of suffering, while they do not remove the causes of evil, it is the duty of legislators, and all persons in power, to allow the poor to remain in that state of comfortable indifference which is the result of ignorance, rather than to force upon them a perception of their miseries, by enlightening their understandings.

In all these discussions, there are, no doubt, points regarding which all men of sense are agreed, and which may be regarded as principles in the philosophy of human nature, admitted by general consent. But such principles are always mere practical maxims forced upon men by experience, rather than scientific views established on philosophic induction ; and, accordingly, it is when we wish to reason upon the nature of man as an object of science, that we discover our unacquaintance with the philosophy of his constitution. In the course of the discussions now

alluded to, no one is able to appeal to principles in human nature philosophically ascertained, and universally admitted as the basis of his arguments, and from which he may arrive at an undeniable conclusion. Many theories in political economy and religion also, although evidently absurd, cannot, for the same reason, be subjected to a philosophical refutation. No circumstances can shew more forcibly than these, that the knowledge of man, as a science, is still in a state of extreme imperfection.

Or to take an instance from literature,—In what branch of learning is less of philosophic principle to be found than in criticism? Critics, too often merely reflect the impressions made upon their own minds by the works under their consideration, and refer their opinions to no principles in human nature. If the mind of the reader be different in natural constitution, or in point of cultivation from that of the critic, there will be no harmony betwixt them; and yet each will praise or condemn the author without a moment's hesitation, as if his own sentiments were infallible dictates of the human understanding in general.

When, again, we turn our attention to the state of the mind under the influence of disease, and form an estimate of the extent of our philosophic information as to its natural constitution in a state of health, or as to the causes of the diseased manifestations, we perceive a total blank. The general phenomena indeed, are known; and many practical rules have

been laid down ; but no philosophical principle is to be found to direct practice.

The philosophy of the mind consists in a scientific knowledge of the nature of man, and of the modifications of which his nature is susceptible ; and the first step in attaining it, appears to be, to ascertain what powers and capacities the Creator has implanted in him ; and the second, how far these innate powers may be modified by external circumstances. That there are innate powers and capacities in human nature, every day's experience and the analogy of all created things falling under the scope of our observation, prove. In every age, and in every clime, the great features of human character have been the same ; and yet the very first principle assumed by the most celebrated philosophers on the mind has been, that no innate powers or faculties exist ; but that the mind, as it comes from the hand of the Creator, is a *tabula rasa* or *blank*. Having treated of this point, under the head of metaphysical objections, I shall not now revert to it.

The utility of the philosophy of Gall and Spurzheim, therefore, consists in this, that it gives us a clear and philosophical view of the innate capacities of human nature, and of the effects of external circumstances in modifyng them. It points out to us the manner and extent in which individuals may differ from each other, in their natural capacities of feeling and of thinking. It presents to us also, an in-

teresting view of the apparent connection betwixt the immaterial and material parts of man ; and it explains the causes of the varying phenomena which the immaterial principle exhibits in its manifestations, as the state of the body varies from infancy to old age, and from health to disease. In short, it reduces the philosophy of man to a science, by shewing us the number and scope of the human faculties, the effects of their different combinations in forming the characters of individuals, and their susceptibilities of modification. Its tendency is to make us acquainted with ourselves, and indulgent to our fellow creatures ; for it teaches us that no individual is a standard of human nature ; and that those whom we are prone to condemn for differing from us in sentiment, may have as good a right to condemn us for differing from them, and will consider their own mode of feeling equally founded in nature, as we consider ours. Hence it shews the necessity of our seeking a higher standard for measuring mankind than any furnished by an individual.

This system of philosophy, therefore, is fitted to throw light upon every subject in which human nature is concerned ; and if it be founded in fact, which I am convinced it is, it will as certainly triumph over all other theories of man, as the philosophy of Newton did over the doctrines in physics which, before his time, held the world in the bonds of ignorance. To point out the whole extent of its ap-

plication would be to write a system of universal moral science. And who can compare the extent of such an undertaking with his own limited resources, without shrinking from the view? It is comparatively an easy task to tell what the system is; but it would require a gigantic mind to shew the full scope of its application and utility. It is with the deepest sense, therefore, of my own inadequacy to do justice to the subject, that I enter on a short and imperfect illustration of its application to a few subjects of literary interest.

The subjects on which it is peculiarly fitted to throw a powerful light, are Education, Genius, the Philosophy of Criticism, Criminal Legislation, and Insanity; but the three last are too extensive, and my own qualifications, to do them justice, too deficient to allow me to attempt any remarks upon them on the present occasion. I purpose to confine myself to two short sections, one on Education, and one on Genius, in which the mode of applying the system to important uses, will be pointed out, rather than any attempt made to bring forward new or interesting views on these subjects.

Should the public take an interest in the science, additional illustrations of its application may be given at a future period.

## SECT. I.

## ON EDUCATION.

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*“ Il existe dans l'espèce humaine des dispositions qui se retrouvent toujours,  
“ quand les mêmes circonstances les mettent en dehors.”*

MADAME DE STAËL.

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“ THE effects of moral instruction and precept on the mind,” says Mr Henry Mackenzie, “ have been rated very highly by some grave and worthy men, while by others, the experience of their inefficacy, in regulating the conduct of the hearer or reader, has been cited as an indubitable proof of their unimportance. Among those, say they, on whom Moral Eloquence has employed all her powers, who have been tutored by the wisest and most virtuous teachers, and have had the advice and direction of the ablest and most persuasive guides, how few are there whose future conduct has answered to the instructions they received, or the maxims which were so often repeated to them. Natural disposition or acquired habits, regulate the tenor of our lives ; and neither the sermon that persuades, nor the relation that moves, has any permanent effect on the actions of him who listens or who weeps.” It shall now be

our endeavour to shew, how far these opposite views of the effects of education are founded in truth.

Every one who has observed mankind must be convinced, that Nature has implanted certain dispositions and capacities in the mind, and that these form the basis of the character of each individual through life. The object of education is to modify these innate powers, and to regulate their manifestations, to restrain such of them as may be too energetic, or to call forth into greater activity those which may be naturally languid. Before we can hope to conduct education to advantage, we must acquire a knowledge of the innate dispositions and capacities of the mind, and learn philosophically the sphere of action of each faculty, and how far each is susceptible of being repressed or exalted. The system of Gall and Spurzheim is of great utility, as affording us such information ; for it professes to treat of the innate faculties of the mind, and the modifications of which they are susceptible.

According to this system, the object of education ought to be, to regulate the manifestations of all the faculties, by the dictates of those peculiar to man ; and for this purpose, to subdue the activity of the propensities common to man with the lower animals, and to exalt the activity of the faculties peculiar to man, or those which produce the moral sentiments and understanding.

In treating of education, therefore, we have to consider, in the *first* place, On what the power of

manifesting the faculties depends? In the *second* place, What order the faculties follow in the course of their successive developement? *Thirdly*, What are the best means for accomplishing the modifications we may have in view? And, *lastly*, How far our power of modification extends.

In the *first* place, then, this system teaches that the power of manifesting the faculties depends on the state of the organization. No fact is more undeniable, than that great differences exist in the power of different individuals to manifest their faculties. In early infancy, the power of manifestation is very imperfectly possessed; and by some individuals that power is never fully possessed at all. Such individuals are idiots partial or total. The power of manifesting the mind varies also in health and sickness, in middle life and in old age. Now, the cause of these differences can be explained only by one of two theories. Either the Creator makes the immaterial mind itself to differ in its powers in different individuals, and at different periods of life; or the immaterial principle is the same in all individuals, and in every situation; but its powers of manifesting itself in the external world are different, in consequence of the organization by the instrumentality of which it acts, being different in developement and activity.

Analogy, and a fair induction from the phenomena falling under our observation, lead us to conclude, that these differences depend upon organization. It

is not to be presumed, without evidence, that the Creator has endowed the immaterial and immortal principle of one man with powers and capacities which he has denied to another ; or that the mind itself varies in its powers with the state of health and the age of the body, while it consists with every day's experience, that differences of organic constitution are the result of natural endowment and of physical events. Nature, for example, gives to one individual a power of voluntary motion, far exceeding that which she confers upon another. She makes one blind, another deaf, and denies to a third the power of speech. It is proved by this system that, in the same way, she denies to one individual the development and activity of brain which she confers upon another ; and it is observed that hence the power of manifesting the mind externally, is different in proportion.

In this way also, alone, does it appear possible to account for the transmission of mental peculiarities from parents to children. "There is," too, says Mr Stewart, "a certain hereditary character (whether resulting from physical constitution, or caught from imitation and the influence of situation), which appears remarkably in particular families. One race, for a succession of generations, is distinguished by a genius for the abstract sciences, while it is deficient in vivacity, in imagination, and in taste. Another is no less distinguished for wit and gaiety, and fancy, while it appears incapable of patient at-

tention, or of profound research." The same important fact in the philosophy of man, is remarked also by Dr Gregory, with his usual felicity of expression : "*Hujusmodi varietates non corporis modo, verum et animi quoque, plerumque congenitæ, nonnunquam hæreditariæ observantur. Hoc modo parentes sæpe in prole reviviscunt; certe parentibus liberi similes sunt, non vultum modo et corporis formam, sed animi indolem, et virtutes, et vitia. Imperiosa gens Claudia diu Romæ floruit, impigra, ferox, superba; eadem illachrymabilem Tiberium, tristissimum tyrannum, produxit; tandem in immanem Caligulam, et Claudium, et Agrippinam, ipsumque demum Neronem, post sexcentos annos, desitura.*"—Gregory's *Conspectus*, c. 1. § 16.

As then, the power of manifesting the faculties depends on the state of the organs, it is of importance to remark that we are able to exercise a considerable influence on the organization of the body by physical education. Parents, therefore, ought to be aware that the power of the child in future life to manifest the faculties of the mind, will often depend in a considerable degree on the mode in which his physical education is conducted. This topic is highly interesting in itself, and one on which much might be said, but being only imperfectly acquainted with the subject myself, and my object being chiefly to state principles, the observations to be now offered, are intended to excite inquiry rather than to convey ultimate information.

Too great sensibility of the nervous system is unfavourable to mental exertion, but too great muscular power is also adverse to it. The great object of parents, therefore, ought to be, to fit their children for the scenes of life in which they intend them to act. If the individual be destined to a learned profession or literary pursuits, his physical education ought to be conducted in such a way as to give him due muscular power, but not to render him too athletic. If, on the other hand, he is destined for labour, his constitution cannot be rendered too robust.

The sensibility of the nervous system will be powerfully affected by diet and exercise. Too little attention is paid to adapting the diet of children to their constitutions. The impression is too prevalent, that food to be wholesome for children must be vegetable or succulent. To many constitutions, no doubt, such kinds of food are best adapted; but where the digestive organs are weak, vegetable diet should be sparingly given, and animal food without sauce or high seasoning, more generally administered.

Exercise in the open air is favourable to all children, if not carried to excess; but if indulged to a great extent, and till too advanced a period of youth, the individual becomes in a great measure incapable of exerting the mental faculties. Exercise in the open air, and amidst new and varied objects, is unfavourable to reflection, and to those labours which re-

quire a concentration of the powers of the mind. It gives a greater tendency to exert the sentiments than the reasoning faculties.

An augmentation of the tone of the muscles diminishes nervous mobility. When, therefore, weakness of mental functions, is owing to too great mobility of the organic system, exercise is beneficial, because it contributes to give stability and energy.

Repose has a contrary effect. Those who live a sedentary life, think and feel more than the active, unless their sedentary habits are carried so far as to produce diseases of the organization, and then the manifestations of the mind are less active.

It is observed by Cabanis, "That great activity of the brain is often supported by spasms of the intestines, or by vicious sensibility of particular parts of the hypochondriac region\*. Hence," says he, "a certain state of physical disease is often favourable to the rapid and brilliant developement of talent, as well as of the most pure and delicate moral affections. Hence also, in re-establishing the health of such persons, their comfort may be increased, but their talents are not always augmented." These observations are in some degree confirmed by facts which are open to general obser-

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\* La grande activité de l'organe pensant est souvent entretenue par les spasmes des viscères du basventre, ou par de points de sensibilité vicieuse établis dans leur region.—*Rapports du Physic et du Moral de l'Homme*, tom. ii. p. 202.

vation. Pope was remarkable for the feebleness of his bodily constitution, and the life of Dr Johnson was a continued disease. Cowper also was long the victim of morbid nervous sensibility; and in common life it is not rare to find the most delicate member of a family surpassing in intellectual capacity the more robust.

These observations, however, are offered chiefly for the purpose of calling the attention of other persons to the subject, who are more able to treat it as its importance deserves.

We proceed, therefore, to the second object of our inquiry,—the order observed by the faculties in the course of their successive developement. The faculties which produce the propensities and sentiments are earliest manifested in the order of nature, and therefore, a child is susceptible of moral education before he is susceptible in an equal degree of intellectual cultivation.

It is of importance to parents and teachers to attend to the fact, that the feelings and dispositions of the mind depend upon innate faculties, as well as the intellectual powers, and that the former faculties may be cultivated as well as the latter. The embryo feelings of every kind, (except two, amateness and veneration,) which distinguish the full grown man, may be experienced by the child. A few years after birth, the individual will experience the same sensibility to fear, to censure and applause, and to justice, and the same natural tendency to fight,

which will distinguish his character in future life. These feelings may, in maturer years, be directed to other objects; but the power of experiencing them exists at both periods. The child who trembles at the threat of being shut up in a dark closet,—who exhibits to us with delight his new suit of clothes,—who fights about a marble,—or who covets his neighbour's top, is under the influence of the same faculties which in future years may make him tremble under the anticipation of a fall of stocks,—which may make him desire to be invested with a star and garter,—which may make him contend for an island or a kingdom, or which may lead him to covet his neighbour's property.

If, therefore, the faculties which give feelings are innate, and manifest themselves thus early, we are bound, by every tie of duty and affection, to direct these feelings to their proper objects, and not to lacerate them by treating those who possess them, as if they had no feelings at all. Many persons appear, by their conduct, to believe that a child cannot distinguish betwixt justice and injustice, when practised towards him; betwixt polite treatment, and rudeness; betwixt the due exercise of parental authority, and self-willed tyranny;—because he cannot reason on abstract subjects. But such ideas are equally erroneous and disgraceful. The power of feeling depends on faculties different from those which produce intellectual manifestations; and although

the child cannot reason so well, he can feel as acutely as his parents.

We ought never, therefore, to treat a child with severity, because he is prone to indulge the particular faculties which Nature has made most powerful in his mind. Our first care ought to be, to discover what powers are particularly energetic in his constitution ; and our second, to learn how to direct them. The existence of a powerful innate faculty is discovered, not only by perceiving the organ large, but by studying the actions of the individual.

If the faculty be powerful, it will manifest itself in actions. The child who has a strong faculty for music, will make music of his own accord. The child who has a strong faculty of form, will draw from a spontaneous impulse. The child who has a strong faculty of benevolence, will shew it by the humanness of his disposition, his aversion to cruelty, and his readiness to bestow. The child who has a strong faculty of covetiveness will shew it by the selfishness of his disposition ; by his propensity to acquire ; and by never giving. The child who has a strong faculty of destructiveness will shew it by his propensity to break and destroy ; and, if benevolence be weak, by his disposition to be cruel, and by his delight in tormenting and killing animals. The child who has a strong faculty of the love of approbation will shew it by his propensity to boasting, and by his sense of shame. The child who has a strong faculty of cautiousness will shew it by his

proneness to the emotion of fear. The individual who has the reflecting faculties strong, will shew them by the consecutiveness of his discourse, the depth of his penetration, and the scope of his invention.

We ought to receive as axioms in education, therefore, that the predominating dispositions manifested in childhood are innate; that their existence will be permanent; and that it is our duty only to regulate them, and not to be offended at their existence. On these principles we ought to endeavour, if possible, to guide children by the law of kindness. 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 the 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. We ought, therefore, to check the manifestations of these feelings, by firmness on our part, guided by affection; and, as soon as reflection begins to dawn, we ought to explain to him his natural proneness to them, and shew that the feelings are in themselves excellent, if well directed; that he is an object of our warmest affection, but that we are determined to repress all irregular manifestations of them. Until the reflecting powers are in some degree capable of act-

ing, these explanations will not be understood; and, till then, the feelings ought to be repressed by a firm, though affectionate resistance to their manifestations on the part of the parent, but never by wrath. But, when the child begins to reflect, such explanations will have more effect than is generally believed. If, again, a child possess powerful faculties of conscientiousness, cautiousness, and love of approbation, he will be naturally prone to timidity and bashfulness. The treatment proper for such an individual is not to scold and ridicule him for being timid; for this only produces pain, and increases the evil; but to inspire him with confidence, by kindness and affability. If another child possess powerful faculties of self-esteem and love of approbation, he will be prone to magnify himself, and to assume airs of importance, which to others may appear ridiculous. The proper treatment for him, is to direct these feelings to proper objects; to make him ambitious of virtue and magnanimous conduct.

I am happy to be able to adduce the authority of so accurate an observer of human nature as Dr. Adam Smith in support of these views. He clearly points out the propriety of considering the faculties as innate, and of endeavouring only to direct, and not to eradicate them. He says, "The great secret of education is to direct vanity," (and he might have added, every feeling,) "to proper objects. Never suffer your son to value himself upon trivial accomplishments. But do not always discourage

“ his pretensions to those that are of real importance. He would not pretend to them, if he did not earnestly desire to possess them. Encourage this desire ; afford him every means to facilitate the acquisition ; and do not take too much offence, although he should sometimes assume the air of having attained it a little before the time.”  
—(Theory of Mor. Sent. Part. 6. § 3.)

After having discovered the particular dispositions which are remarkable either for strength or deficiency in the child, our next object ought to be to cultivate them, that is, to repress the manifestations of those which are too energetic, and to increase the activity of those which are too feeble. As education is at present conducted, the feelings are not systematically cultivated at all. No system of philosophy has hitherto taught that feelings depend upon faculties ; that the power of experiencing them is different in different individuals, and that that power may be increased in those in whom it is weak, by cultivating the faculties which produce them, in the same manner as the power of reasoning may be increased by cultivating the faculties of the understanding. Hence it has never formed a regular part of any plan of education to increase the power of feeling benevolence, of feeling justice, or of feeling veneration, by the special exercise of the faculties upon which those sentiments depend. Nor has any plan been laid down for cultivating the minds of individuals according to the pecu-

liarities of their natural constitutions. Indeed, no such plan could be devised ; for we have hitherto possessed no philosophic means of discovering what the peculiarities of individual constitutions are. The only cultivation which the sentiments receive, according to the present system, is from the casual influence of example. This mode of cultivation is no doubt good in itself, and, as experience shews, highly beneficial, but it is best suited to the case of individuals who are prone to virtue from innate dispositions, for we generally perceive the more intractable to be very little benefited by it.

According to this system, however, it is necessary to cultivate the feelings by the direct exercise of the faculties upon which they depend. Parents and guardians, therefore, ought to repress the manifestations of the lower propensities in children when they are too energetic, and to call the faculties of the higher sentiments into vigorous activity. The latter effect will be produced, as already mentioned, by the influence of example ; because, by the law of social sympathy, active manifestations in one individual excite the same faculties upon which the manifestations depend into activity in the beholders. Thus, if a parent or guardian manifest the faculties of benevolence, of justice, of veneration, or of covetiveness, strongly and habitually in the presence of a child, the same faculties will, by these acts, be cultivated and excited into permanent activity in the child. This

is the true account of what the metaphysicians call the Principle of Imitation in children. There is no doubt, a faculty of imitation, which gives the power of mimickry, and which unquestionably exerts an influence in disposing the child to imitate his seniors ; but there is, besides, an identity of faculties, and a sympathetic influence arising from similarity of constitution, that makes a child prone to do the acts which he sees done before him. Every child does not always do so ; because, as already said, the faculties are not, in every case, precisely the same in energy in every individual ; and, of consequence, where the faculties of the parent differ from those of the child, the former may exhibit many active manifestations of particular feelings ; but, from the primitive faculties which produce these feelings not being naturally powerful in the child, the parent may fail in impressing on him his own character.

As a general rule, however, for cultivating the moral powers, it may be safely laid down that, by a law of nature, the regular active manifestations of faculties in parents excite into habitual activity similar faculties in children. But this rule obtains in the faculties which are most prone to run into abuse, as well as in those of a higher order. A parent who inflicts personal chastisement often, and in a rage, or who scolds loud and long, and shows little politeness, little benevolence, and little justice towards a child, cultivates

in the latter the faculties which give rise to the emotions of rage and resistance, (combateness and destructiveness), and outrages the higher sentiments, just as effectually, or indeed more effectually, than if he were to frame and teach a catechism recommending rage and resistance as positive duties, and decrying justice and benevolence as dangerous and prejudicial. As a general rule, whatever you wish your child to be or to do, be that, or do that to him. If you wish him to be outrageous, to be cruel, and to be quarrelsome, be outrageous, cruel and quarrelsome to him. If you wish him to be humane and polite, be humane and polite to him. If you wish him to be just and pious, be just and devout before him.

This result, as already noticed, arises not solely from a principle of imitation leading him to do mechanically as you do. Such a principle would be cold and lifeless. The result arises from sympathetic faculties in the child, giving inward emotions and feelings corresponding to your own. These faculties are innate, permanent and steady, and, when you have cultivated them, you can depend on the permanence of their effects. When you cultivate in children the faculties which feel benevolence, veneration and justice, you will make the feelings which attend the activity of these faculties known to them by experience, and these feelings are so agreeable in themselves, that they will afterwards, without your superintendence, indulge the same

faculties in active manifestations, for the sake of experiencing the inward satisfaction that attends their activity. But if you outrage all these faculties in your conduct to your children, and act towards them under the influence of rage, of deceit, of self-will, or of any improper feeling, you will excite into permanent and energetic activity the same faculties in them.

I have great pleasure in being able to support these views by the testimony which Mr C. Pietet gives to the success of Mr Fellenberg's exertions, in reforming the mendicant children of the Canton of Berne, in his institution at Hofwyl, by cultivating their moral faculties in the way now recommended. "Le soin," says he "de développer la  
"gaité des élèves, de les maintenir sereins, alertes  
"et actifs, est considéré comme très important. Ils  
"sont constamment caressés et prévenus ; tout les  
"invite à la confiance. Vehrli \* ne leur parle  
"qu'en souriant. Il travaille avec eux, il lit, il  
"cause, il chante avec eux ; il leur conte des his-  
"toires, et ne les quitte dans aucun moment.

"Le travail et l'ordre, la douceur, une marche  
"sage, égale et persévérante, triomphent de tous  
"les obstacles moraux, de toutes les habitudes per-  
"verses. Ces enfans vagabonds, mendiants, ou ra-  
"massés çà et là dans la plus profonde misère, mais  
"accueillis et soignés avec une bonté affectueuse,

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\* The Assistant Teacher.

“instruits dans la pratique de leurs devoirs envers Dieu et envers leurs semblables, soumis à un travail continu, à une règle constante et ne perdant pas une minute pour l’instruction, même dans leurs jeux, n’ont jamais eu besoin d’un seul châtiment pour être amenés à une conduite régulière.”—See *Edinburgh Review*, No. 61. p. 158.

But to cultivate the moral powers properly, it is not sufficient merely to excite their sympathetic activity by the influence of example. To give them the full measure of cultivation, we must allow them to manifest themselves externally in actions as frequently as possible, or, in other words, we must allow them to produce actual effects. If we wish to cultivate the faculty of benevolence to the best advantage, we must make our children the actual administrators of benevolence themselves. We must allow them to do acts of charity, and not merely to give alms, but to court acquaintance with poverty, misery and distress in its bodily form, and to feel the sympathetic glow which can be experienced in its full fervour, only when we see the objects of our charity in all their misery, but at the same time “in possession of all the feelings which unite them to us by the ties of a common nature.” The case is the same with all the other faculties. If we wish to cultivate the faculty of justice in children to the best advantage, we must accustom them to practise it, and administer it in

acts. Constitute them judges of each other's conduct, teach them to award punishments or recompences to each other, and let their awards always be fulfilled, unless they are extremely erroneous and absurd, which will rarely be the case. In the same manner, if a child has too little regard for property, and is too much disposed to bestow on others, without consideration, every thing which he happens to possess, endeavour to excite his desires ardently for some object, but do not allow him to obtain it till he has performed a quantity of labour as the purchase of it, and then his faculty of caution will be more ready to restrain his generosity when he has learned the difficulty of acquiring.

So much for the mode of cultivating the propensities and sentiments of our nature. The other faculties susceptible of education at an early period of life, are the **KNOWING FACULTIES**. The functions of these faculties are to become acquainted with objects and their qualities, but not to reason. Most of these faculties may be manifested in the first stages of childhood, but the reflecting faculties, or those which trace abstract relations and consequences, cannot in general be so till a much later period in life.

The proper mode of cultivating the knowing faculties as well as the former, is by exercising them in active manifestations. If the reader will look over the list of these faculties, and their functions, already enumerated, he will have no difficulty in perceiving

the class of studies in which children may advantageously engage. According to the present mode of conducting education, the faculty of Language is the only one of all the knowing faculties cultivated in childhood. Children are made to learn sounds, the meaning of which they are not capable of comprehending; and they are not instructed in regard to the knowledge of many external objects which they are quite capable of understanding; and instruction in which, would afford them delight. To be able to convey such instruction, indeed, the teacher must himself possess an accurate knowledge of the functions of the faculties, and the different periods at which they are developed; which, by the common systems of philosophy, it is very difficult for him to attain. When he sees manifestations in a child particularly powerful, he must know to what faculty these belong, and the particular class of objects or of studies fitted to cultivate this faculty into permanent energy and activity. However unphilosophical it may appear, yet it is a fact established by every day's experience, that a child may excel greatly in the capacity for learning words, who is not able to manifest sentiments, or other faculties, in proportion to the faculty of language. On the other hand, an individual may possess a very limited power of learning words, who may possess great natural genius for other pursuits. If one child, possessed of a powerful faculty of language, should experience

great pleasure, and manifest great power in learning words ; and another child, possessed of powerful faculties of constructiveness and form, should experience great pleasure in drawing, cutting figures, and constructing, and manifest these faculties in acts, it is barbarism to punish the latter for manifesting the faculties which Nature has made most powerful in his mind, and for not manifesting the faculty of language as powerfully as the former, which perhaps is bestowed upon him in a very limited degree. It is equally absurd to conceive, that the former individual is endowed by Nature with all the elements of a splendid genius, merely because he manifests one knowing faculty with superior power. In like manner, if a child manifest a great natural talent for calculation, or for music, the parent and teacher ought to know the exact sphere of the functions of the faculties on which these acts depend, and either cultivate the faculties of the child, with reference to his future destination, or direct his destination with a regard to the faculties which he possesses. They ought never to conceive for a moment, that a great talent for language, for drawing, for music, for mechanics, or for mathematics, implies the possession of moral sentiments and reflecting faculties in equally eminent perfection. While, therefore, they do not despise any talent which Nature has bestowed, they ought never to delude themselves into a belief that any particular

faculty, to which Nature has assigned only limited functions, is universal in its scope of activity.

The REFLECTING FACULTIES are the last manifested in the order of time. The brain in the upper part of the forehead, which is the organ of these faculties, is not fully developed in some individuals, till the age of twenty, twenty-three or twenty-four. In others, however, the development is complete at an earlier period of life; but rarely in any one, before fourteen or fifteen. At this latter period also, the full developement of the cerebellum, on which the amative propensity depends, takes place. Until, therefore, the organs, both of this propensity and of the reflecting faculties, are fully developed, we cannot, with sufficient certainty, predicate what the natural dispositions and capacities of any individual will be. No doubt, if an individual is able to manifest powerfully the faculties of veneration, or tune, when a child, we may safely predicate that he will possess the power of manifesting these faculties during life; but if the reflecting faculties and amative propensity, when they come to be developed, prove eminently energetic, the individual may then experience greater pleasure in obscenity than in veneration, or in philosophical discussion than in music; and he may then become sensual, rather than devout; or philosophical, rather than musical; although his natural capacity for veneration and music remain the same. Or, in such cases, the indi-

vidual may exhibit the most absurd inconsistency of conduct ; may be at one time a saint, and at another time a sinner ; at one time a philosopher, and at another a musicante ; and all with equal sincerity.

The reflecting faculties, like all the others, will be best cultivated by that mode of exercise which makes them produce the most active manifestations. In the metaphysical systems of philosophy, ideas have been unfortunately confounded with the mind ; and it has been conceived that, if we merely infuse, with sufficient assiduity, a store of moral precepts and philosophical ideas into the memory, we shall produce the highest state of cultivation in the mind. According to our system, however, all beneficial education consists in the cultivation of faculties. Precepts cannot exert an influence on the mind, unless the faculties be previously sufficiently powerful to feel the obligation of them, or to perceive their force. Hence the proper way to make an individual devout is to cultivate his faculty of veneration, and this will be better done by exciting it into a glow of activity by the influence of example, than by merely encumbering his memory with words. Hence also, the way to render an individual charitable and humane, is to cultivate his faculty of benevolence, and this will be done more effectually by exciting the faculty to produce active manifestations, than by laying down abstract

rules concerning his duty to his neighbour, unattended by active practice of them in life.

Hence our great object in cultivating the reflecting faculties ought to be to give them energy and activity in performing their functions, and to point out the best modes of directing their manifestations. The particular ideas which we furnish are stores or materials for these faculties to work upon ; but, if we wish the faculties to produce powerful manifestations themselves, we must excite them to act ; we must excite them to compare, penetrate and trace conclusions ; we must teach them to use the stores which we furnish ; for, till we do so, the latter are of no utility. Hence every mode of instruction in which the pupil himself is actively employed, is always the best. If prelections alone are read, it will only be minds possessed of great natural internal activity that will derive full benefit from them. Such minds, being naturally energetic, seize on and appropriate thoughts wherever they are to be found ; “ they gather sweets from every opening flower ; ” but on minds of inferior capacity, the sentences of the teacher fall like sounds on a deaf ear, they never penetrate, and the sluggish faculties, instead of being excited, are lulled into more hopeless inactivity, by dull discourses which they do not comprehend. Where the natural energy of the faculties is weak, or only moderate in degree, it is the more necessary to stimulate them to greater energy, by calling them into

activity, and hence such a mode of education is undoubtedly the most effectual.

I have heard an objection stated against cultivating the reflecting faculties by exercise ; that by doing so we are apt to produce conceit in the pupil, and an exaggerated opinion of his own attainments. Such an objection, however, is founded upon ignorance of the separate functions of the faculties. It is the faculty of self-esteem alone which produces conceit ; and exaggerated opinions of ourselves, are in proportion to the activity of that faculty, and not to the cultivation of the understanding. No doubt, if the faculty of self-esteem be particularly energetic in an individual, and if he write an essay at College, he will be exceedingly proud of it, and in all probability will entertain exaggerated opinions of its merits. But it is not the writing of the essay which produces the sentiment of self-esteem ; the sentiment was previously energetic in his mind, and that circumstance only gives it a particular direction. Had he not written the Essay, he would have been equally proud, but of some other real or supposed accomplishment ; and, as it is certainly better to be proud of intellectual talent than of inferior attainments, the writing of the essay must be regarded as a fortunate incident in his education.

Hence the objects of education are to cultivate the faculties of the higher sentiments, and the knowing and reflecting faculties into permanent

energy and activity, and to repress the energy of the faculties common to man and animals, so as to place them under the guidance of the faculties proper to man. The morality of the individual will be in proportion to the predominance of the faculties of the higher sentiments over the lower propensities ; and his genius will be in proportion to the energy of the knowing and reflecting faculties.

The cultivation of the intellectual faculties is of great importance in directing the faculties of the propensities and sentiments in the proper mode of their gratification : but I am obliged to observe, that the cultivation of the intellect, where the higher sentiments are not equally cultivated, has less effect in leading to morality than is generally supposed. On observing mankind, I find individuals, in whom the faculties of the higher sentiments are naturally powerful, exceedingly moral, although their intellectual powers are often slender : and I find individuals, whose faculties of the higher sentiments are weak, often exceedingly immoral, although their intellectual powers are remarkably strong. I observe that the individuals in whom the faculties of cautiousness, conscientiousness, benevolence, veneration, and firmness, are energetic, either from natural endowment, or much cultivation, are generally prudent, honourable, and virtuous, although possessed of very different degrees of intellectual power. I find, on the contrary, individuals

in whom these faculties are weak, selfish, illiberal, and unjust, even although adorned with the most splendid intellectual capacities.

Many absurd theories have been advanced in regard to the bad effects of education upon the lower and middle classes of the community. We have been told, that “after a desire of rising seizes a peasant or mechanic, his whole life is spent in the fevered anxiety of discontent and unhappiness,—a sort of diseased restlessness, of which he becomes the passive victim, infects his mind, and tinges his pursuits; and, even when his friends are looking up to his labour as super-human,—while they are admiring or envying his advancement in knowledge, his nights are often spent in sleepless musings, and his days consumed in the labour, at which his whole soul revolts, but which he finds indispensable to his schemes of advancement. He feels his condition as miserable as that of the slave chained to the galley-oar; because he knows, from his books, situations of a different kind.”

Such notions are founded on a lamentable ignorance of human nature. The individual, whose higher faculties are not cultivated, is just a human being abandoned to the impulses of the propensities and sentiments which are naturally most powerful in his mind. These are always the lower propensities of our nature; and hence savage and uncultivated man is a Being inspired by strong propensities of amateness, destructiveness, combativeness and

covetiveness, without moral faculties equally active to direct or modify their manifestations. And, in point of fact, the savage character is uniformly found to be a compound of lust, ferocity, pugnacity and dishonesty, corresponding completely with what might be expected from the unrestrained manifestation of the faculties which predominate in his constitution. Human nature is the same in every country ; and the labourer of civilized life is naturally just as prone to disgusting and dreadful vices, as the savage of the wilderness ; and the actual difference of character betwixt them, is attributable entirely to the education of the latter. In the former, the faculties of the lower propensities are excited to vehement activity by his situation. In the latter, the manifestations of these faculties are repressed, and his higher powers more or less cultivated. If we cultivate the moral sentiments of the mechanic, his lower faculties will be controlled in proportion as the energy of those is increased. If we cultivate his knowing and reflecting faculties, we open up to him sources of gratification of a higher nature, and give him an increased power of usefulness, and a capacity of adapting means to an end, which will not only benefit the individual himself, but make him a much more useful member of Society. If nature have bestowed upon him powerful faculties of ideality, causality and comparison, it is very probable, that by education, we shall give him a dislike to the meaner drud-

geries of labour. But in doing so, we shall capacitate him for a higher sphere of action. If nature implant the higher faculties eminently powerful in any individual, and if circumstances conspire to oppose the manifestation of them in their legitimate sphere of action, his life will present a melancholy history of high minded efforts continually failing, and continually plunging him into deeper misery, because the faculties were not properly directed. Of this, the life of Burns, and the lives of many other eminent but unfortunate men, furnish too conspicuous examples. In them these faculties were innate; and being naturally great, produced great conceptions, notwithstanding the abject circumstances in which their possessors were placed. If such individuals had been placed in circumstances where their faculties would have had scope for an unobstructed activity, the individuals themselves would have been happy, and their lives useful to society.

Let no one apprehend that by education we shall be in danger of rendering the mass of the lower population disgusted with their employments, and lead them to aspire to too elevated destinies. The effects of education are always bounded by the natural capacity of the mind to be educated; and nature has taken care to provide a sufficient supply of men for every rank of life, by making the endowment of the faculties of a large majority of the race so moderate in degree, that they will never be

enabled by the efforts of others, to aspire to any thing much above the level of moderation.

As to the education of the middle classes, again, we have been told, that cultivation makes them proud and fantastic in their notions, and averse to the duties of their situation in life, and incapable of fulfilling them. This has been alleged in a particular manner, to be the result of cultivating the minds of the females of the middle rank. In answer to such objections, I remark, that the capacity for discharging domestic duties, depends upon the cultivation of the superior sentiments, and of the knowing and reflecting faculties jointly. Hence, a woman who possesses cautiousness, conscientiousness, benevolence, philoprogenitiveness and firmness, in an eminent degree, will make an excellent daughter, sister, wife or mother. If the faculties of language, constructiveness and tune, are eminently cultivated in her mind; she will possess, besides, three valuable sources of amusement to herself, and of entertainment to others. And if the reflecting faculties are also eminently cultivated, she will be still the more excellent. She will then possess a depth of penetration and a scope of understanding, which will give her dignity as a woman, and extended usefulness as a member of society. Hence, the first requisite for constituting a good wife, is vigorous and active faculties of the moral sentiments; and the second is a liberal endowment and cultivation of the knowing and reflecting faculties. Those persons,

however, who think, that intellectual endowment or education incapacitates woman for the duties of her situation, seem to believe either that the propensities and sentiments will be manifested to most advantage, when altogether undirected by intellectual power; or that cultivation of the intellect withers up, and eradicates the moral faculties. Such ideas are too absurd to merit refutation. The best sentiments degenerate into weakness, when undirected by reflection; and the most vigorous exercise of understanding, does not necessarily dry up the sources of feeling. The most perfect character is made up of a happy endowment of both.

As the direct tendency of a good education, therefore, is to repress the manifestations of the lower propensities, and to cultivate the superior sentiments and the knowing and reflecting faculties, we may hold it as an indisputable axiom that, where an individual has been well educated, and his subsequent conduct has not corresponded to the instructions he has received, his imperfections are to be attributed to nature, and not to education. In some individuals, the natural endowment of the lower faculties is so great, that it is a matter of extreme difficulty to subdue their energy; and hence, in such individuals, education may not always appear to have produced its full effects. But education improves even the worst natures to a considerable extent. If the ferocity, the sensuality, the avarice, or the lust of

dominion of such persons, is at any time apparently restrained by the predominance of higher sentiments, this advantage may be owing, in no inconsiderable degree, to education ; for we have only to look to the savage state to be satisfied of the general brutality of man when uncultivated.

This leads us to consider, as was proposed in the last place, the extent of our power to modify the manifestations of the faculties.

As this system teaches that the faculties are innate, and that each has received a determinate constitution from nature, it follows according to it that we cannot *change* the nature of any individual ; and that all we can do is only to regulate the activity of the several faculties in their outward manifestations.

We have already discussed the best modes of increasing the activity of those faculties which we wish to cultivate ; and in doing so, we have anticipated, in some degree, the discussion of the extent of our powers of modification. Great as these powers undoubtedly are, it must not be concealed that all our exertions to cultivate the moral and intellectual powers, and to restrain the propensities in their external manifestations, by example, by precept, and by active employment, may sometimes turn out unavailing ; and that some individuals will prove ultimately vicious, after every endeavour, conscientiously and intelligently applied, to reclaim them. The system of Gall and Spurzheim not only admits this

fact, but explains the causes of it, and affords us great assistance in applying every possible remedy to the evil. Strong propensity to vice arises from great natural endowment of the faculties common to man with the lower animals, joined with a weak endowment of the faculties peculiar to man. After we have discovered, therefore, which of the lower propensities are inordinate in their activity, which we easily do by observing the actions of the individual, the next thing to be done is to discover whether the different higher faculties, such as those which give the love of approbation, the sentiment of justice, the sentiment of veneration, or of benevolence, possess considerable or moderate natural power. If they do, we must then be most sedulous in cultivating them by extraordinary efforts, so as to find in them the means of controlling the lower propensities, which are naturally too energetic. We must endeavour to increase, by all practical means, the activity and the sensibility of these higher faculties, so as, if possible, to render the pleasure resulting from their activity, equal or superior to the pleasure attending the indulgence of the others. If we can succeed in these endeavours, we gain the victory to the cause of morality by the most amiable means. If we cannot do so, we must try a remedy of another description.

The pleasure attending the indulgence of a strong propensity is the true motive which incites us to in-

dulge it. If we can set up rivals in the higher sentiments to this pleasure, we succeed in restraining the propensity. If we cannot balance pleasure with pleasure, we must endeavour to diminish the one pleasure, by connecting it with pain, and this will increase the relative power of the other. For example : If an individual naturally prefers the pleasure of stealing, of fighting, or of blaspheming, to the pleasures of practising justice, benevolence and veneration, notwithstanding all our exertions to diminish the *quantum* of the one, and increase the *quantum* of the other,—we must then endeavour to diminish the pleasure of stealing, or fighting, or blaspheming, by making suffering follow closely upon it ; in short, by inflicting punishment. There is a faculty of the mind which feels the emotion of fear (Cautiousness), as well as faculties which produce propensities to inferior actions ; and this faculty, if addressed and roused to action, may, as well as those of a higher order, operate as a check upon these lower faculties. If the faculty which feels the emotion of fear, be strong and active in any individual, we may, in his case, predict that punishment will prevent immoral manifestations of his inferior propensities.

But in awarding punishments, also, the different functions of the faculties, and the difference of their endowment in different individuals ought to be kept constantly in view ; for what occasions severe suffering to one individual will often excite n uneasi-

ness in another. If the love of approbation be powerful in one individual, he will be liable to be deeply affected by disgrace; while in another in whom that faculty is weak, disgrace will produce a very trifling sensation. In a third individual in whom covetiveness is strong, the loss of property will be dreaded as a serious evil; and he will be more affected by the loss of money than by any other affliction. It is only in the very lowest natures, that some feeling may not be found, by means of which the conduct may be influenced; and it is only with such individuals that corporal chastisement ought to be resorted to.

In such cases, where all our endeavours to elevate the conduct by education prove ineffectual, no duty remains for man to perform, but to guard himself against the evils likely to be produced to society by such unfortunate individuals. Such persons ought to be looked upon rather as patients than as objects of wrath. They then become the subjects of criminal legislation;—but with this topic of discussion it is not my present intention to interfere.

In the views of education now given there is, perhaps, nothing new, and nothing but what was formerly familiar to men of correct observation and sound understandings. But, as already said, this system, being merely a theory of human nature as it exists, is not calculated so much to make new discoveries concerning the nature of man, as to reduce

to the certainty and precision of a science, the practical observations which had formerly been made.

The very coincidence betwixt the most accurate observations upon human nature and the principles of this science is a strong testimony in its favour, and goes far to prove that it is no empirical theory, devised by the imagination without a foundation in nature ; but that it is, what has long been wanted, a Theory of Man, founded on the basis of all true science, the observation of facts.

## SECT. II.

## ON GENIUS.

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“ *The impulse of Nature, which softly I feel,*  
 “ *The law which she prints in deep lines on my heart,*  
 “ *Must I doubt ; till the School to that law set her seal,*  
 “ *And bind the free spirit in the trammels of art ? \**”

SCHILLER.

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No subject has occupied philosophers more than Genius, and yet on no subject have their opinions been more inconsistent and unsatisfactory. The subject itself is fascinating and splendid ; and the nature of genius is known, although the philosophy of it is in a state of extreme imperfection. When we regard a Shakespeare, speaking the language of every mind, from that which occupies the throne, to that which inhabits the cottage, and pouring forth the pure and natural conceptions of every intellect, from that of a Cæsar to that of a goodman Dull ;—when we regard a Byron, pouring forth his dreadful, yet spirit-stirring notes, which fascinate

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- \* “ *Muss ich dem Trieb misstraun, der leise mich warnt, dem  
 Gesetze,  
 Das du selber, Natur mir in den Busen geprägt,  
 Bis auf die ewige Schrift die Schul’ ihr siegel gedrückt,  
 Und der Formel Gefäss bindet den flüchtigen Geist ?*”

our feelings, while they make our souls shrink, and our limbs tremble ;—when we contemplate a Scott, now rattling in our ears the wild din of war, now melting our hearts in the soft sympathy of love ;—when we regard a Maturin, now chilling us with horror, now bracing our souls up to fiend-like fury ;—when we regard a Campbell, breathing on our minds the delicate and the delightful sentiments of heavenly purity and love ;—when we regard a Mozart, breathing the strains of heaven from the harps of men, and exciting in our souls the most exquisite and rapturous emotions ;—when we regard all these great and glorious minds, and when we feel our own littleness beside them, we have an irresistible desire to discover the secret sources whence such mighty emanations flow.

When, however, we consult the philosophers on the mind, for information respecting this high and interesting subject, we receive the most inconclusive and unedifying answers. We meet with no theory admitting and successfully accounting for the existence of those great natural differences of intellectual power, which we perceive so conspicuous in different individuals. We meet with no theory admitting of the existence of faculties formed and endowed with functions by the hand of Nature, on the power of manifesting which such differences might depend. Instead of looking to Nature for an explanation of such interesting phenomena, we find the metaphysical philosophers pressing habit

and association, and every external circumstance, into their service to explain them, and leaving Nature entirely unregarded.

These observations will be best elucidated by laying before the reader the opinions of some of the metaphysical philosophers themselves on genius; and a more accurate opinion regarding their merits will be formed by a close contrast of their jarring theories, than could be conveyed by any criticism on their works.

“ Helvetius and other bold metaphysicians have maintained the paradox, that all men are born originally the same, and are moulded into what they afterwards become, solely by the force of external circumstances. Genius, according to this doctrine, is a mere creature of the fancy, and originally belongs no more to one man than to another. Train all men alike, and their powers, their attainments, and their actions, will be similar. Accident, more than design or premeditation, has fixed the destinies of great men, as well as disposed of those who are unknown to fame \*.”

“ Demosthenes,” say these philosophers, “ became eloquent because he heard an oration of Calistratus, whose eloquence made so deep an impression on his mind, that he aspired only to acquire this talent. Vaucanson attained excellence in mechanics, because, being obliged, when a child, to

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\* Article Cranioscopy in New Sup. to Encyc. Brit.

stay alone in the waiting-room of his mother's confessor, he found there a clock, examined its wheels, and endeavoured, with help of a bad knife, to make a similar machine of wood. He succeeded, and one step leading on to another, he arrived at the construction of his wonderful automats. Milton would not have composed his *Paradise Lost*, had he not been deprived of his place of secretary to Cromwell. Shakespeare composed his tragedies, because he was an actor; and he became an actor, because he was forced to leave his native place, on account of some juvenile errors. Corneille fell in love, made verses for the object of his passion, and thence became a great poet. An apple fell at the feet of Newton, while he was in a contemplative mood; and this event, so trivial in itself, led him to the theory of gravitation\*."

Dr Johnson, on the same subject, has said, "The supposition of one man having more imagination, another more judgment, is not true. It is only one man has more mind than another.—Sir, the man who has vigour may walk to the east as well as to the west, if he happens to turn his head that way."

The author of an ingenious article on Logic, in the *Edinburgh Encyclopædia*, gives it as his theory of genius, "That every man has, to a certain degree, the elements of genius; and that those who

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† Dr Spurzheim's *Physiognomical System*, 8vo, p. 452.

stand pre-eminent above the rest, owe their distinction entirely to the acuteness of their powers of perception, and the retentiveness of their memory." And, according to him, acuteness of perception depends on the perfection of the external senses.

And, lastly, Mr Stewart teaches, that difference of genius depends chiefly on habits of association. According to him, the *mind* forms a *habit*, and the *habit* forms a *power* or *capacity* of the mind.

To these *powers* of *wit* and *fancy*," says he, "that of *invention in the arts and sciences* has a striking resemblance; *like them*, it implies a command over certain *classes of ideas*, which, in ordinary men, are not equally subject to the will; and, *like them, too, it is the result of acquired habits, and not the original gift of Nature*."—(Elem. vol. i. chap. v. part 1. § 4.) Again he says, "What we call the *power of imagination, is not the gift of Nature, but the result of acquired habits, aided by favourable circumstances*."—(Ibid. chap. vii. § 1.) Again, in his Outlines of Moral Philosophy, he informs us, that "besides these intellectual faculties, which *in some degree are common to the whole species, there are other more complicated POWERS or CAPACITIES, which are gradually formed by particular habits of study or of business*. Such are the *power of Taste, a GENIUS for poetry, for painting, for music, for mathematics, with all the various intellectual habits acquired in the different professions of life*."—(p. 16.) And again, he has,

in his *Outlines*, a chapter entitled, “Of Intellectual Powers or Capacities, formed by Particular Habits of Study or of Business.”

According to Mr Stewart, the reason why we are not all Shakespeares, Byrons, Maturins, Campbells, Mozarts, Newtons, or Davies, is because we have not all acquired “the habits of association,” and the habits “of study or of business,” which “formed the genius” of these celebrated individuals, for poetry and music, philosophy, and chemical discovery. But let me ask the metaphysicians, *Why* we do not all form these habits? and *how* it has happened that these individuals acquired them?

If genius depends on habits of association, and on habits of study or of business, *on what does the power of forming these habits depend?* This is the question which it is next of importance for us to solve. We ought never to suppose that we are in possession of ultimate knowledge before we have attained it. Every one has heard of the philosophy which teaches that Atlas supports the Globe. Then what supports Atlas? The system does not tell. In like manner, Habits form genius. What gives the power of forming habits? The metaphysicians do not tell. If all men have an equal natural power of forming habits, then it is absurd to talk of *differences in natural genius*. If all men have not equal natural power of forming habits, then it is of no use to tell us that habits form genius, unless we are told on what circumstances the power of forming

habits depends. No hypothesis can be more unphilosophical than that which attributes the formation of genius to habits ; for habit is merely a facility of doing a thing, acquired by the practice of doing it. But before we could begin to act, we must have had the *power* or *capacity* implied in the act itself.

The prevalence of such hypotheses as these among the most esteemed authors, gives us a humiliating proof of the small progress that has been made in the philosophy of the mind. In short, it shows that the nature of man, as a science, is almost absolutely unknown ; and that every author endows the mind with faculties according to his own fancy, none being capable of pointing out any satisfactory evidence on which the admission of them is founded.

The real cause, however, of these unsatisfactory and contradictory hypotheses for unfolding the nature of genius, is to be found in the circumstance of philosophers never having studied the natural constitution or functions of the faculties themselves ; but having confined their attention exclusively to ideas, and to the supposed relations which unite them. In order to obtain a better explanation of the philosophy of genius, therefore, let us again have recourse to the philosophy of Gall and Spurzheim.

According to their system, the power of feeling desires and emotions, and the power of forming ideas, depend on the faculties, and each faculty, in virtue

of its constitution, gives the power of feeling emotions of a certain kind, or of forming ideas of a certain kind, and it owes its functions neither to the human will, nor to any fortuitous circumstances, but to nature alone. Hence powerful faculties confer the capacity of feeling strongly, and of thinking deeply. The mind does not manifest one faculty alone, equally capable of feeling in every way, and of forming ideas of every kind; but it manifests several faculties, each independent and distinct in its functions. Genius is the capacity of forming ideas with facility and vigour, and of reproducing them with ease, vivacity and effect. Now, the faculties of the propensities and sentiments only feel, and do not form ideas; they may inspire genius, therefore, with feelings and emotions, but they do not constitute it. The knowing and reflecting faculties, however, form ideas, and reproduce them. An eminent endowment of the whole of these faculties, therefore, constitutes universal genius. An eminent endowment of a limited number of them constitutes a partial genius. A man who only feels strongly is not a genius; it is he who can not only feel, but who can perceive, conceive, remember, imagine and judge, in a certain way, with power and effect, who is such.

As the faculties are independent and distinct in their functions, it is absurd to suppose that genius is a single general indescribable feeling of inspiration, equally applicable to every pursuit. Each faculty has its specific functions from nature, and he

is a genius whose knowing and reflecting faculties are able to perform their functions with eminent effect. Hence the greatest genius is substantially the same being as the dumbest mortal; he has only the same faculties in a higher degree of perfection. Hence, too, an individual may be in one respect a great genius, and in another respect very deficient in natural ability. The individual who has the faculty of Tune eminently powerful may be a genius in music, and in nothing else. He who has the faculty of language eminently bestowed may be a supereminent linguist, and excel in no other accomplishment. He who has the faculties of constructiveness and form eminently powerful may be an eminent mechanic, and excel in no other art. He who has the faculties of comparison and causality powerful may be a profound philosopher, and no poet; and he who is highly gifted with ideality may have the rapturous inspirations of the poet, without possessing the deep-penetrating and logical powers of the philosopher.

Hence, when we are informed what faculties an individual pre-eminently possesses, and the degree of energy with which he is able to manifest them, we are able, by means of this system, to tell for what pursuits he is fitted, and for what he is not fitted; we see at once the extent and scope of his mental powers, and are able to form an enlightened estimate of his genius. By no metaphysical system can this be done.

These differences in the power of manifesting the faculties must depend on some cause. It may be difficult to say whether the size and activity of the brain is the result of superior energy of the faculties, or if the superior power of manifesting the mind depends on superior size and activity of the brain ; but Gall and Spurzheim have found by observation, that the degree of power with which each faculty is manifested is *de facto* in proportion to the size and activity of a particular portion of the brain.

The reason, therefore, why we cannot all write poetry like Milton, Byron, Burns, Scott or Campbell, cannot all compose music like Mozart, or make statues like Phidias, is because we cannot manifest the specific faculties which they possessed, with so much power and activity. We cannot feel as such men do, and we cannot form the clear, rapid, powerful and impressive conceptions which flow upon their minds, because our faculties have not the innate strength and energy of theirs. This is the reason, too, why we cannot acquire their “ habits of association,” and their “ habits of study and of business.” The ideas must be *formed* before they can be associated, and it is because we cannot form them so powerfully, so varied, so impressive as they, that we cannot associate them as they do.

Who, indeed, that is not blinded by the mysticism of metaphysical philosophy can doubt that the habits of the musician depend radically on a

power or faculty which nature has implanted in him, which gives the desire and the power to make music? And what unhappy girl, who, without possessing any appreciable faculty of tune, is doomed to strike the keys of a piano-forte, does not feel by experience that musical habits cannot be acquired where the natural power is wanting? Who that knows any thing of science, or the arts, or of life, does not know that the enthusiasm of the philosopher, of the mechanic, of the painter, of the poet, or their “habits of study,” if that phrase pleases better, are founded on the antecedent possession of specific natural faculties which give the power, and the desire, to perform the various acts which they respectively delight in; and that, unless these faculties be given powerfully by nature, no habits of association or of study can be formed, which will confer excellence in their several pursuits? Now, I say again, these natural faculties are never spoken of by the metaphysicians, while it is the sole object of the system of Gall and Spurzheim to give an account of them and of their functions.

Let it not be forgotten, however, that the faculties may be exercised, and that their activity is thereby increased. Exercise increases the power of forming ideas, and, consequently, the power of associating them. It has been most justly observed that education improves in an astonishing degree even the greatest genius: Witness the first productions of any author, and compare them with his

maturer pieces ; the contrast is so great, that it is difficult to believe them the productions of the same mind. The causes are these : First, The natural power of the faculties continues to increase with age and exercise, till it attain a certain state of perfection, at which farther improvement stops. In the second place, Nature furnishes only faculties, not ideas : Ideas, however, are the materials, and the faculties the instruments. Powerful faculties placed amid the productions of nature, will no doubt gather ideas from every passing scene. But furnish them with the best materials in profuse abundance, and you add astonishingly to their means of producing excellence themselves. Besides, excellence depends so much on comparison, that, without models of high perfection, even the first-rate genius is apt to be satisfied with results much inferior to those which he might attain, were higher objects kept in view.

When the faculties, therefore, are powerfully active by natural energy, the conceptions are both rapid and strong ; when they are naturally weak and languid, the conceptions are slow, laborious and feeble. Some men talk of “ the fatigue, exercise, and anxiety of mind, which an author has to endure,” and say that they “ appear greater than those which attend military stations.”—(Duncan on Genius, p. 129.) But this is the case only when a man becomes an author, whom nature never destined for one. When the faculties are languid and feeble,

we cannot by an effort of the will rouse them to form rapid and forcible conceptions, or to feel powerful emotions. We may tug at the chain of association, but brilliant conceptions will not appear, because such conceptions cannot be formed by misty and expiring faculties. But, as the faculties owe their constitution to nature, and as they perform their functions in consequence of their constitution, they will, when naturally powerful, produce powerful thoughts, with as little pain to the possessor, as will be felt by the high-spirited race-horse when he gallops over the plain. Instead of mental exertion being to such men a pain, it is their delight. Ask any man who ever invented in the arts or sciences, and he will tell you that the act of invention was the most delightful of his life; he will tell you that he was able to invent only when the strong impulse came from within; only when his faculties answered to the summons of his will; and that, although there were long periods when the god of inspiration seemed to have forsaken him, yet when "the great burst of inspiration came," the ideas poured like a torrent upon his mind, and no pleasure equalled that of giving scope to his mental powers, when thus spontaneously energetic. The works of Shakspeare, Scott, Byron, and such mighty men, shew that the efforts which produced them were made with the ease of might, and not with the toil of impotency.

It has justly been observed, that “no poet of the first rank has ever spoken of the mechanism of his art, while poets of inferior station have laboriously displayed its rules in verse;” and that “while inferior performers only endeavour to copy preceding models, or to supply the want of inventive faculty, by abstract discussion, or the dull formalities of logic; those of a superior order, though they generally practise good logic, sometimes hardly understand, and seldom stoop to explain the grounds of their art.” Such inferior performers have never felt what genius is, and hence they conceived that its place could be supplied by rules. The use of rules is merely to direct the faculties into the proper mode of exercising their powers, not to confer or supply the place of power; and their utility even in this respect is but limited. When nature gives the power, she teaches also how to use it; and it is difficult to determine whether rules and art have not done more harm to genius by the fetters they have imposed, than benefit by the aid and direction they have afforded. At all events, rules, to be useful to genius, ought to be general, and should be delivered more in the shape of practical observations to be kept in view in order to avoid faults, than as directions to be followed as the only mode of attaining excellence. It ought never to be forgotten that vigorous faculties are the essence of genius; and that the modes in which they may be

successfully exerted are as numerous as the range of human thought itself is extensive.

Yet those who have written rules to direct others in the prosecution of literary pursuits have too frequently forgotten to keep this fact in view. They have considered literary compositions as mere collections of ideas, not as vivid emanations of living powers; and hence have given rules for the composition of ideas, as an architect would prescribe rules for the arrangement of stones. The greater part of Horace's rules "*de Arte Poetica*," are of this latter description, and are therefore of subordinate utility; because he who has not powerful faculties cannot put them into practice, and he who has powerful faculties, observes them without the aid of such instructions. Rules to direct the faculties how to attain the highest state of energy and activity, and the best stock of materials, are useful, because the faculties are naturally susceptible of great improvement by education, and because one kind of ideas is preferable to another; but beyond these limits rules are of no utility. Dietetic rules for attaining strength of muscle may be of service in preparing a man to make a great bodily exertion; but if he has not the innate power, no rules will enable him to display a vigorous strength of limb. I am aware that Horace has said,

——— “ O ego lævus,  
 “ Qui purgor bilem sub verni temporis horam !  
 “ Non alius faceret meliora poemata \* ;”

which is meant to ridicule the doctrine of natural power. But when he lays down as a rule,

“ Non satis est pulchra esse poemata ; dulcia sunt,  
 “ Et quocunque volent, animum auditoris agunto † ;”

he might just as well have expected to confer on a tottering man of eighty the vigour of eighteen, by desiring him to be strong, as to confer on ordinary minds the power of doing what he prescribes, by merely desiring them to do it. If the rule was intended for men of mighty minds alone, it was unnecessary ; nature, in bestowing the power, would teach them how to produce such an effect as this without the aid of Horace’s prescription.

His other observation is much better founded :

“ Natura fieret laudabile carmen, an arte  
 “ Quæsitum est. Ego nec studium sinè divite venâ,  
 “ Nec rude quid possit video ingenium : alterius sic  
 “ Altera poscit opem res, et conjurat amicè ‡.”

\* “ O fool that I am, who purge for bile in the spring time ; else none would make better poems than I.”

† “ It is not enough that poems be beautiful : let them be sweet and affecting also ; let them bear the soul of the reader wheresoever they please.”

‡ “ It is often asked whether nature or art does most in the production of exquisite poetry ; but the end requires so much the union of both, and they conspire so harmoniously in attaining it, that, for my part, I cannot conceive, what study without genius, or genius without study, could accomplish.”

In fact, nature and art cannot be contrasted as two separate things, for without natural power art cannot be acquired. The truth, therefore, is, that natural power, as the essence of genius, is the basis of excellence; but that art, when judiciously applied, gives it the polish and elegance which the diamond receives from the hands of the artist, the intrinsic value being in both cases bestowed by nature alone.

Schiller, with reference to this subject, has well said,

“ Thus, my friend, it always has been,  
 “ And thus it will always remain,  
 “ Impotency oft has the RULE on her side,  
 “ But Strength takes Success in her train.”

No doubt, however, every one has heard of the difficulty of an union betwixt Genius and Taste in the same author. “ Why,” says Schiller, “ will Taste and Genius so seldom combine? Because Taste is affrighted at Strength, while Genius spurns controul†.” The cause of the difficulty of this union of taste and genius, however, is to be sought for also in the na-

\* “ DAS NATURGESETZ.

“ So war's immer mein freund und so wird's bleiben, die Ohnmacht

“ Hat die Regel für sich, aber die Kraft den Erfolg.”

† “ DIE SCHWERE VERBINDUNG.

“ Warum will sich Geschmack und Geist so selten vereinen?

“ Jener fürchtet die Kraft, dieses verachtet den Zaum.”——

SCHILLER.

ture of the faculties. Genius is the result of faculties strong and energetic, roused into a state of vivid excitement. Taste is the consequence of cultivated faculties, remarkable more for sensibility than strength. In the mighty whirlwind of inspiration which constitutes genius, the faculties may produce manifestations remarkable more for vigour than delicacy; or, under the impulse of one faculty peculiarly strong in the individual, ideas may be formed, which will not please the general faculties of readers. The author may embody his own peculiarities in his works, and such peculiarities will offend, unless his genius be so overwhelming as to make the depth of tone exclusively occupy the mind, and thus obscure the perception of faults. This is in some degree Lord Byron's case: If the feelings and ideas which he embodies in many of his lines were expressed by the pen of an inferior mind, the pages would often present a monstrous bloat of disgusting images and scenes. But there is nothing in genius in natural opposition to taste. The man of genius does not stop, while his faculties are in the glow of excitement, to contemplate their operation; he yields to the impulse he feels, and pursues his course directly to the end. Having gained it, he then relaxes, surveys his thoughts themselves, and amends what appears offensive to his mind in a cooler state, or to taste. When Pope corrected his version of the *Iliad*, we are not to suppose that he reasoned on the propriety of particular words.

He must have tried how each would sound, and how it would express the sense ; and the faculties judged intuitively from their natural constitution, of the effect of the alterations. Such alterations, moreover, rarely extend beyond verbal corrections, and if made when the glow of the original fervour is passed away, they are not always improvements.

If philosophers had but conceived that the faculties have received a specific constitution from Nature, and that they perform their functions in virtue of that constitution, we should not have been distressed with the absurd and contradictory opinions now too widely current, that taste and genius are mere habits of association ; or that taste is one thing of an incomprehensible kind, and genius another, possessed by one mind or two, but not founded on the broad basis of human nature. The faculties themselves, and their functions, are radically the same in all the human race ; but they differ in their combinations, and in their degrees of energy and activity ; and hence an explanation of taste, genius, and every other phenomenon of thought, must be sought for in a knowledge of the faculties, and not in the supposed relations of particular ideas, or in vague and imaginary powers or inspirations which have no existence in Nature.

Genius, thus, is nothing but eminent energy and activity of the faculties which form ideas. He in whom the reflecting faculties are powerful, sees through the most difficult propositions as if by in-

tuition, and he unfolds his ideas with the purest simplicity, and yet with irresistible effect. Vivacity and ease combine with strength, to distinguish every act of his mind; there is a spirit in every act that he performs, and a soul in every sentence that he writes. He makes the printed page speak, and his ideas seem to flow spontaneously from the fulness of his stores, and scarcely to require an effort for their production. His impressiveness and strength delight us, even although we do not always approve of his conclusions; for the pleasure experienced by himself in the exercise of his faculties is communicated, in a secondary though subordinate degree, to us who receive their impressions. It is this quality in the productions of men of genius which gives them that secret charm which fascinates our will, dazzles our understanding, and which pleases even us when we cannot approve. Madame de Staël describes it most characteristically in a single sentence, when speaking of Mirabeau. She says: "*On sentait une puissance de vie dans ses discours, dont l'effet étoit prodigieux.*" It is this "*puissance de vie*," which makes the heart thrill when listening to the powerful conceptions of a certain Pulpit Orator whom we have already had occasion to mention.

The man who wants genius, on the other hand, is one whose faculties possess only moderate energy and activity in their manifestations. Such a one may apply his powers to a great variety of pursuits,

and be tolerably successful in them all, because he has no particular internal impulse to any specific courses of action. He may, by long exercise of his faculties, increase their activity to a certain extent, and acquire a degree of expertness highly useful, and often highly respectable. But he still will be only an ordinary mortal after all. The fire, the force, the depth, the originality, the creative power of genius, will be wanting, and his most valuable qualities will be correctness and precision. In all those situations to which he has been accustomed, he may even shine ; but in the great and pressing moments of life's dreadful crisis, the difference between Nature and education will be conspicuously displayed in his want of resources. The weak mind then sinks appalled ; but the great and powerful soul rises to every obstacle, and surmounts it. With great faculties, resources multiply as difficulties occur. The mind glories in its strength, and scarcely knows a limit to its powers.

It has been frequently remarked that an individual often betrays great genius in speculation, who shews great simplicity in the conduct of affairs ; and hence some have concluded that excellence in any pursuit depends solely on the direction given to the mind ; while others have inferred that genius is a kind of delusive faculty, quite incompatible with sober sense and discretion, and a dangerous gift for any man to possess, who wishes to thrive in his worldly business. Both notions are erroneous ;

because both are founded on the supposition that the mind manifests but one single power, while, in point of fact, it manifests several powers, each distinct from the other. Genius depends on the superior endowment of the faculties which form ideas; and the peculiar sphere of activity of these faculties is to observe and to speculate. Accordingly, an individual who possesses them powerfully is naturally fitted to excel in the lucubrations of the closet; but for the conduct of affairs other faculties are requisite. In the intercourse of life, we come in contact with the propensities and feelings of our fellows. Our motions are opposed by this man's pride, another man's avarice, and the vanity of a third. To meet these obstacles successfully, we must possess the faculties which give propensities and sentiments too. The proper check to the domination of the pride of others, is pride; to the encroachments of avarice, is keenness in holding; to the provoking influence of vanity, is contempt; and to the solicitations of the rascally and designing, firmness to our own purpose. Although an individual may have a great endowment of the faculties which form ideas, if he be deficient in the faculties of cautiousness and firmness, he will not be naturally prudent; if deficient in covetiveness, he will not be naturally keen or economical; if deficient in conscientiousness, he will not be naturally just; "so true is it, that folly" (in conduct) "is as often owing to a want of proper sentiments, as to a want of understanding\*." But let

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\* Hazlitt.

it not be imagined, that the words Cautiousness, Firmness, and so on, are here used as mere names for fleeting and occasional feelings or ideas in the mind they designate innate, permanent, and steadily operating capacities to feel in a certain way, and the character is modified by them, although the influence is unperceived by unreflecting individuals themselves.

But, on the other hand, if an individual, besides great knowing and reflecting faculties have received powerful faculties of the superior sentiments, viz. of cautiousness, conscientiousness, self-esteem, firmness, veneration, and benevolence, he will naturally conduct himself as prudently in the business of life, as the dullest of mortals. A poet with great ideality and little covetiveness, will not be a match at a bargain for a bookseller with great covetiveness and no ideality; yet if the poet be gifted with covetiveness equal to his ideality, he will match the keenest literary leech. Pope shewed this in his conduct. Hence the circumstance of men of genius being too often unfit for the cool calculations of profit and loss is owing, not altogether to their endowment of genius, but to their want of an equal endowment of some other powers. The principle of this system, which I have often repeated, is of great utility in philosophy, that the same causes produce always the same effects; or, in other words, the same faculties always perform the same functions; and hence, if it were part of the functions of the knowing and reflecting faculties to

incapacitate for business, it would be a general rule, without a single exception, that capacity for business would be great in proportion as the endowment of these faculties was small. Such, however, is not the case, and hence that practical defect must depend on some other cause.

It has often been remarked, that men of great genius are frequently prone to great vices; and hence many persons have rashly concluded that genius and ungovernable passions are necessarily connected. Nay, some individuals have even presumed so far on the supposed inseparability of the two, as to be proud of their vices, and to suppose, that, by manifesting them, they afforded indubitable proofs of genius, although their possession of intellectual capacity was proved in no other way. Such notions, however, are wholly absurd. The lower propensities of our nature depend on faculties as distinct from those which inspire with genius, as the eyes are distinct from the ears; and hence, until the persons now supposed are able to cause the cerebellum to manifest the intellectual powers, they will never render great proneness to vice equivalent to great endowment of genius. It is unquestionably true, that several men of great intellectual powers have been prone to the indulgence of the lower propensities of our nature in a lamentable degree. But this concomitance is in every case accidental, and not necessary. Many great men have been virtuous, as well as many vicious. If Nature bestow on the

same individual a great endowment of the faculties which produce propensities, and also of the knowing and reflecting faculties, with an inferior endowment of the faculties which produce the moral sentiments, he may be a great genius, and at the same time extremely prone to vice. But if she bestow on another individual the same endowment of the knowing and reflecting faculties, with a weak endowment of the propensities, and a strong endowment of the sentiments, he will be equal to the other in genius, and far surpass him in morality. Thus the vices of great men are spots upon their greatness; proofs of their lamentable subjection to the animal desires of our nature; but by no means constituent parts of their intellectual superiority. The cause of morality is never in greater danger than when vice is invested with a false lustre borrowed from concomitant greatness; for those who are subject to the vice, without being possessed of the genius, are ever ready to represent the connection as indissoluble, and to pretend to the one because they exhibit the other. But this system exposes the falsity of such pretensions; and, by drawing a strong line of demarcation betwixt the sources of genius and immorality, shews us both in their true colours, and enables us to distinguish betwixt them, however close and frequent their combinations may happen to be.

The *direction* of the genius will depend generally on the particular propensities and sentiments which predominate in the individual. A person

with great reflecting faculties, little love of approbation, and much covetiveness, will apply his reflecting faculties to acquire property to gratify covetiveness. Another individual with the same reflecting faculties, little covetiveness, and much love of approbation, will apply his reflecting powers to acquire fame, in order to gratify his love of praise. The faculties of the propensities and sentiments, thus afford motives of excitement to the intellectual powers; and the mutual influence of the faculties is so great, that a strong feeling will frequently excite extraordinary displays of intellect, which cannot be commanded by the individual on ordinary occasions. Hence, to excite the manifestations of genius in the most powerful manner, we ought to address to each individual, motives corresponding to his predominant propensities or sentiments. At present, the love of praise, or the love of money, are the two chief exciting causes; but the motives might be considerably multiplied, as the faculties which give desires are more numerous. With regard to children, this fact in our constitution ought always to be kept in view; for one will be excited by one motive, and another by another, to the most forcible manifestation of his intellectual powers.

Having begun this essay with the enumeration of various metaphysical accounts of genius, and having given an account of it on the principles of Gall and Spurzheim's philosophy, I cannot conclude better than by adding a few observations on the subject, made by men who have

possessed it, and who have been able to speak of its nature and effects from experience. The reader will then see which theory coincides most with the experience of those who could not be mistaken as to genius itself. He will judge whether it is a mere habit of association, or an innate energy of mind referable to nature and the constitution of the faculties as its essential cause. Our great poet, Cowper, shall speak first, and his theme is the endowment of the poet.

## THE POET.

“ I know the mind that feels indeed the fire  
The muse imparts, and can command the lyre,  
Acts with a force, and kindles with a zeal,  
Whate’er the theme, that others never feel.  
If human woes her soft attention claim,  
A tender sympathy pervades the frame :  
She pours a sensibility divine  
Along the nerve of every feeling line.  
But, if a deed not tamely to be borne,  
Fire indignation and a sense of scorn,  
The strings are swept with such a power, so loud,  
The storm of music shakes th’ astonish’d crowd !  
So, when remote futurity is brought  
Before the keen inquiry of her thought,  
A terrible sagacity informs  
The poet’s heart ; he looks to distant storms ;  
He hears the thunder ere the tempest lowers ;  
And, arm’d with strength surpassing human powers,  
Seizes events as yet unknown to man,  
And darts his soul into the dawning plan.”

The next extract relates to a genius of a different kind ; namely, to the great and celebrated Mozart. The Baron de Grimm, in his Memoirs, gives the following account of the first appearance in Paris of that celebrated individual.

“ The master of a choir at Saltzsburch, by name Mozart,” (the father,) “ is just arrived at Paris (1763) with two children. His daughter, who is only eleven years of age, plays on the harpsichord divinely ; she executes the most difficult pieces with a precision that is perfectly astonishing. Her brother,” (afterwards the great composer,) “ who will not be *seven* years old till next February, is yet a more extraordinary phenomenon ; so extraordinary, that we scarcely knew how to believe what we saw with our own eyes, and heard with our own ears. Not only does he execute the most difficult passages with the utmost precision, but the astonishing thing is, *to hear him play from his own head* for an hour together, *abandoning himself to all the inspirations of his genius*, producing a thousand ideas that enchant, which succeed the one to the other with the utmost taste, and the most exquisite harmony, perfectly free from all confusion. The most consummate master of the science, could not shew more skill in his modulations, which he conducts by ways the least known, yet always exact. He *reads* with the utmost readiness all the music presented to him, and *writes and composes with wonderful facility*, with-

out coming near the instrument to seek his chords\*. I wrote down a minuet, and desired him to put the bass to it ; he took the pen and did so immediately, without ever touching the harpsichord. Another thing to which I was a witness, and which seems almost incomprehensible, is this :—A lady asked him the other day, “ whether he could, by his *car* alone, without seeing the music, accompany an Italian *cavatina*, which she knew by heart ;” and she began to sing it. The child tried a bass, which he found not perfectly exact, because of the impossibility of preparing beforehand, the accompaniment of a song which he did not know ; but, when the air was finished, he requested the lady to sing it again ; and in the second essay, he not only played the air perfectly well with his right hand, but he added the bass with his left, without the least hesitation or embarrassment. After this, he begged the lady, ten times over, to sing the air again, and every time varied the character of the accompaniment. He would, probably, have gone on to twenty times, had he not been desired to stop. These two extraordinary children have excited the admiration of every one who has seen and heard them.”

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\* This shews the great power of *Conception* which an energetic faculty confers ; for it is obvious, that he could conceive the notes so distinctly, as to compare and arrange them in his mind, without the aid of an instrument to give them body.

The next extract regards a mechanical genius; namely, the late celebrated Mr Smeaton, civil engineer. I copy from the biographical account prefixed to his published reports.

“ Mr Smeaton seems to have been born an engineer. The originality of his genius, and the strength of his understanding, appeared at a very early age. His playthings were not those of children, but the tools men work with; and he had always more amusement in observing artificers work, and asking them questions, than any thing else. Having watched some mill-wrights at work, he was one day soon after seen, (to the distress of his family,) on the top of his father’s barn, fixing up something like a wind-mill. Another time, attending some men who were fixing a pump at a neighbouring village, and observing them cut off a piece of bored pipe, he contrived to procure it, of which he made a working pump, that actually raised water. These anecdotes refer to circumstances that happened when he was hardly out of petticoats, and probably before he had reached the sixth year of his age. About his fourteenth or fifteenth year, he made for himself an engine to turn rose-wood; and he made several presents to his friends of boxes, in wood and ivory, turned by him in that way.

“ His friend and partner in the Deptford Waterworks, Mr John Holmes, visited Mr Smeaton, and spent a month with him at his father’s house, in the

year 1742, when, consequently, our author was about eighteen years of age. Mr Holmes could not but view young Smeaton's works with astonishment; he forged his own iron and steel, and melted his own metals; he had tools of every sort for working in wood, ivory, and metals. He had made a lathe, by which he cut a perpetual screw in brass; a thing very little known at that day.

“ Thus had Mr Smeaton, by the strength of his genius, and indefatigable industry, acquired at eighteen years of age, an extensive set of tools, and the art of working in most of the mechanical trades, without the assistance of any master, and which he continued to do a part of every day, when at the place where his tools were; and few men could work better.

“ Mr Smeaton's father was an attorney, and was desirous of bringing his son up to the same profession. He was, therefore, sent up to London in 1743, where, for some time, he attended the Courts of Westminster-hall; but finding that the profession of the law did not suit the bent of his genius, (as his usual expression was,) he wrote a strong memorial to his father on the subject, whose good sense, from that moment, left Mr Smeaton to pursue the bent of his genius in his own way.”

In the next place, let us hear on this subject our own great minstrel, of whose genius Scotland is so justly proud.

“ But say, my Erskine, hast thou weighed  
That secret power by all obeyed,  
Which warps not less the passive mind,  
Its source concealed or undefined;  
Whether an *impulse*, that has birth  
Soon as the infant wakes on earth,  
One with our feelings and our powers,  
And rather part of us than ours ;  
Or whether fitlier termed the sway  
Of habit formed in early day ?  
Howe’er derived, its force confess’d,  
Rules with despotic sway the breast,  
And drags us on by viewless chain,  
While taste and reason plead in vain.”

*Introduction to Canto 4. of Marmion.*

I conclude with a passage from Schiller, who thus expresses himself, in his poem on Genius, “ What *thou* doest, what pleases *thee*, is law, and passes as a Divine Word of Power to all generations. The works of thy gifted hand, the words of thy inspired tongue, move the enchanted soul with impulse irresistible. Thou alone markest not the divinity that stirs within thee ; and the mighty spell that makes every spirit obedient to thy call. Simple and modest is thy way, through a subjected world.”

This passage in the original is the finest that can be read. I subjoin it.

“ DER GENIUS.

———“ Was du thust, was dir gefällt ist Gesetz  
Und an alle Geschlechter ergeht ein göttliches  
Machtwort,  
Was du mit heiliger Hand bildest, mit heiligem  
Mund  
Redest, wird den erstaunten Sinn allmächtig be-  
wegen,  
Du nur merkst nicht den Gott, der dir im Bu-  
sen gebeut,  
Nicht des Siegels Gewalt, das alle Geister dir  
beuget,  
Einfach gehst du und still durch die eroberte  
Welt.”—*Schiller's Gedichte.*

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#### ERRATA.

Page 111, second line from the bottom, *for the read* their

— 190, last line, *for* consciousness *read* conscientiousness

— 217, third line from the bottom, *for are read* is

## APPENDIX

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### No. I.

CORRESPONDENCE betwixt the Author and Dr P. M. ROGET, author of the Article CRANIOSCOPY, in the New Supplement to the Encyclopædia Britannica, *referred to on page 94. of the preceding Essays.*

To P. M. Roget, Esq. M. D.

SIR,

*Edinburgh, 5th May 1819.*

AS I have not the pleasure of being personally known to you, I avail myself of the introduction of our common friend Dr Dewar, to afford me an apology for intruding upon your attention. I am at present engaged in preparing some Essays on the system of Gall and Spurzheim for the press, and in these essays I find it necessary to advert to your article Cranioscopy, on the same subject, but to differ very widely from your views. In consequence, your article is spoken of in terms rather of severity than otherwise. It gave me pain to be obliged to do so, but the interests of truth appeared to require it. As, however, I may have misapprehended the scope of your arguments, or may myself be mistaken: and as the furtherance of truth

is the only object I have in view, I take the liberty to trouble you with this letter, and to say that I shall have great pleasure in modifying my observations if you are in the right, and in being corrected myself, if I am in the wrong. If your views and mine shall not after all correspond, I shall be happy to print any observations with which you may be kind enough to favour me on the subject, either in defence of your own views, or in refutation of mine.

The principles, then, on which I proceed, are the following :

*First*, It is a principle in physiology, now universally granted, that functions can never be inferred, *a priori*, from structure. Hence, the brain *may* be the organ of the mind, and different parts of it *may* be the organs of different faculties, and yet mere dissection or examination of structure could never reveal such facts.

*Secondly*, Consciousness gives us no intimation of the existence or functions of any organs of the body, made use of by the mind as instruments for manifesting its powers : For example, We are not conscious of the existence or functions of the nerves of voluntary motion, although it is by means of these nerves that we act on the external world. In moving the arm, we are not conscious of the operation of the muscles which produce the motion ; in speaking, we are not conscious of the functions performed by the muscles which contract the larynx ; in hearing, we are not conscious of the functions of the auditory apparatus. And, in like manner, we are not conscious, when in health, of the existence or functions of the brain, whatever these functions be.

Hence, he who has sought to discover the functions of the brain only by dissecting it, and he who has sought to discover the organs of the mind only by attending to the

subjects of his own consciousness, must, from the necessity of the case, be ignorant equally of the functions of the brain, and of the organs of the mind; for, by neither means could the fact be discovered, that the brain is the organ of the mind, even although it were indisputably so. These principles are distinctly stated by Dr Spurzheim, at p. 205. of his octavo work, from which I perceive your article is taken.

Now, in the *third* place, the only way of discovering the functions of any organ of the body, serving as an instrument for manifesting the mind, appears to me to be, by comparing the power of manifestation with the state of the organ; and this mode of discovering functions, if pursued long enough, and with sufficient attention, must lead ultimately to results which cannot be doubted.

When, therefore, Dr Spurzheim said, that by comparing the developement of the cerebellum with the power of manifesting the amative propensity, he found the size and power to be generally in proportion to each other; when he said, that by comparing the developement of the brain under the middle of the parietal bones, with the power of manifesting the sentiment of cautiousness, he found the size and power to be generally in proportion; and when he said that, by comparing the developement of the brain in the upper part of the forehead, with the power of manifesting the reflecting faculties, he found the size and power to be generally in proportion;—when he said so, did he not proceed on principles which, if followed out with sufficient attention, would lead to indubitable results? and did he not proceed on the *only principles*, by means of which either the functions of the brain, or the organs of the mind can possibly be discovered?

Farther, if it be a fact that dissection cannot reveal the functions of the brain;—if it be a fact that reflection on the

subjects of our own consciousness can never reveal the organs of the mind ; and if it be a fact that the functions of the brain, and the organs of the mind can be discovered only by comparing the power of manifesting the mind with developement of brain, is it not philosophical to make such a comparison, and to state the results candidly and fairly, and to solicit the aid of every philosopher in checking the observations and results, for the sake of insuring accuracy and certainty ?

Now, in your article *Cranioscopy*, you appear to me not to have stated these principles to the public, and not to have shewn that the principles are unsound, or that, *de facto*, the observations made in following them out, have been inaccurate. You appear only to have used every argument to shew, that inquiry is unnecessary, and that the system is self-evidently absurd.

This, however, with all deference, is arriving at the conclusion a little too rapidly ; for, if it be impossible to discover that any particular part of the brain is the organ of any particular faculty, by any way, except by comparing developement and power of manifestation together, and if you have not made such a comparison, which you nowhere say you have done, you appear to me to be arguing without an inch of ground to stand upon yourself. When Dr Spurzheim says he has made the comparison, and found so and so ;—when his followers say they have made the comparison, and found so and so, on what principle do you, if you have never made the comparison, teach the public that Dr Spurzheim and his followers have not, and could not find so and so ? Every word that Dr Spurzheim says may be true, for any thing that dissection, or consciousness can reveal to the contrary ; and you do not say that you proceed on any other data than those furnished by dissection and consciousness,

when you call the system a “fantastic edifice,” and “the wild effusions of a bewildered fancy;” and you do not specify any data, which can enable you, without comparison, and *à priori*, to predicate that the facts stated by Dr Spurzheim are absurd; which it appears to me you ought to have done before you could philosophically condemn the system without comparing it with nature. Such is the cause of my speaking of your article in terms of disapprobation; and my reason for troubling you with this letter, is to state fairly the principles on which I proceed, that I may yet, ere the Essays go to press, avoid doing you an injustice, if I have inadvertently misapprehended the scope of your argument, or fallen myself into a mistake as to the principles of the science. I am, &c.

LETTER from P. M. ROGET, Esq.

*Bernard Street, Russell Square,  
London, May 18. 1819.*

SIR,

I am obliged to you for the honour of your communication relative to the system of Drs Gall and Spurzheim; and have read with great interest and pleasure the pamphlets you were so good as to send me, extracted from the Literary and Statistical Magazine. Although I fear there will still remain a considerable difference in our opinions as to the merits of this system, I flatter myself the difference lies in a narrower compass than you seem to imagine; and that my endeavours to convince you, that the censures you have passed upon my Essay, which has appeared in the Supplement to the Encyclopædia Britannica, are founded upon a misconception of the scope of my reasoning, will not be altogether unsuccessful.

The essential point, I conceive, on which the disciples and the opponents of Gall and Spurzheim are at issue, is

whether there really exists such an uniform correspondence between certain forms of the head, skull, or brain, and certain characters of mind, as can be distinctly recognised by observation. Until this be ascertained as a matter of fact, all speculation as to what may possibly be the functions of different parts of the brain, founded on reasonings *à priori*, can, in my opinion, lead to no positive or certain result. The question then, is, Whether sufficient evidence has been obtained to establish the fact, that certain forms of brain are accompanied by certain powers of mind? What I principally contend for is, that, as far as that evidence is derived from the observations of Drs Gall and Spurzheim, it is quite inconclusive, not only because the general accuracy of their observations is extremely suspicious, but because the several propositions with respect to the functions and particular parts of the brain do not appear to have been obtained by fair induction from experience. In the article *Cranioscopy*, I have fully explained the grounds on which this scepticism may, I think, reasonably be entertained. From the remarks you have made on this part of my Essay, it appears to me that you have not exactly appreciated the nature of my objections, which are principally directed against the sufficiency of the evidence brought forward by Gall and Spurzheim in support of these pretended facts.

You find fault with me for not having stated more explicitly, that the truth of the theory must ultimately depend on its conformity with experience. But the proposition really appeared to me to be too self-evident to require even the most concise enunciation. A theory, being merely the generalization of facts, must, of course, be built upon facts. When the facts have been ascertained and collected, and when we have shewn them to admit of being comprehended under a smaller number of more general

facts, we have, in other words, established their theory. Neither the one nor the other has, I think, been accomplished, in the present instance. I have no confidence in the authors of this system, either as faithful observers, or as sound reasoners; and, as far as I have myself had an opportunity of comparing the results they pretend to have obtained, with my own experience, I cannot say that I have found them in any degree verified. I at one time took some pains to make observations on this subject; and am persuaded that I met, in the course of them, nearly as many exceptions to the rules, as instances in confirmation of them. One consequence of my endeavours to satisfy myself by a reference to nature, was the conviction I received of the extreme difficulty of conducting an investigation of this nature. I have stated some of the sources of difficulty, not with a view of discouraging inquiry, if conducted on the true principles of philosophical induction, but as ultimately contributing to its success, by inspiring a salutary caution against a fault, to which it seems to me that the founders of this system have shewn a strong propensity, that of too hasty and imperfect generalization.

You complain that I have not proved that the observations of Gall and Spurzheim are, *de facto*, inaccurate. It appears to me, on the contrary, that where doubts can be reasonably entertained of the accuracy of the observers, the exposition of the grounds of doubt leaves the *onus probandi* on the side of those who seek to establish the facts in question. With those who are satisfied with the testimony of Drs Gall and Spurzheim on these points,—who esteem them accurate observers, and give them credit for having exercised that coolness and caution of judgment which alone can secure us from deception, even by our external senses,—and who can trust to their fidelity in generalizing the results of observation, and are satisfied with

the logic which they are in the habit of employing, I cannot presume that any thing I might say would have much weight. I am, therefore, inclined to let the matter rest here; since, after all, the judgments we are likely to form on the validity or insufficiency of this sort of evidence must be as much the result of feeling as of reasoning. On this account I do not feel disposed to enter into any further controversy on the subject; though, at the same time, I remain open to conviction, if the evidence in favour of the theory, furnished by observers worthy of confidence, shall ultimately be found to preponderate. I am, Sir, your very obedient humble servant,

P. M. ROGET.

To P. M. Roget, Esq.

SIR,

*Edinburgh, 28th May 1819.*

I have had the pleasure of receiving the letter of 18th May, which you did me the honour to write to me, under cover to Dr Dewar. I fear there is no prospect of you and I agreeing on the merits of the system of Gall and Spurzheim; so I drop all private controversy on that subject. But I am sorry that we do not yet agree on the apparent tendency of your article *Cranioscopy* in the *Encyclopædia*; and it is on this topic alone that I trouble you with another letter.

If it was your object, in that article, to state, that the great cause of the present deep ignorance in regard to the functions of the brain, was to be found in the circumstance of anatomists having hitherto confined themselves to dissection alone of that organ;—that Gall and Spurzheim had at least the merit of suggesting the only way in which this ignorance was likely ever to be removed, viz. by comparing manifestations and developement together;—but that from

their enthusiasm, or incapacity, or some other cause, they have pursued their own mode of philosophising with so little advantage, that their conclusions cannot be depended upon;—and, hence, that other anatomists ought to follow industriously in the same course, and seek to perfect science by obtaining correcter results;—if it was your object to make such a statement in the article *Cranioscopy*, then I have done you great injustice in the *Essays* intended for publication; and I now write, to say, that, with your permission, I shall print your letter to me in the *Appendix*, or any *note* with which you may be pleased to furnish me, in explanation of your object.

On reading your article, it appeared to me, that your object was to represent both the mode of philosophising, and the conclusions of Gall and Spurzheim, as absurd, and deserving of no consideration; and that you meant to shew, first, that the *true* faculties and dispositions of the mind, could not be discovered by observing manifestations, except with extreme difficulty and uncertainty; Secondly, That the true developement of the brain could not be discovered with any moderate certainty through the cranium and integuments; and, thirdly, That experience shewed rather that the mind might be manifested without perceptible diminution of power, even although the brain were partially, if not indeed totally destroyed by disease, than that the brain was the organ of the mind; and, hence, that the whole system both in foundation and superstructure, was only “the wild effusion of a bewildered imagination.”

Since I received your letter, I have again read your article, and with all the candour in my power; and I am sorry to say I cannot see the object of it in another light from that now stated. It is with regret, therefore, that I cannot alter the observations made on it in what I intend to print; and although I am well aware that any observa-

tions of men will give you no uneasiness, yet it is so painful to be supposed capable of wilfully misrepresenting an author, in order to make an attack upon him, that it would be a real favour to me to be allowed to establish at least my *bona fides*, by publishing the correspondence, or the substance of it, and thus to afford the reader a safeguard against my misconceptions, if I have so egregiously erred. I have the honour to be, Sir, &c.

*P. S.* I cannot but regret that you did not state the result of your *observations* in the article *Cranioscopy*; as a number of well authenticated facts in contradiction to Gall and Spurzheim's statements would have outweighed, in my humble apprehension, a whole *Encyclopædia* filled with arguments.

G. C.

LETTER from P. M. ROGET, Esq.

*Bernard Street, Russel Square,  
London, June 3. 1819.*

SIR,

I have to acknowledge the honour of a second letter from you on the subject of my article on *Cranioscopy* in the *Encyclopædia*. In answer to your inquiries as to my object in writing it, I can only say, that I have endeavoured to give such a statement of the arguments for and against the system, as might enable the reader to form his own judgment respecting its truth. My comments of course, applied solely to the evidence brought forward by its founders, Drs Gall and Spurzheim; I accordingly thought it right to omit all reference to my personal experience on the matter, more especially as I was not exactly writing in my own name; and I felt it nowise incumbent in me to lay the foundations of any similar system myself, or presume to direct others in the pursuit, by laying down

a plan of operations to be followed for that purpose. But, as I have before stated, I shall certainly not refuse my assent to the facts in question, when I shall be convinced they have been fairly established. I have the honour to be, Sir, your most obedient humble servant,

P. M. ROGET.

*P. S.* I have no objection to your publishing this and my former letter to you, if you think it worth while.

## No. II.

EXTRACT from Sermons preached in the Tron Church of Glasgow, by Thomas Chalmers, D. D., referred to on page 208.

“ GOD has, for the well being of society, provided man *with certain feelings and constitutional principles of action*, which lead him to a conduct beneficial to those around him; to which conduct he may be carried *by the impulse of these principles*, with as little reference to the will of God, as a mother, among the inferior animals, when constrained by the sweet and powerful influences of natural affection, to guard the safety, and provide for the nourishment of her young. Take account of these principles as they exist in the bosom of man, and you there find compassion for the unfortunate; the shame of detection in any thing mean or disgraceful; the desire of standing well in the opinion of his fellows; the kindlier charities, which shed a mild and quiet lustre over the walks of domestic life; and those wider principles of patriotism and public usefulness, which, combined with an appetite for distinction, will raise a few of the more illustrious of our race to

some high and splendid career of beneficence. Now, these are the principles which, scattered in various proportions among the individuals of human kind, give rise to the varied hues of character among them. *Some possess them in no sensible degree* ; and they are pointed at with abhorrence, as the most monstrous and deformed of the species. *Others have an average share of them* ; and they take their station among the common-place characters of society ; *and others go beyond the average*, and are singled out from among their fellows, as the kind, the amiable, the sweet-tempered, the upright, whose hearts swell with honourable feeling, or whose pulse beats high in the pride of integrity.

“ Now, conceive for a moment, that the belief of a God were to be altogether expunged from the world. We have no doubt that society would suffer most painfully in its temporal interests by such an event. But the machine of society might still be kept up ; and on the face of it you might still meet with the same gradations of character, and the same varied distribution of praise, among the individuals who compose it. Suppose it possible that the world could be broken off from the system of God’s administration altogether ; and that he were to consign it, with all its present accommodations, *and all its natural principles*, to some far and solitary place beyond the limits of his economy,—we should still find ourselves in the midst of a moral variety of character ; and man, sitting in judgment over it, would say of some, that they are good, and of others, that they are evil. Even in this desolate region of atheism, the eye of the sentimentalist might expatiate among beauteous and interesting spectacles,—amiable mothers shedding their graceful tears over the tomb of departed infancy ; high-toned integrity maintaining itself unsullied amid the allurements of corruption ; benevolence

plying its labours of usefulness, and patriotism earning its proud reward in the testimony of an approving people. Here, then, you have *compassion*, and *natural affection*, and *justice*, and *public spirit*,—but would it not be a glaring perversion of language to say, that there was godliness in a world, where there was no feeling and no conviction about God ?” (Sermon iv. pp. 132, -3, -4, -5.)

### No. III.

NOTE referred to on Page 298.

Dr Spurzheim has remarked in a cursory manner, that “ Every one feels that he thinks by means of the brain ;” and in the foregoing Essays it is laid down as a principle of the System, that we have no consciousness, when in health, of the existence or functions of that organ. These apparently opposite propositions may, without difficulty, be reconciled. We have a general consciousness that the thinking principle is somehow connected with the head more intimately than with any other member of the body. We all feel that we do not think by means of the legs, arms, or trunk ; while we have a sort of indistinct consciousness that we think by means of the head. This, accordingly, is what I understand Dr Spurzheim to mean by the words now quoted. But this indistinct feeling does not amount to a consciousness that the substance within our heads is brain, and that the special function of that substance is to serve as the instrument for manifesting the mind ; which is the true import of the proposition maintained in the Essays. It is worth mentioning, however, that I have met with one gentleman who assured me that he has distinct consciousness that he feels

and thinks by means of the brain; and that after severe application to abstract study, he feels heat, and a pain in the forehead, at the seat of the organs of Causality and Comparison. Such sensibility of constitution is perhaps by no means common; but this system shews so clearly that we ought not to take our own feelings and perceptions as infallible types of the feelings and perceptions of the whole human race, that it will be more philosophical not to reject the statement of this gentleman as incredible, merely because our own feelings do not confirm it, but to admit that it may be true, as his constitution and ours may probably differ.

#### No. IV.

#### NOTE.

In page 100. of the Essays, a passage is quoted from the article *Cranioscopy*, in answer to the charge of Materialism brought against the System. It ought to be mentioned, that these observations originally appeared in the *Edinburgh Review*, vol. ii. p. 148. They are ingenious and philosophical, and as they were made at a very early period of the discussions on the System, the reviewer has the greater merit in the liberality displayed in them, of which he ought not to be deprived.

## INDEX to the Plate.

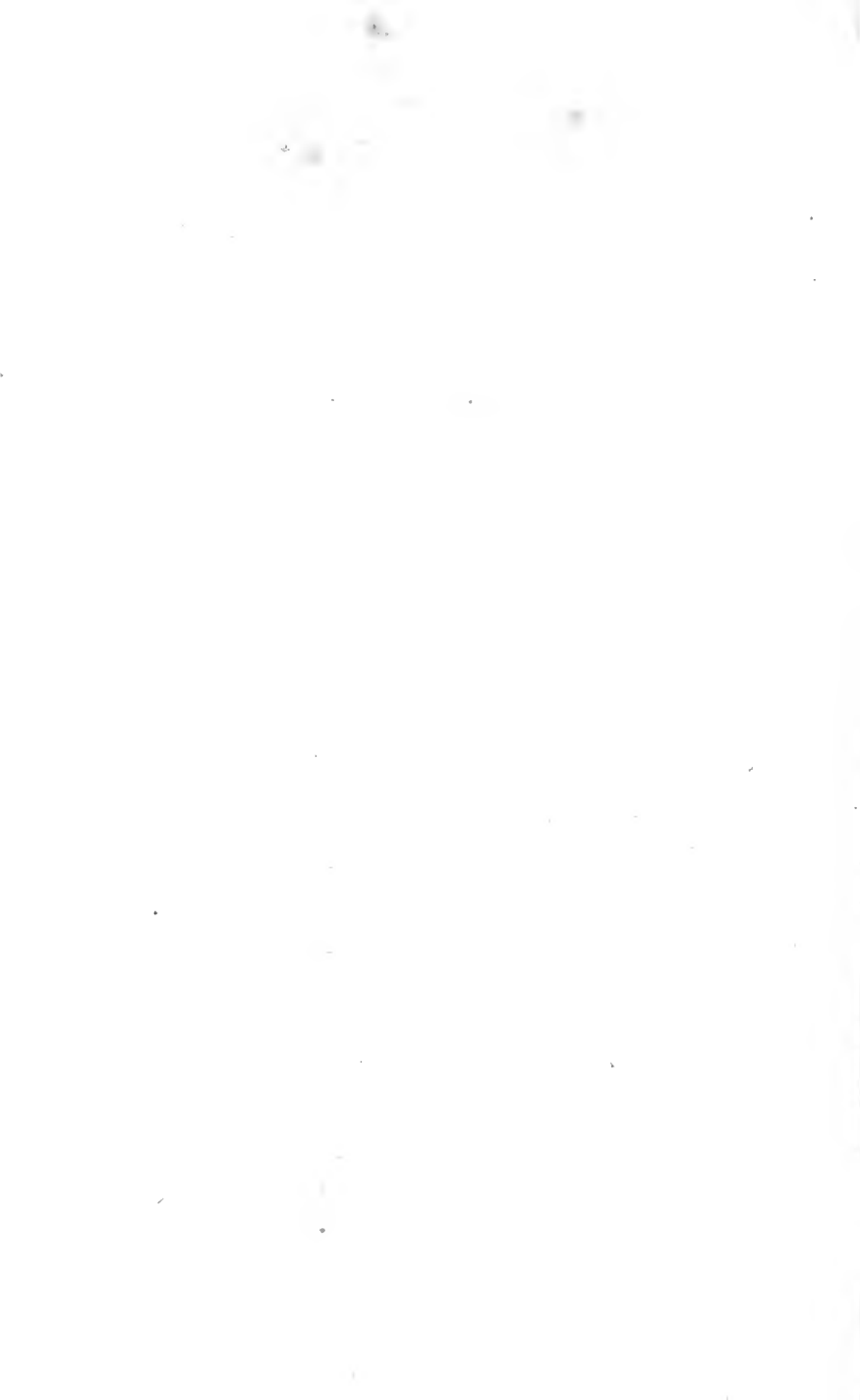
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Those organs not marked as probable and conjectural, are regarded as *established*. Nos. 15. and 17. are here stated as probable, because they are mentioned as only so in Dr Spurzheim's work, published some years ago; but so many observations have been since made, which confirm them, that they also may now be regarded as *established*.

FINIS.





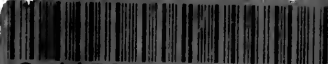


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