An essay on the system of Messrs. Gall and Spurzheim, read before the Physical Society ... 14th November, 1817 / [Charles Hepburn].

AN ESSAY

ON THE

System

OF

MESSRS. GALL & SPURZHEIM,

READ BEFORE THE

Physical Society,

HELD AT GUY'S HOSPITAL, 14TH NOVEMBER, 1817.

BY

CHARLES HEPBURN, JUN.

FELLOW OF THE LONDON MEDICAL SOCIETY, AND MEMBER OF THE PHYSICAL SOCIETY, HELD AT GUY'S HOSPITAL.

"Larger vessels may venture more,
"But little boats should steer near shore."

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1818.

To T. H. GREEN, Esq.

OF

St. Thomas's Hospital.

DEAR SIR,

IT is with the greatest respect, that I beg permission to dedicate to you this, my first production; and, being the President on those evenings it was read and discussed, to no other person can I do it with greater propriety, or pleasure to myself. In doing this, allow me to return you my sincere thanks for the kind and friendly manner in which you have given me your advice upon this occasion; and, I trust, I shall ever prove myself worthy to be classed among the number of your friends.

I had not the least idea, until these few weeks, that this Essay would ever appear in print; and it is at the solicitation of *many* of my friends, that it now assumes that form. They, as well as yourself, must be aware how very limited is the time generally allowed in Societies for discussion; consequently, how *very much* authors are obliged to confine the length of the papers they present. The subject which I have treated of, above all others, required some enlargement, as it encompassed the metaphysical opinions of many centuries. I did, however, keep it as much as possible within bounds; but now, that I have an opportunity of enlarging, I most willingly embrace it; and have made such alterations and additions as I thought more particularly required. Still, however, although thus altered and printed, it must not be considered in the light of a publication; it would be unfair to offer it as such, because the Theory is not my own; and I have only *endeavored* to display, advocate, and support, the opinion of others. It ought only to be considered as a *sketch* of a system which has of late excited much attention, and will enable those of my friends, who have not leisure to read the voluminous works of Dr. Spurzheim, to have some idea of the doctrine, and of its utility. I shall briefly notice the discussion that took place upon this subject.

On the first evening, our attention was wholly occupied upon that part relating to the superiority of man over the brute creation; and here many objected to my introducing Theology to support my opinion; indeed, thought it was wholly irrelavent and inadmissible; now I maintain quite an opposite opinion, considering Theology the only means by which we are enabled

to settle the point, and the sacred Bible as the resolver of all our doubts. If, as I confidently hope, we all were in that Society, believers in that book; if reason dictates to us the truth of its doctrines, and if we believe it to be the true and authentic transmission of sacred records, why, when doubts arise upon any subject, if they can be resolved by it, do we not remain content with its decrees. The human mind is, however, so prone to reason, and endeavour to prove, that nothing exists but it can account for, that it never will remain satisfied, unless logical reasonings will support it; and, indeed, were we to be satisfied with these, then, having proved the authenticity of the sacred records, (of which there *can* be no doubt,) we should thus confirm its decrees, and determine the truth of our inductions. If any do doubt the authenticity of the Bible, then may its decreesbe suspected; but, as we are to suppose, I repeat it, that all in that Society were believers in this holy book, what objection can there be to bring it to determine a point so material, and which can never be finally settled by the mere ingenuity of man's arguments. *It is said* that, in bringing forward the scripture in Societies, you raise doubts in the young mind; indeed, to use the words of another: "you do more harm than you can account for." Now, here I must most decidedly differ from those who maintain this opinion. It seems to me a most singular occurrence, that when we have arrived at an age generally termed manhood, we have that insuperable objection to the introduction of scripture, and seems, as it were, to be ashamed of reviewing those truths which it presents. It is a pity that the principles of virtue and morality, which our parents and our tutors have endeavored to instil into our minds when young, as the principles and foundation of our conduct in after life, should so far have lost their influence, that we are unable to face its dictates, and fearful to view its contents, because our minds have become more open to objections. It is said, that its introduction leads us often to deny its truth; but the denial is made, not from thorough conviction and diligent investigation; it is, therefore, not only dictated by the mere laws of justice, but it is an imperious duty, devolving upon that person who attempts to deny the truth of the sacred writ, when we consider that he is endeavouring to dispel the glorious fabric that holds us together—the principles and happiness of his country—that he should examine the grounds which led him to deny the words and works of his Creator; and, in doing this, in reviewing the contents of the bible, if he read, examine, and compare, he cannot fail to give his consent to that, which his pride and vain glory would before deny: and I would not, knowingly, argue with any man upon the subject of the mind, who professed those principles generally termed atheism; but they are principles I believe no man to possess; for, however *willing* he may be, and however urgent to persuade

himself, that there is no creator, still that small share of reason, which even *he* possesses, must and will convince him, that he is wrong. The atheist may resolve all living beings into matter; himself, the animal who was given for his support and service; in fact, every thing existing on this earth, into matter; and it may seem plausible, and very authentic, till you enquire who formed matter; here *he* would willingly drop his arguments; but he is obliged to own a creator of matter; and thus, unfortunately for him, his own opinion contradicts his assertions. I would ask him further, how is it that matter, (a general term certainly for a substance of vague conception,) could possess the power of modeling itself into so many different forms, figures, &c.; and how did these attain the different powers of motion which they display? This I consider an unanswerable question; neither his mathematical calculation, his logical reasonings, nor his sophisticated mind, can give to it any other than that of a supreme Being, who rules over the whole. I am confident, however some men may pride themselves upon *their conviction* of there being no supreme power, there is not one of them, in their hearts, confesses the words he utters: and for a philosopher to be an atheist—for that man who is daily studying the noble works of creation—for that man who is daily viewing its beauties, to exclaim—all lives from chance, and no Creator existed, truly proves that we are possessed of some principles which require the strictest hand of reason to regulate and command.

Having thus, as I hope, (although, perhaps, soared somewhat within forbidden regions) fully proved the falsity of the principles maintained by those styling themselves atheists; as also, that the discussion of truth can suffer no injury by investigating them, as to their relation to the scripture, and how far they may be determined by them; I shall not comment upon the inference to be drawn in reference to the subject of the "superiority of man over the brute creation," but refer those who doubt it to the first and second chapter of Genesis, after reading and studying which, *I* have no doubt but that they will agree with me in believing man to be the supreme of God's works.

On the second evening of the discussion our adversaries occupied the greater part; and I only spoke twice, and that very shortly; being more willing to allow them this advantage, as I was desirous to hear the many objections which I was confident would be made, and I feel great pleasure in stating that, of twenty-two persons who spoke, *not one* offered any new objection, and not a single one was made that has not been previously answered by Dr. Spurzheim. But, on the third evening, the previous advances of our adversaries on the preceding, instantly vanished, their objections were answered, and facts were stated by some gentlemen which it was wholly out of their power to contradict. As such, and upon summing up the whole of the discussion of

this and the preceding evenings, and finding that we had not lost one axiom which we had advanced, I must own I felt some pleasure that we were placed in the midst of many very able adversaries; and our force small, but we were enabled to withstand all their talent, all their ingenious arguments, and certainly have to congratulate ourselves, that we have not lost an iota of this theory.

I know of no better opportunity than the present that I can take, to return my thanks to those gentlemen, adversaries or friends to this theory, who took a part in this discussion; I never, in the Society, saw one conducted with so much propriety, regularity, and indulgence.

This may, my dear Sir, appear to you, as to many others, a very singular Dedicatory Letter; but, as I should have been necessitated to add a Preface, for the purpose of explaining that which I have here done, you, I am confident, under these circumstances, will pardon so long and singular a Dedicatory Epistle.

It may be thought by many, that I am too fond of introducing Theology: this I deny; I never do but when it is required; and even then I trust I consider well its importance; but I have always in my studies endeavoured to follow that prince of philosophers, Sir Isaac Newton; and like him I do, and hope I always shall, in studying either natural philosophy, or the philosophy of the human mind, recollect, that there is one above who has willed that such and such things should be, and that, in these wonderful works, there are some things superior to our comprehension and understanding; these he has ordained shall remain, among many others, as everlasting marks of his omnipotent power.

Accept, once more, the thanks, and the kindest wishes for your health and happiness, from,

Yours, sincerely,

CHARLES HEPBURN, Jun.

48, *Luças-street, Commercial-road.*
May 9, 1818.

AN ESSAY,

&c.

" To all inferior animals 'tis given,
T' enjoy the state allotted them by Heaven;
No vain researches e'er disturb their rest,
No fears of dark futurity molest:
Man only man, solicitous to know,
The spring whence Nature's operations flow."

JENYNS.

IN presenting this Essay to the notice of the society, I feel it necessary to premise a few words in explanation:—During my residence in Edinburgh last winter, I had an opportunity of attending the greater part of the lectures delivered by Dr. Spurzheim in that city. I made at the time some few notes, and have since added observations of my own. On my arrival in London, hearing a public lecturer regret the few papers that were brought before this society of a physiological nature, it occurred to me that this subject might create some interest, and lead to discussion, from which we might derive some benefit, were it presented to this society in the form of an Essay. I have since that time written the Essay, which is now about to be read. For some observations of my own, entwined with the matter of the subject, I must request your indulgence: a metaphysician so young in practice, cannot hope to present the most perfect ideas. The anatomical dissections I have altogether declined interfering with, for reasons that must be obvious: First. It is impossible to settle merely by discussion the points that would be argued; it is only by an ocular demonstration that they can be

proved. Secondly. That the nervous system, as explained by these gentlemen, differing from most others, would require a paper upon that subject alone, to do them any justice; and lastly, That, as the lectures were delivered to a mixed company of ladies and gentlemen, the anatomical part was omitted, as being uninteresting to the general hearer. The theory of Messrs. Gall and Spurzheim has only of late years excited attention in this country: the publication of Dr. Spurzheim's Book, in the English language, together with his delivery of lectures, has brought it more particularly before the British public. It consists of a division of the brain into organized parts, and a division of the mind into propensities, sentiments, and faculties, assignable to this division:—The number of the division is thirty-two, classed under the three several heads above-mentioned. The propensities eight, viz. amativeness, philoprogenitiveness, inhabitiveness, adhœsiveness, combativeness, destructiveness, covetiveness, secretiveness.—Sentiments are, self esteem, love of approbation, cautiousness, benevolence in man, or meekness in animals. The sentiments which are proper to *man* (for those that I have already spoken of are found in the brute creation as well as in man,) are veneration, hope, ideality, conscientiousness, firmness. Knowing faculties are—individuality, form, size, momenta, order, time, colouring, locality, number, tune, language. Reflecting faculties are—comparison, *casuality*, wit, imitation. This division of the mind by these gentlemen is perfectly new; as metaphysicians, we have previously considered the mind as merely made up of four great essentials, viz. perception, memory, judgment, and imagination; the possession of these constituting mind, which is the great criterion of man. It is true, the mind *possesses* the whole of these faculties; but upon a slight consideration we shall see how indefinite are these terms; when, for instance, we see one man endowed with a memory of localities—another with a memory of number—and a third with a memory of language—can we allow that memory is a term defining the whole? No; I think it requires that division which these gentlemen have given to it. They have given a memory, a judgment, and perception, to *each*

faculty; so that every part expresses its particular cause. The various judgments men possess, some of colouring, others of form, of music, &c. cannot leave a doubt in our minds of the indefinite manner in which they have been used. Many philosophers have asserted, that man is to be merely considered as a rise in a degree from the brute creation: they seem altogether to have forgotten the *greatest* attribute of man. In their ardour to establish a system, they have forgotten, or perhaps *wilfully neglected*, to account for mind. In my opinion, even the assimilation in some degree of feature, the coincidence of structure, and the performance of similar functions, can at all detract from the superlative excellence of man, or in any way level him with the brutes who serve him. It is as arrogant an assertion to level man with the brutes, as it would be to level God with man. That spirit which was breathed into man at his creation, that creation after the image of our Creator, so *expressly* revealed by *history* and *revelation*, ought to deter speculation so unaccountable and so useless. Instinct is a word which always to me seemed to require some explanation: like mind, it expresses a whole, it comprises the attribute of brutes; but it requires some division to express the peculiar propensity. The difference of mind, I think, from instinct, is well shewn in this circumstance—a dog will go to a fire, will enjoy it; but that dog, although means are presented, is not enabled to replenish it; he does not possess that power of reasoning for futurity which constitute a principal part of our thoughts. The division of instinct that has been made by Messrs. G. and S. must appear, upon a slight consideration, as justifiable as that of mind. Diversity in action is observed in all animals; each class possesses a peculiar or distinct attribute, which marks in some manner their whole race. Some animals are carniverous, some are herbiverous, some are water, others are land fowl, some animals protect their young, others destroy them, some birds choose partners for a whole season, while others merely enjoy for a time. Can then one and the same instinct move these animals? Must not each possess a peculiar power, when each possesses a peculiar action? Can any one suppose that

the instinct which propels the duck to the water deters the fowl? It is upon these grounds, which I certainly think very fair, that Messrs. G. and S. have given, equally with man, a peculiar set of propensities to the brute creation, and that according to their manifestations, we are enabled to draw some general information as to their peculiar feature of character; and I can here, from personal observation, speak as to the truth of their inductions. Thus has the Creator placed in all animals a power by which they shall be guided: thus has he given to the bird instinct to set on its egg; but he has given to man that reason which distinguishes between an egg and a stone. Thus also the brute creation acts according to the impulses of nature, directed to a certain object, while man possesses a power to will and to do—to constitute and to act. What mind is, or rather, what soul is, they do not pretend to point out; this is one of those subjects which are ordained to remain in obscurity; it is one of those subjects which shews our subserviency to a superior power, and it is that which constitutes the dominion of creation; and if I may here be pardoned for making a direct assertion, I would say that its constitution will never be discovered, although we are witnessing its daily effects. That first cause which produces these effects, which man would vainly attribute to his being alone, belongs to a power who has willed that such and such things we should know; but that beyond this we should not advance one single step.

It is hardly necessary to touch upon the immateriality and immortality of the soul; I am confident none here will deny it. On a subject of this kind, logical reasoning falls to the ground; if doubts do arise, they are instantly quelled by the affirmations of scripture; and here so plainly is it dictated, that all our wild speculations become absurd, and we must treat them as we do the assertion of Hume, when he affirms, that he has logically proved there is no Creator, by reminding us such an assertion merits all the blame that is attached to it—it is one of those affirmations which proves how absurd and arrogant are some of the assertions of man. It is only the effect of the mind they attempt to inquire into; this study is

generally called that of the human mind: it is improving to that person who studies man in general, or has for his object any particular branch, depending upon the nature and economy of man. I think it will hardly be requisite that I mention how useful this study must be to the medical man; the very nature of the qualities of the mind point out how much they must be influenced by it. It is with regret that I mention, as a further inducement to study the mind, the rapid progress of insanity within these few years: it has now made such rapid strides over Europe—so numerous, so distressing, and so heart-rending are the cases which are daily viewed by the medicel practitioner; the sight of a father bewailing the loss of his son; lost, because now rather has he become inferior to those animals which surround him;—they do retain their natural instinct; but man, when deprived of that which makes him lord of the creation, sinks, not only to a level, but sometimes infinitely beneath them. How often must we have beheld the fond mother bewailing the lost intellects of her lovely daughter;—nor can a more painful sight be presented to us, than the once delicate and beautiful female, who possessed not only outward endowments, but the more solid fabric of a virtuous mind, sunk into the abyss of misery: those accomplishments, which were the fond parents' delight—that beauty, which charmed the eye of all, expressing not only the external form, but the fair fabric of a virtuous mind, raving in all the horrors of a maniacal state, or sunk into a melancholic torpor, worse than the ravings of a determined madman. How distressing a scene, to view children surrounding the sick bed of their parent, afflicted with this disease, unable to recognize the features of his own dear and lovely offspring, or sensible to the wailings of his surrounding friends. I repeat, so numerous and distressing are these occurrences, that—if sympathy is a feeling of the human breast—if man does feel for another's woes—is it possible that he can view, without a wish of relieving—that he can remain an inactive spectator, beholding the ruin of all that is fair and lovely—without breathing a wish that he might be enabled to set this ruined fabric right again? and, if we are to learn, and learn to do good, what study can be more truly

pleasing, when we find it productive of such happy effects; when we find, that even one shall be delivered from this unhappy malady, and be enabled to hold, once more, intercourse with his fellow-creatures? As the beams of reason enter the mind, and once more enlighten by their rays the darkened chaos, it will kindle in the breast of the poor maniac a fire of gratitude, which every ray of reason must strengthen, and which cannot but be pleasing to that person who has entered, with such success, in his cause. But I am confident I need no longer dwell upon this subject: it must be acknowledged, that the study of the mind of man must be useful, when it has for its object the performance of such a general good. It will hardly be credited, perhaps, that, according to the returns made during five years, the ratio had increased in proportion as 100 to 127; and if the progress is as rapid as at that period, which was from 1805, it will now be as that of 2 to 1, increasing in a ratio at this period greater than the population. Here, then, a very interesting question presents itself to our consideration:—to what moral or physical cause are we to attribute so rapid an increase?

But as I shall treat of insanity hereafter, it may, perhaps, be as well that I defer any more observation till that period. Great objections have been made to this theory; and, as is too often the case, it has been condemned as absurd, without ever being examined. I can with truth assert, from extensive experience, that, at least, one half of those who condemn it, have never read ten pages of Dr. Spurzheim's book; they have been guided in their opinion, solely by a set of men, who form themselves into a conclave, to condemn or praise a work as they may think fit. It is a pity, that criticism should have dwindled into scurrility, and that hacknied witticisms, should have assumed the place of sound sense. This is not the place to investigate the laws of criticism, or I should be led most certainly to deprecate the manner in which it is at present pursued: in my opinion, it is neither founded upon the laws of literature or those of justice.

It has always been the boast of the English literary world, that they have treated and reviewed the opinions of foreigners with the greatest respect; that they have

examined before they condemned; and even, in their condemnation, allowed much to ingenuity. Every gentleman present this evening, must be acquainted how shamefully a celebrated Northern Review attacked this theory: they seemed to be the first who aspired to the honour of annihilating that which, but as yet, was only a spark; to crush genius before it should have flamed; and, as it were, condemn the superstructure of a pillar, of which, as yet, they only beheld the foundation. The attack was as ungenerous as unjustifiable; and their inability to support their former assertions, has plucked from them some of those plumes they so undeservedly wore.

The greatest point that we have to establish is, that, both from analogy and reasoning, we are justified in dividing the brain into separate organs. I feel sorry, that I am unable to present the society this evening those proofs which I myself witnessed, while attending the lectures of Dr. Spurzheim. I am obliged to content myself by the relation of those circumstances which are more evident and are more easily related. It is a difficult task to answer the objections, so as to satisfy and convince thoroughly those who have not read or thought for themselves: it is those *who have read*, and not rightly comprehended the auhor's meaning, that a confutation of the objections will be better understood: others must, in the same way, take our assertions as they have taken former ones. I am to presume the admission of the division which has been made of the mind. There is a law in nature, so fully established as to admit of no doubt, that nature, to produce certain effects, has a corresponding organization; and it perhaps might be requisite, that I mention here that, when I speak of nature, to use the words of a celebrated Professor: I mean "Nature's God." That nature has an organization to produce effects, requires little evidence to prove. Let us survey this material world, with all its contents, from the lowest thing in creation, to the most exalted of its formation, we behold each partaking of some peculiar shape or form constructed to the different scenes it has to perform. Not only is organization given to the performance of action, upon which materiality has a grasp, but it is given to parts, in order that, through

them may be manifested, certain powers, whose origin to be immaterial. Life seems to be one of these immaterial powers—one of those incomprehensible actions, which serve so fully to point out a subserviency to a higher power. That life is such, is easily proved. When the spark, which animates the body into a living system, becomes extinguished, there is then no diminution of any of its parts; all its members remain as before; and little else is beheld, but the pallid countenance, and the stillness of once-reverberating pulse. 'Tis more like our diurnal rest, than the rest of death; but, from being a body animated with all the life of a living being—from being the thinking, willing, and acting body—it has become deprived of all of them, and yet without the loss of any material substance. Thus we look for something which must account for this departure of power; and we look for it in life, which is neither tangible, visible, or in any form presented to us, except that of animating the human body. Thus do we conclude that organization is given, not only for the purpose of material action, but that immaterial power acts through organization, and is the foundation of living principle. Life, then, becomes manifest, by stimulating the body, and its existence proved, by its continued actions; and the performance of these constitute a state of life. But life is not manifest through one organ alone; for, although as a primary position, we may call the body one organ, still, as being composed of many, we are not justified in saying life becomes manifest through one but through many organs. But there is an immaterial power which seems to depend upon life, although distinct from it. It can never exist without life, but life may and does frequently exist without it: it also is so far distinct from life, that its actions are manifested through one organ alone, while, as I before stated, life stimulates the whole. What this immaterial principle is, I should suppose, is readily contemplated. Mind, as forming part of the human being, existing always in conjunction with life, and never found without it; and the brain, as being the organ through which this is manifested, is readily recognised to be that immaterial principle. This separation of life and mind, which, I think, cannot be denied, supports me in my ar-

gument of the great superiority of man over the brute creation. Instinct is too often confounded with mind, and determinate actions placed in an animal by its Creator, for its nature is too frequently confounded with principles of reason. For instance, the great sagacity, as it is called, of the bird, in building its nest in a particular form, is certainly determinate, for each bird continues the same kind of nest; and even placed in different situations, where a diversity is requisite, it still adheres to the same formation. But man, not only endowed with the intuition of instinct, has in him principles which are the means of determining his actions according to the various situations he may be placed in. Man not only has the power of forming habitations like the birds—not only has a peculiar formation according to the different countries he inhabits, but he has that wonderful power of modeling his habitation according to his own will; thus placing in his grasp a power of willing, which the bird, or any other animal, has not. Every step I advance in the study of metaphysics, the oftener I consider upon, and the more frequently I debate within myself, this argument of man's superiority; I seem to have gathered new strength for its support: I would therefore say, that not only has man the evidence of sacred writ to support him in this situation, as the supreme of God's works, but he has one which to this very hour is present to us, the strength of which is increasing in proportion as we advance in life, and the strength of which will increase while the world lasts, and till man shall be swept away—till the revolving earth—"this circumscribed universe," which conveys him his diurnal round, shall once more sink into a chaotic fluid—the mind of man will rise, but never on this earth reach its meridian. Always will some stronger proofs of its majesty, some more evident facts of this divine-like faculty, be presenting themselves to our view, and man *shall* reign over all the creeping things of the earth, because it is ordained by that power to whose will we ought all to bow.

Having therefore endeavoured to prove that the operations of nature, whether considered as material or immaterial, are manifested through organs; having shewn that life is an immaterial principle, and its power manifested

through the body: as also, that mind is an immaterial principle, but totally distinct from life, it is our next object to enquire what organ in the human body is the medium of the reasoning powers. If we survey the different organs of the human body, we are enabled, with the exception of one or two, to point out pretty accurately their different functions. Among those whose functions are not as yet perfectly decided, is that of the brain; (although in my opinion it is perfectly so.) We find no other organ of the human body through which the mind can with more propriety be said to manifest itself. In its healthy state we find that the mind is more acute, more susceptible of application, and more interested in the different branches of mental power. In its diseased state, all that brilliancy of fascination, all those redundant graces, which play around the man of literature, vanish, and we too frequently find him not only deprived of this, but in their place, different passions, of a baneful nature, stirred to action. If we take the other organs of the body, consider them separately in their healthy and diseased state, we can find no analogy, or any proofs which can bear us out in its being attributed to any of them; and it seems to me, that if the moral sentiments of the viscera have not yet vanished, ere long they will be completely extinguished. It would be useless to enter into an investigation of the arguments for and against the brain being the seat of the moral sentiments; but there is one contradiction so manifest, that I cannot omit giving it. Its supporters, in affirming that the intellectual powers reside in the viscera, forget that the brute creation have viscera, but are altogether devoid both of intellectual power and moral sentiment. That the brain is the seat of the mind is easily proved. Injuries received there are generally manifested by a corresponding alienation of the mind. It is true, that, very frequently, extensive injuries have been received by this organ, and no very perceptible alienation of the mental faculties has occurred. This is readily answered, and I have more than once been surprised to hear it brought by the medical world as an argument against it. Those who are in the slightest degree conversant with medical practice, must be aware how various is the degree of irritability which persons

possess, and how very much they influence the general tenor, symptoms, and progress of a disease, in fever more particularly; it is therefore no wonder that persons, who are attacked with this disease, should, although exposed to the same contagion, have it so variously, more especially as the brain, at least in my opinion, is the seat more particularly of fever. In the practice of surgery it is impossible but that we must observe this diversity of the power of sustaining an injury, according to the greater or less degree of irritability which the person possesses. Thus, therefore, in referring the injury of the brain to the influence of irritability, we can easily account for that diversity of disease which appears under similar and apposite circumstances. Nature never provides more than is sufficient to answer its purposes. Of what use, then, is that mass of brain situated above the corpus calosum? It surely cannot be for the mere purpose of filling up, nor, as some have imagined, a magazine of nervous influence. Setting out with the position that the life and mind are separate immaterial powers, and that the brain is the organ through which the latter is manifested, I shall proceed to lay upon this foundation, the superstructure of this theory. To those who heard this Essay read in the Physical Society, it is perhaps necessary I should say a few words. They will very soon perceive that I have adopted a different mode of proceeding; and I think will agree with me in believing it preferable. I did not proceed in my arguments before them in that logical method, and progressive accession to the different points, as I have here; they will also perceive that what was before general assertions, are now supported by argument, and that much new matter is here thrown in: this I considered necessary, as many, who will see this, I shall not have an opportunity of conversing with; therefore shall be unable to answer their objections, and the questions which general assertions must always draw after them. I have therefore endeavoured to support them as shortly as possible, in order that I may not be accused of making assertions devoid of truth. I have, however, strictly adhered to the original principle in the Essay, and shall throughout. Having endeavoured to shew that mind is placed in

the brain, we ought next to consider what mind is, or rather, what are its properties. With respect to the nature of mind, I would say, that it is a spirit implanted in man, by which he manifests powers, principles, and actions—solely his attribute. The properties of mind, I have shewn in a former part of this Essay, to be divided into thirty-four parts—each of these varying in such a degree as to justify their distinct appellation. I shall now proceed to shew, that the division which has been made of the brain, for the reception of these different propensities, sentiments, and faculties, is correct. Nature not only provides organization for the purpose of manifesting material and immaterial power, but she divides each of these organs according to the quantity of power required, and their action is generally manifested by the power employed—that is, she divides them in such a manner, that corresponding actions act in corresponding parts, and, vice versa; as, for instance,—the arm is not as it appears externally, one solid pillar of muscle; but a number of them, which act according as the motion is diversified. Thus, therefore, in the brain, we find that the powers which it manifests are diversified, and we expect to find that it has organs according to this division: but let us proceed to our proofs of its existence. All brains are not the same—some are large, others small; some have elongations one way, some another; now, we should expect to find, that if the brain only manifested its power as one organ, it would always be the same; but, it has been proved that, according to the developement of the brain in particular parts, so are individual organs manifesting themselves. This division of the brain is not so new as many suppose: many centuries since, philosophers, observing the diversity that existed in man, ventured to attribute to particular parts, some one or other of their ideas upon the subject. The Archbishop of Ratisbon, in the thirteenth century, delineated a head, gave particular seats to certain faculties of the mind—the forehead was the seat of common sense; judgment and thought were placed in the second ventricle; memory, and the moving powers, in the third. Charles Bonnett thought every individual fibre of the brain was a particular organ of the

soul. Haller, Van Swieten, and others of eminence and talent, have formed divisions. They saw the impossibility of that part being an undivided substance, which evinced propensities, sentiments, and faculties, so diversified. This sanction, thus given to the theory by antient philosophers, certainly must have its due weight.

That law of nature, by which, to produce certain effects, she modifies her condition, certainly holds good in this theory. In automatic life, we find a stomach for digestion; liver, for the secretion of bile; and lungs, for respiration: the five senses are different from each other. Now, the whole of these, if we view their actions, we shall discover, are for the purpose of contributing to the support of the body. Thus, then, if we reason by analogy, we should say, that as nature has provided different organs for separate functions in automatic life; so we should be led to expect the same occurrence in the different manifestations of the mind. If we allow the mind to be manifested through the brain, if we allow a diversity in mind, should we not expect to find a diversity in brain; and do we not? Do not all anatomists agree, that there is a marked difference between the skull of the male and female? Do not physiologists assert, and anatomists agree, that the brain must partake of this diversity? And, lastly, will not all maintain, that the minds of men and women are greatly diversified. Thus then, I think, many agree in a fact which they are not aware of: and, if we find this organization differ to become so perceptible, may we not conclude, that there are minuter diversities, which require but time and opportunity to develope. No less evident is the diversity in the same individual, than between the sexes, and particular persons. How often we find, that a man may excel in verbal memory, and yet be totally unable to connect two ideas. When we find that a man may be a good poet, but a bad musician, how ought we to reason—let investigation be our guide; let us proceed from our first point, and our conclusion must be this—a diversity of organ to produce a diversity of faculty and feeling. Spurzheim says, in treating on this subject—"The faculties of animal life, moreover, cannot continue to act incessantly, but need rest; and it is known, that study, too

long protracted, produces fatigue, while we may continue to study by changing the object. Now, if the brain were a single organ, performing all the functions of the mind, why should it not be more fatigued by this new species of action? Our eyes may be fatigued by looking at pictures; but we can still listen with pleasure to music, because there is an organ for seeing and another for hearing." I dare to say many gentlemen, present this evening, must have felt in the manner above alluded to. I think this is more expressly felt in thinking, although indeed we may call study an object of thought. Yet, if after we have been for some time proceeding from our point, and multiplying our ideas upon it, we at last find ourselves bewildered in the maze of fancy, or whatever subject may occupy our mind: if some trivial sensation turn the current of our former ideas, an instantaneous change seems to have taken place in the whole body; that former weight which seemed to oppress the mind is removed, and it bounds, as it were, into its former state, from the surcharge of idea with which it had been filled.

Dreaming is explained by this theory in the following manner:—When we are awake and watching, all our organs cannot be active; some of them are generally at rest: so in sleep one of these organs may occasionally enter into action, and thus constitute the sense of dreaming; and, according to the number of organs that are active, so are our dreams more or less complicated.—Somnabulism certainly proves the plurality of organs. When asleep, several organs are in a state of watchfulness; the brain acts upon the external world by its power over the five external senses, and they can produce diversified motion, according to the parts acted upon: if, then, the action of the brain be propagated to the muscles, we have motion; if, to the vocal organs, speech—thus may a person walk and talk during sleep. The five senses during sleep, may one of them be active; we may see and not hear; we may speak, and see only in imagination. Perhaps no action in the human body is so curious as that of dreaming. The numerous hypotheses which have been started, in order to account for this singular phenomenon, have never been resolved in a manner which could even

admit their plausibility. The account given of it by Messrs. Gall and Spurzheim, which I have related above, certainly bears a great share of probability, and seems to be, as far as we are able to judge of this fanciful feeling, correct. According to this theory, we can now account for the recurrence of those actions in our sleep, which has happened in the day. Previous to sleeping, we are generally led to think of the actions of the past day; and while our thoughts are then wandering, the body, exhausted by fatigue, sinks to rest; and all, except this one organ, seems to sleep: it, however, seems so independent of the body, that it can remain active during its state of rest; but, however, can so far influence it, as to put it in action when our ideas are determined to either of the five external senses. Now, I contend, were the brain one organ alone, every part of it would partake of this action; so that our dreams would not be confined, as they generally are, to one determinate object. How are we to account for partial insanity, if we do not admit plurality of organs? How often do we see persons, who are insane only upon particular subjects; and who, in every other respect, is perfectly unique? Supported, then, by the arguments and proofs which are here presented, but which, would our time admit, might be greatly multiplied, I am justified in asserting, that the brain may be divided into separate organs; and, if any are led to deny this conclusion, I would ask what is the use of the brain? How is it, and for what purpose, has nature made this diversity in the skulls, and consequently in the brains of females and males?

With these proofs I shall conclude the subject of plurality of organs; and those gentlemen who are acquainted with Dr. Spurzheim's book, will perceive that I have adhered, as far as possible, to his proofs. I can profess little originality upon the subject.

I shall now proceed to consider some of the objections generally made to this plurality of organs: And first, of wounds of the brain. If, as I before said, the sanction of antient philosophers will avail, we might mention the names of Haller, Morgagani, Boerhave, Hildanus, &c. as supporting, by their observations, this theory. That injuries of the

head produce injuries of the mental faculties, there can be no doubt. But it has been asserted, that injuries of the brain, very extensive injuries, may occur, and yet no alteration of the mind take place. So, also, say we : the mind may be diseased, and yet no apparent injury of the brain be manifest. So, also, in all the other organs of the body. In hydrophobia, where an acute disease of the nervous and muscular system has taken place, it is seldom that we see any alteration in the texture of either. Our opponents say, how is it that those faculties, which are situated in the organs that are destroyed, remain unhurt? Our answer is this—that it is too often forgotten by those who make this objection, that the organs for the most part are double : therefore, that although one may be greatly injured ; or, perhaps, as has been the case, totally destroyed, still the other may continue to perform its functions, and, perhaps, without any perceptible difference. In Hemiplegia, one arm, one leg, and even one half the brain is paralized, still the opposite organs of the body perform their accustomed offices. When we are called to see a person who has received an injury of the head, it is generally one with whose previous state of mind we are totally unacquainted ; consequently, if the organ which has been injured is small, perhaps one whose action depends in a great degree upon another, or corresponding ones, we may be unable to discover any particular alienation. The irritability of the person also must be considered : he may be of such a general habit of body, which may enable him to receive very extensive injuries with little effect occurring ; so that, without a mind prepared for the investigation, without a previous knowledge of the man's character, it is impossible we can with accuracy discover the change that has or may occur. I would therefore say, that it is impossible for us to judge by preceding cases, because, being unacquainted with the division of the mind made by this theory, we did not look for corresponding alienations. Therefore, it is only by subsequent observations, made in a manner corresponding to this theory, that the assertions made by the supporters of this theory can be contradicted. Hydrocephalus, of all the objections which have been made, seemed to be the strongest ; and

certainly, to many, was conclusive of the fallacy of this theory. A slight investigation of this disease will, however, prove their judgment to have been erroneous. In the healthy state of the brain there is always a small quantity of fluid deposited in the ventricles: this fluid may accumulate in such a manner, as to occasion a dropsy of the brain; and it seems, that this fluid, as it increases in bulk, distends the brain into a thin membrane; or, to speak in plainer words, unfolds those convolutions of the brain, which are apparent even in its healthy state. Now, then, it becomes a question, is it possible for the brain to perform its offices as well in the distended, as the condensed state? That it will perform its office is evident; because we see many children, who are subject to this disease, going through the different mental acquirements with little apparent defect. Still, as this is not the natural shape of the brain, it must always be in some way deficient; and so we find it; for it is seldom children with hydrocephalus manifest any great talent. But the opponents to this theory assert, that water is not only accumulated in the ventricles, but also between the membranes of the brain; indeed, frequently between the dura mater and the skull. I feel sorry to doubt the veracity of any gentleman; but I cannot admit the truth of their observations as to this occurrence. It is too often the case, that in opening the heads of children, to investigate this disease, inattention is paid to the sawing, and frequently the membrane is ruptured by the instrument—the water immediately rushes out—the membrane sinks into a pulpy mass—and then comes the report of the case in the following manner:—On sawing through the cranium, a great quantity of fluid escaped, and the brain was found very small, and in a pulpy state; and upon this case they found their objections to this theory. How is it possible, say they, that the brain can be divided into organs, when we find that even in a minute and pulpy state it manifests its faculties? How is it possible, I should add, that the brain can be the organ, possessing the mind, if this does occur. But it *never has*—it is impossible—and, if it were possible, I should not hesitate in giving up all my former opinions, and, concluding that

nature had established some new laws, which were undiscovered.

From what has been said upon the subject of hydrocephalus, we maintain that, as the brain is composed of two layers of fibres, these, by any fluid passing upon the interior, may become distended into an horizontal form, and may even then perform its functions with little detriment. We should conclude from what has been said of injuries of the head, and hydrocephalus, either that the brain is the organ manifesting the mind; and in this case it cannot be destroyed in those hydrocephalic persons who manifest intellectual faculties; or that the brain is not the organ manifesting the mind, because hydrocephalic persons, whose brain is disorganized, nevertheless manifest feelings and intellectual faculties. There are two skulls shewn at the museum of St. Thomas's hospital, which are supposed by many to contradict this theory. With respect to that of the Carribee chief, I think it totally inadmissible as an objection. Messrs. Gall and Spurzheim do not pretend to judge artificial heads; and it certainly is one. It is thought singular that the mind should have continued to manifest its faculties when the brain was pressed into such a form. It is a well known fact that the Chinese women are, during their infancy, subject to an operation in order to compress their feet: this is done with the idea of preventing their leaving home. I, however, understand, that although their feet are for many years pressed to a particular shape, still they are enabled to walk, and sometimes even run, with great facility. Now, therefore, if these women are enabled, after such an extensive pressure, to perform the usual functions, and merely an alteration in shape has occurred; let us in the same manner reason with regard to this head of the Carribee chief. His skull was not flattened at single blow—in a day, or in a year: from early age a gradual pressure formed it in the manner it is now displayed. The brain took a part in this gradual pressure; and, like the foot of the Chinese woman, it altered its form, but not its functions. We cannot pretend, as I have before said, to determine, by inspection, this man's intellectual powers, although we might, in a general way, have some idea, ac-

cording to the quantity of brain, of his strength of mind. Thus, therefore, I cannot admit this Carribee chief's head as any proof of the fallacy of this theory: it is the operations of nature we examine, and not the fantastic systems which man would endeavour to model his form to. The other skull is that of a gentleman, who died some years ago: it is certainly of a very peculiar form; very flat and wide. This gentleman manifested all the usual intellectual powers; and it was thought singular that the skull, being of so peculiar a form, and seemingly having such a small cavity, that this should occur. I understand that the water was contained in the ventricles, and that the brain was unfolded, as I have explained above. I measured the quantity of brain it could hold, and I found that its width made up for its shallowness, and that it would contain almost as much as any other skull in the museum. Neither of these cases, therefore, can be at all applicable as objections to this theory. The next objection which we shall consider, is that of the minute division of the brain and mind. Is it possible, say our opponents, that in a mass, to all appearance homogeneous, you can point out separate organs. It is certainly true, that there is some difficulty in pointing out the exact limits of each organ; but this holds good with respect to the whole nervous system. That there is a difference between motion and feeling, no one will deny; and yet the difference of nervous structure has never been separated. "The structure of the skin," says Spurzheim, "must be different at divers places; as is evident by the exhalations arising from it, and the hair which grows on different parts of it; but the difference of these parts of the skin has not yet been demonstrated. But *it is possible* to demonstrate some *particular coincidence* between the development of the fibres, and the corresponding moral sentiments and faculties of the mind. The bundles of fibres situated in the forehead, are much smaller, and more numerous, than those situate in the posterior part, where the fibres are larger, but fewer: so in relation to the faculties and propensities assigned to these parts.

After having thus stated the foundation of this system, and briefly reviewed those objections which seemed to

militate more particularly against it, I now proceed to a part which, of all others, has been the least understood; and, consequently, much misrepresentation has taken place, and this theory has suffered most materially from it.

The physiognomical system of Messrs. Gall and Spurzheim, founded upon the observations which have been made in the preceding pages, by which they have endeavoured to present to the public a system pointing out the different faculties, sentiments, and propensities of man: as also, the relation these have to each other, and their consequent formation of the individual character. It appears that Gall, during the time he was a student, felt himself hurt at his own defect of memory, and the very excellent ones which some of his fellow students possessed: he however, at the same time observed, that they did not possess the power of understanding the subjects they committed to memory so well as himself: these persons he found had invariably prominent eyes; and this circumstance first led Gall to the study of craniology. Of course, as is usual with all new ideas, upon which systems are founded, he committed many blunders; and it was not till some time after his first observations, that he was enabled to lay down any very accurate system. After his sytem was formed—after he had assigned to his organization murder, theft, music, &c. the error which he committed, of assigning names to faculties in action, and not giving them their special faculty, occasioned many enemies; as every person was alarmed at the idea of possessing such propensities as murder and theft. It is very evident, it is not correct to name the organs according to their abuses; otherwise hunger and thirst might be named gluttony and drunkenness. It does not at all follow, that a man possessing the organs which constitute murder in a diseased state, should be a murderer. Gall, as I have stated, only described particular actions, without specifying the special faculties. This error, which was so evident, was soon corrected; and Gall and Spurzheim immediately set about multiplying the observations which they had before made.

The multiplication of facts which presented themselves induced these gentlemen to give them relative situations

some of them, however still remain to be determined; others are only conjectural. If they discovered that strong organization developed energetic actions, they concluded that small organs must be followed by weaker actions; and they compared the weaker functions with the respective organs, and weaker organs with their respective actions; and, if these corroborated each other, then these negative proofs confirmed their more positive conclusions.

Now, it is upon these circumstances, that the physiognomical part of the system is founded; and, I think it but right, I here transcribe the first words of Dr. Spurzheim's book, in order to set at rest an objection which has arisen through misrepresentation:—"This system," says he "is commonly considered as one, according to which it is possible to discover the particular actions of individuals; it is considered as an art of prognostigation. Such, however, is not the aim of our enquiries: we never treat of determinate actions: we consider only the faculties man is endowed with—the organic parts, by means of which these faculties are manifested—and the general indications they present."

It is these *general indications* which they present, that forms this system. The words *general indications*, have not been generally attended to by many, either in reading or in reporting this system. They have been willing to arrest this point, to prove the absurdity of this theory: it is impossible, however, for any one who reads with a desire to deal justly, to avoid applying these words as they ought. It is impossible for me, in a limited Essay, to go over all the different propensities, sentiments, and faculties: I shall content myself with pointing out one, and then endeavour to set right misconceptions.

I have shewn, in a former part of this Essay, that the mind may be divided into propensities, sentiments, and faculties: these are again divided into specific actions. Each of these particular divisions has a place assigned to it in the brain; and it is according to the developement these parts that we are to judge of its power.

I shall quote the second organ or propensity as an example. The diversity of affection which parents have for their children, must appear very evident to all who are

conversant with the world: scarcely a day or an hour can pass without this being presented to the attention of the medical man. How often we find the parent watching, nourishing, and cherishing, with anxious solicitude, its little offspring. From the prince's palace, to the peasant's cot, in every region of the universe, is this fond feeling found. But sometimes, alas! (happily not very frequent,) we find this feeling wanting: then, indeed, every humane heart must shudder at beholding this perversion of human nature.

Messrs. G. and S. have a particular organ for this feeling, and have named it that of philoprogeny: it is situated just at the tubercle upon the occipital bone, and it is according to the greater or less degree of extension that they judge of its power. It will be readily allowed, that this feeling is more universal in females than males; and, as a proof of the correctness of their inductions, the lengthening of the skull, from the forehead backwards, is one of the distinguishing marks of the anatomists between the male and female skull. Not only is this organ found more prominent in the female class of human beings, but this distinction is carried to the lowest scale of living animals; and this particular part is easily distinguishable. In some animals and birds, however, this feeling is sometimes found wanting: the cuckoo, for instance, (a bird as much given to physical love as any other,) commits its eggs to chance, and to some other agent its future developement. To prove the truth of the position with regard to this organ, advanced by our theorists, I cannot omit relating a circumstance mentioned by a gentleman, (with whose name I am at present unacquainted,) on the third evening of the discussion:—Spurzheim, in visiting one of the provincial hospitals, was taken into the female wards, and requested to examine this particular organ: he did so, and passed through a number, making some slight observations, till he came to a woman, who, immediately he touched, he shrunk back from; and, on being afterwards asked the reason, he informed them, that in this woman the organ of philoprogeny was almost wanting: singular enough to relate, she had been taken up for the murder of her infant child. In examining, also, the heads of twenty-

nine women, who were infanticides, twenty-five of them had this organ very small. Now, then, let us impartially survey the positive proofs of the existence of this organ; and the most sceptical, and the most biassed of minds, must shrink from that declaration of falsity which they would attach to it. Some there are, who, possessing the light and varying shades of witticism, make them subservient to the abuse of sound sense; and, it is too frequently the case. that direct proofs are neglected, and the scurrility of the envious more frequently attended to. It is not this organ alone which contains such positive proofs; many others are there, would our time and limits permit, which might be here pointed out; but it is my opinion, that if one organ alone is established, it proves that the foundation of this theory is correct; and it only requires that which all other discoveries have had, time to ripen it to maturity.

Having thus proved the existence of this feeling, and the particular part in which it is developed, I shall now proceed to explain the mistakes which have occurred in the two organs of destructiveness and covetiveness. That difference which we observe in the food of the herbiverous and carniverous animals, first gave rise to the naming an organ that of destructiveness. The great difference that was observed in the formation of the skull, just above the external meatus auditorum, lead to the supposition, and ultimately to the establishment, of its situation.

It has been said by some persons, that it is an error to attribute internal faculties to determine the food of animals. This is supported by saying, that carniverous animals are provided with taste, teeth, and instruments, to urge them to their food. But this only proves the harmony of the external faculties, and the external agents. "Man," as Spurzheim says, "has hands in order to take his aliments; but some interior sensation admonishes man and animals of the necessity of taking food." The idiot has hands to perform action, but is unable, on account of his deprivation of reason. Thus the tiger, the lion, cat, &c. have claws; but an internal power excites them. An internal propensity, or power, must therefore make use of

the external instruments; and this propensity is attached to a particular organ. That there is in animals a peculiar principle to kill; and that this is more energetic in some than in others, is very evident: there are some who kill merely to satisfy the call of hunger; while others, as the wolf, tiger, and pole-cat, kill all around them. Surveying, then, this diversity in the brute creation, we are naturally inclined to carry our inquiries higher in the scale of creative beings, and ask whether or no man is endowed with this propensity? If we reason analogically, it would stand thus:—Man is a being endowed with the propensity of living both upon carniverous and herbiverous food, as we have evident proof at the present time. That carniverous food was the original aliment of man, before the introduction, and consequent increase, of the agricultural system, can be proved, both from the sacred records, as also by historical traditions. When I speak of the original aliment, let it not be understood that I mean this was the only food; because fruits then existed upon the earth; but it is evident that the Creator, when he commanded into existence the beasts and birds, intended them for other purposes than merely to range through the earth. I certainly am of opinion with Lord Kaims, when he says, in his History of Man, speaking of the progress of man with respect to food and population, that, "in temperate climates, the original food of man was fruits that grow without culture, and the flesh of land animals. As such, animals become shy when often hunted; there is a contrivance in nature, no less simple than effectual, which engages man to bear with cheerfulness the fatigues of hunting, and the uncertainty of capture; and that is, an appetite for hunting." Lord Kaims, therefore, evidently agrees with us in this particular, that it is not external agents alone which propels man to his food; and that there is a "contrivance of nature," and this contrivance named destructiveness. We have proved, by analogy, that man is carniverous; and that he therefore does kill in order to sustain life. Man is not confined alone to one species of animals; the whole extent of the creation comes under his power, and are subjected to his will—from the elephant to the ant; the whole range of creation becomes

destroyed to satisfy his wants; and instances have occurred, of man destroying his fellow-creature for his food, in those situations in which necessity would not warrant such an action. Now, therefore, in man, this propensity to kill animals takes a wide range: from their horror, at the sight of the least cruelty—their indifference to the infliction of pain, to the pleasure of seeing killed, and even to the desire of killing—shocked as may be the feelings of many, it requires neither the aid of mathematical reasoning, or logical proofs, to identify its existence. Unfortunately, we have too many positive proofs of its subsistence at the present time. The numerous anecdotes that might be here related, of persons sacrificing their reputation, character, their every thing, to inhumanity, would fully prove it. Observe the diversity of feeling at an execution: note those persons who never allow one to pass without being present; and then determine, whether or no, cruelty may not exist in the human mind. The history of George Selwin, affords a good proof of the existence of this feeling; or, I would rather say, of the perversion of a useful propensity: he never was absent from an execution which took place within many miles of his residence: look at the field of battle; hear the accounts of the slain from the mouths of different soldiers; observe the energy of one and the feeling of another: idiots, madmen, persons of education, others devoid of it, frequently possess this dreadful perversion of feeling.

From what has been said upon this subject, we are enabled to prove, that man is carniverous, as well as herbiverous. I might have gone much further into this subject; and, by a comparison of structure, still more clearly pointed this out: but, as this proceeding might be considered by many as tedious, I shall content myself with what is above stated. Destruction is an attribute of carniverous animals: excited to a certain degree, this propensity is requisite, and useful; it is sometimes necessary that we destroy that which is useless, to replace it by that which is more useful: and, again, there are many things, which, on account of their being dangerous, we are obliged to destroy. But, on the contrary, wherever this propensity destroys things that it ought not, an evident

abuse takes place; and this very abuse constitutes very frequently murder, and that horrible train of cruelty attached to it. Thus, sufficient has been said to prove, that there has not, in this theory, been laid down an organ for murder *solely:* they have only shewn that, like all other organs of the human body, so this organ may become diseased—that its diseased actions may, like them, occasion a total perversion of its functions; and, instead of producing a useful and beneficial action, be productive of the worst effects. In doing this, they have not, as some have asserted, "added one other support to the doctrines of fatalism;" nor have they, as others have been willing to prove, "sealed that man with odium through his life, who happens to possess an unfortunate protuberance. But I shall, after speaking of the organ of covetiveness, speak more directly upon this point. We all agree, that the brain is useful, eminently useful, because it endows us with the power of mental faculties. This organ is frequently the greatest blessing to society, teeming with all the finer feelings; the mind, alive to the voice of distress, exercises itself in the performance of good and charitable actions; sometimes it is the harbinger of the most important discoveries; sometimes, the composer of the most enlightened works: but sometimes, alas! it is divested of all this splendour—all these emanations of greatness: and, instead of the excellent understanding, and the feeling heart, we find it productive of all the vices which fancy can picture, all the most despicable actions which are presented to us. Thus, then, as a whole, this satelite, whose corruscations sometimes illuminate whole generations, may be eclipsed, and blacken the brilliancy of nature. Let, then, this reasoning upon the whole brain, be extended to its particles: let us recollect, that, as in acoustics, the vibrations of the sound are the same in the smallest atom of the cord as in the whole: so, also, in disease, its effects may be carried to the same extent in the most inconsiderable particle of its composition as in the whole. If we consider these incidents, in relation to the present point, we must admit the truth of the statement of Messrs. G. and S. and be perfectly satisfied that they have not advanced an unfounded assertion. The organ of covetive-

ness has in the same manner been misapplied; and they have been accused of giving a special organ for theft.

When man was first created, placed in the garden of Eden, no one contended with him his possession: Lord of the earthly universe, he surveyed the creation as his own. A multiplicity of individuals, as it increased the consumption of the earth's products, naturally caused exertions to be made to supply increasing wants. Man finding it, therefore, necessary to cultivate the earth, and feeling within himself the justice of retaining that which was the product of his daily labour, guarded it with all the feelings of just possession. This seems to have been the origin of "meum et tuum." As he advanced in civilisation and acquirements, not contented merely with sufficient for his wants, he nourished the idea of comforts, and this naturally increased his wish of possession. Thus, then, we find that power of possession existed at the creation; and, to this day, discoverers of the most savage nature, have always found the idea of this existing, and laws for its protection. Possession and accumulation of property is not only beneficial, but totally indispensable: without it we should be not only devoid of every comfort we possess, but be bereft of all opportunity of mental improvements. It requires little penetration to discover that this feeling must be innate: surveying the different seasons of the year, and beholding its products—turning our attention to the millions of existing beings who look to it for their sustenance; and then, considering that it is only at certain periods we are blessed with the fruits of the earth, the most inattentive mind cannot fail of acknowledging how totally impossible it would be for us to exist without an accumulation to satisfy our wants while the treasures of the earth are locked up. This propensity, like that of the preceding one, extends its actions greatly, from the mere sufficiency to retain existence, the accumulation of comforts, and the hoarding of wealth; and, sometimes, in its diseased and abused state, to the taking that which is not our own. Thus then, again, we behold a propensity useful and good, may become totally perverted in its actions, and a bane to our happiness. No one, I am confident, can deny the diseased

state of this propensity, if they but reflect for a moment on the many instances we have on record, of persons in the highest ranks of society committing theft; whose situation would seem to remove them from all cause, and yet unable to withstand the temptation. That we do not find it so often in the higher circles as in the lower ranks, is well accounted for. The incidents of situation, and the temptations, all conspire to sustain this unfortunate failing in the latter.

I sincerely hope, I have now said sufficient to erase from the minds of my hearers, that accusation which has been so unwarrantably attributed against our theorists: nor can I, in conclusion, help animadverting upon the manner in which its enemies have attached this *to it.* They have not done as becomes those who pretend to judge, reason, argue, and deduce inferences: it is well for any man to say, here is an organ of murder; here is an organ of theft; but he ought, at the same time, to recollect, that if he takes upon himself to investigate, he ought to give the foundation of his condemnation; if this had been done in this instance, no reasoning could have proved that they have given special organs for murder and theft. Nothing, in my opinion, tends so much to retard the general welfare of literature, as unjust and unfounded criticism: the young are timid at the idea of the erudition of our Critical Reviews, and too frequently are induced to resign their works, fearful of this modern palladium of wit and scurrility. Men of riper years and acknowledged talent, rather than submit to the indignity of having their works lashed and cut up, and their meaning perverted, withhold that which might otherwise be a general good.

It has been said of this theory, that we can, by a knowledge of it, on looking at a man's head, see directly his disposition, and his general character. This I positively contradict; and assert, that its authors never advanced any such position. They have said, in the very first line of the book which I before quoted, that they do not treat of determinate actions; they only consider the faculties man is endowed with, and the "general indications they present." Some persons have taken up the principles of

this theory in a point of view totally opposite to its meaning. They have given it a signification, that it is one, by which, on feeling the exterior of a child's head, immediately after birth, we are enable to determine his future character—determine him to be a Robespierre, a Newton, or a Socrates; whether he is to be a blessing to his country, shedding around him the rays of charity, and supporting the weeping widow and the orphan; or, to be a bane to mankind in general: whether, to shine as a Pitt in his country's senate, or be the Bellingham, to cut off rising merit, before he shall have bloomed; a very convenient expeditious method, no doubt, of settling a man's future existence, and certainly might be useful. But this we deny, and say, that it is totally impossible; but what we know to be *possible*, and *probable*, I shall shortly relate. If, on the examination of a child's head, we find certain organs strongly manifested, we should say, that it is *probable*, that this organ will have a determinate influence upon the character in future life. But if to this enlarged organization of one faculty, we find another equally prominent, we should then say, if this organ does come into action, which is at present only suppositional, they will have a mutual influence upon each other. If the one is larger than the other, the larger will be the primitive feeling, affecting and influencing the others. I shall give a case:—A child may possess the organ of benevolence in a very great degree; but, opposed to this, we find the organ of love of popularity, if these are exciting causes, acts of charity, &c. flow from it; but these are impelled by the feeling of love of popularity; and this is the means taken to acquire it. From this instance, I think, what I wish to infer, will be readily comprehended, viz. that it is not the possession of one organ alone, which can determine the character; we must consider the different organic constructions, and then call into our minds their mutual influence; thus this theory is not *quite* so *useful*, or so determinate in its actions as many suppose: but this is not all; there is still another very principle point to be taken into consideration—a man may possess benevolence, covetiveness, love of popularity, &c. but these may never come into action; they may either have

feelings more predominant to counteract their actions, or they may never have an exciting cause to stimulate them. The possessor may never be placed in a situation in which these may be brought into action; and other organs, although much smaller than the others, may have the ruling of his character. It is, therefore, from the consideration, not only of predominant organs, of their mutual influence, but also the situation in which the possession of these is placed, that we are to draw our inference; and, proceeding in this manner, concording separately, collectively, and relatively to each other, we may be enabled to estimate characters in general. I would assimilate their mutual action to the formation of a neutral salt; we apply substances to each other very different in all respects; we observe these substances to have a mutual action, and they produce a substance totally different from either of the former ingredients. So of the human character; its contents, taken separately, we find greatly varied, when brought in action, and having mutual influence, still more strikingly altered and assimilated.

I have now proceeded as far in this theory as many may think fit. I have investigated its foundation—I have reviewed some of its objections—and I might here have very well closed it: I cannot, however, help offering a few remarks on its utility, and were we unable to do this, I should not consider it any detriment. I cannot agree with those who consider a theory useless, when we are unable to apply it to some particular purpose. Let it be considered, that science has not, by a momentary flash, arrived at the splendid state at which it is at present—that the progress from the state of uncultivation, which marked the ages of our forefathers, have only been matured, adorned, and illustrated, by the labours of men of the greatest perseverance, that they discovered many points, both in the sciences and arts, the utility of which they were totally ignorant: but they did not, as seems too much the fashion of the present day, consider them as absurd and frivolous; they left to future ages their applications, and we are indebted to them for many discoveries which have of late been applied to the arts. Many centuries ago, it was discovered, that boiling water was con-

verted into steam; but it is not many years since the discovery was made, that this steam was equal to gunpowder in its powers; that it could raise from the depth of the earth fuel to support its own formation—that it could stem the tides, and baffle the very winds, is an application of this power, within a very short period; still there are many, perhaps, who will contend that this discovery was of no utility to science. It is vain to argue with such; they cannot possess that spirit of liberality which ought to characterise those who pursue investigations of this nature. That the discoveries in nature are useful—that the application of them never fail of adding to our state some new comfort and indulgence, marks, not only the beneficence of our Creator, but his wisdom. He who formed man, knows well how much ought to be trusted to his capacity: he knows what to add to our stock of information, and lets in upon the mind those discoveries which, had they been all at once given to us, without search, would have proved, very probably, a bane to our happiness. In placing in man a spirit of inquiry, in modeling the constitution of his character after such a form, that he shall always strive to reach the top of the ladder, he has rendered him happy, for he gives him an employment which, as to himself, all discoveries must be useful; so all time spent in these subjects, must be happily employed. And who is he who would attempt to mar the will of his Creator? It is he who would stop this spirit of inquiry, and drown the efforts of rising ambition: it is he who would laugh at the poor shepherd, when he formed the stars into constellations, forgetting that one day these very simple ideas of a rustic should be the means of guiding us to the different regions of the earth. But to such an argument against the formation of a theory, we ought never to attend; it becomes us more to treat with silent contempt such futile objections, than to attempt to prove that they are generally jealous of this new opinion.

But, even in this early stage of the discovery and formation of this theory, we are enabled to apply it, and little as its application may be, still it will, I hope, never deter those who support it, from continuing their investigations, until they shall have so modeled it, that its utility

shall be made more apparent. It has already been applied to education, to the arts, to criminal legislation, and to insanity. I shall say very little upon these, as it requires much more time to investigate their mode of action, than I can give to it in this Essay; and,

First, of Education.—To those who have studied man, and man's nature, it must appear evident, that the germs of the mind and faculties, exist at birth. Experience has taught, that the faculties require, and ought to be cultivated. Before the formation of this theory, I do not conceive that we had a proper idea upon this subject. There is a regular routine through which every boy, on entering a school, is subject to; and this, without the least consideration of the faculties he possesses, and never considering whether or no he may be ever able to acquire reputation. Now, would it not be of *singular advantage*, were we enabled to discern those faculties which he possesses in a more eminent degree, and which are more likely to come to perfection? That all boys do not possess the same facility of learning as others, we have daily proofs: and how frequently do we see the son of a poor man, whose education has been limited, rise to an eminence in literature truly astonishing, while many, who have all the advantages which education can bestow, and whose attention has been unwearied, are unable to acquire that knowledge which they seek. This theory supports the opinion of genius; it altogether objects to the absurd notion of those who endeavour to prove, that there is no original mental superiority between the most learned and the most illiterate of mankind. I think at this time, when literature has arrived at an epoch universally great and grand; when every branch of science has shone forth with indiscribable lustre; and, when we are aware that many of these effects have been produced by men whose births were obscure, whose education was neglected, whose opportunity of acquiring knowledge in any particular branch of science in which they afterwards shone, was but little; and yet, when brought into a sphere where that genius might act, it bursts forth like a flame, as rapid as it was surprising. Can we doubt that some possess innate faculties superior to others; can we believe that Locke could

have been a Byron, or Newton a Shakespeare? impossible: I think the principle of genius so prominent, so imposing, and so frequent, that doubt were needless. Need I mention two men, whom all here must respect, whose memories all must cherish with the feeling that the names of Cullen and Hunter must ever be accompanied. Is it possible that Handel could have so beautifully delineated the passions of man as Shakepeare, or that Shakespeare could have tuned the soul by music into such rapture as Handel. It is my decided opinion, that genius is not, as many have endeavoured to prove, a word inadmissible in the dictionary of the metaphysical student. Admitting then, that there are innate faculties in the mind, this theory presents you with a mode by which you may become acquainted with the more prominent faculties; and it is by ascertaining these, and directing them properly, by modifying those which we fear may be hurtful, and directing our attention and exertion to the cultivation of those that are largely developed that we are to benefit education: but to do this we require to be thoroughly acquainted with the faculties, with their manner of acting, and their modifications.

Little need be said upon the benefit of this theory to artists; it is always their aim to copy nature as nearly as possible; and this theory, making them acquainted with one of the effects of nature, must be of utility in forwarding their views. As to the benefit the legislature is to derive from this theory, I shall decline speaking upon it; it is not a province of mine; and I perhaps should be led to deprecate, very severely, any legislature who would endeavour to judge any man for a crime but by the action he has committed. I wish it was in my power to speak with as much confidence of the next application of this theory as of the preceding ones.

Insanity, of all the diseases incident to human nature, is one the most painful in its suffering, as it is in its nature: one which, when we consider we must shrink at, when we reflect that the man who now shines a patriot in his country's cause, he whose brilliant and overpowering language, while it continues, carries along with it a

fascination, that sustains the admiration of his hearers—the man who is labouring to diffuse knowledge to his fellow creatures; in short, any man, however eminent and amiable he is, may, in the short period of a few hours, be bereft of all his mental faculties, be divested of his eminent qualities, and sunk into a state too horrible for man to attempt a description.

Insanity seems to have three origins—First. An inflamation of the brain, topical, arising from blows, &c. Second. A sympathy of the brain with some other of the viscera diseased; and, Third. A diseased state of the brain, arising from mental operations. Now, each of these seem to me to be perfectly distinct, and would require a separate treatment: but I find my paper is becoming so extended, that I am obliged, very unwillingly, to curtail this part very much; but as Dr. Spurzheim has lately published a book upon the diseased manifestations of the mind, I must refer my readers to his work for a detailed explanation. But this much must appear evident, that, as a great number of cases of insanity proceed from a diseased state of the mental faculties, so that which renders these more simple, must considerably facilitate its cure. I have said little, and fear what I have said is unsatisfactory: I can only find my excuse in the limitation of the present Essay. Should I ever be tempted to pursue this subject again, it will be my chief aim to prove its utility in this direful malady. Having finished this part of my subject, I might still enlarge and answer the objections that have been made to this theory, on account of its increasing materialism, fatalism, and hurting moral liberty: but I fear I should weary the society, and shall be happy to remove from the minds of any gentleman these accusations. As to its being the means of lessening morality, I am confident, when it is rightly understood, it will rather tend to increase it. Every person, it is very certain, takes the greatest pains to hide from the world their faults; they are careful that they may not be observed; this caution is frequently the means of deterring them from committing actions, which they might otherwise be induced to do. Supposing that by

their head, so conspicuous a part, by-standers, and even strangers, may read their very faults, they will not only endeavour to conceal, but correct them.

Having now finished my proposed Essay on "The System of Messrs. Gall and Spurzheim," I shall only occupy the society's time a few moments in conclusion. I purposed to have extended it much more than it is at present: I have, however, been induced to abandon my intention, knowing how limited is the time of the society, and how endless, upon such a subject, might have been the extension; as the deeper I went, the multiplication of argument must necessarily have been greater, and I should at last have been obliged to end this subject much more abruptly than at present. The impossibility of entering into the minutiæ in a limited Essay, any gentleman must be aware of: it must only be considered, then, as a text for discussion: I have studied to give the principles upon which it is founded, and must leave the discussion to support or condemn it. Metaphysics is a science abounding with such numerous enticements; so wide is the field we have to journey, that speculation must sometimes occupy the most cautious—I may, in some parts of this Essay, have been guilty of it, not, I am confident, knowingly. I have ever studied to follow that excellent principle of Sir Isaac Newton—"Never to allow any subject a place in the mind, which has not truth to support it; nor *ever* to *condemn* any thing, however *apparently* foolish it may seem, until we can prove by *sound sense* its falsity."

My study of the human mind has not been very long, or very deep; but thus far I am certain, that prejudice is one of the greatest enemies we have to contend against in the establishment of a theory. To bring conviction to the prejudiced mind, is one of the most arduous and difficult tasks; it so often has the power of swaying reason and judgment. If prejudice is so great a bane, how great will be my pleasure, if I can only hope to have convinced a few that this theory is not as the Northern Reviewers have pleased to name it—"The trash, the despisable trumpery, which two men, calling themselves scientific inquirers, have the impudence gravely to present to physiologists of the 19th century, as specimens of reason and induction."

Such I hope, will not be the conclusion of the gentlemen whom I have the honour of addressing this evening: too liberal, I hope, to condemn before they examine, and *too just* to condemn if they are convinced. For the errors which must abound in this Essay, the difficulty of the subject, its recent development, and consequently as yet imperfect establishment, must plead and claim your kindness.

FINIS.

ADDENDA.

That I should feel some fear at sending forth among my friends my first production, must be but natural: their judgment must be to me of greater interest than could be the whole armed force of our modern critics. As such, I need not remind them, that the first efforts of a young mind, cannot fail to have some trammels which time can only efface; and, should this minor effort meet their approbation, the same feeling which impelled me to undertake this, will stimulate to improve another. If I fail in my efforts to gain their approbation, while it convinces me, how fallacious are our hopes and wishes, it will also instigate me to greater exertions. Let them recollect that there is in the human mind a power which impels us very frequently, almost without our own knowledge, to the performance of works to which our talents are not equal: but the youthful mind is unable to withstand the glittering meteor that is constantly dancing before it, and to reach the temple of ambition is its greatest aim. So also, to be one of these men of " close and studious retirement, whom the world never hears of, save when from their thoughtful solitude there issues forth some splendid discovery, to set the world in a gaze of admiration, then will the brilliancy of a superior genius draw every eye towards it; and the homage paid to intellectual superiority

will place its idol on a loftier eminence than all wealth, or all title could bestow; and the name of the successful philosopher will circulate in his own age over the whole extent of civilized society, and be borne down to posterity in the characters of ever-during remembrance." If such a splendid prospect will not impel the youthful mind, what will? and, if we have the presumption sometimes to wish a realization of these fascinating scenes, although time may never realize them, still we cannot be blamed for cherishing; and we may exclaim with Campbell—

> "With thee, sweet Hope, resides the Heavenly light,
> That pours remotest rapture on the sight:
> Thine is the charm of life's bewilder'd way,
> That calls each slumb'ring passion into play:
> Wak'd by thy touch, I see the sister band
> On tiptoe watching, start at thy command,
> And fly where e'er thy mandate bids them steer,
> To pleasure's path, or glory's bright career."

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A

TREATISE ON HYDROPHOBIA,

WITH THE

Correspondence

That took place last Autumn, in the Public Ledger, on that Subject.

BY CHARLES HEPBURN, JUN.

Fellow of the Medical Society; Member of the Physical Society, held at Guy's Hospital, and Author of an Essay on the System of Messrs. Gall and Spurzheim.