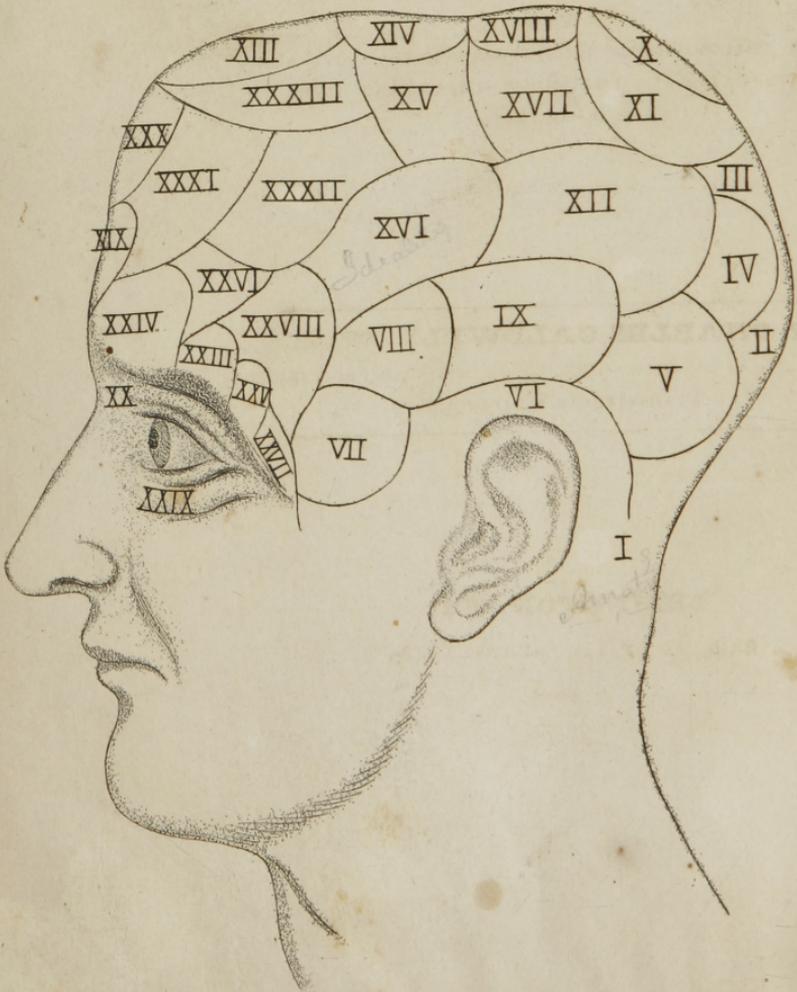
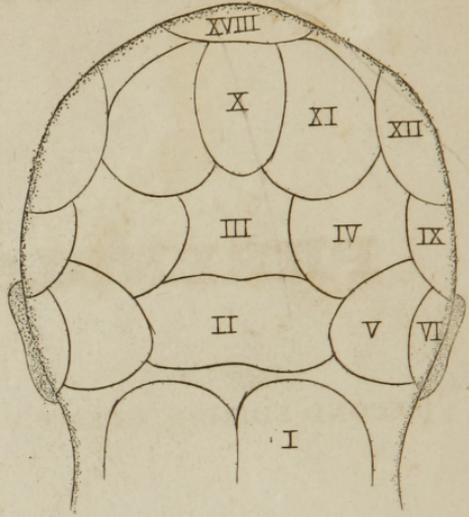
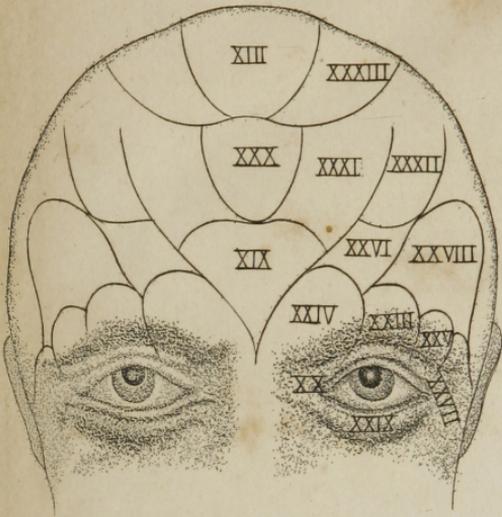


PHRENOLOGY



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John K. W. Dunbar

ELEMENTS

OF

PHRENOLOGY.

(SECOND EDITION, GREATLY ENLARGED.)

WITH A PRELIMINARY DISCOURSE IN VINDICATION OF THE SCIENCE,
AGAINST AN ATTACK ON IT BY FRANCIS JEFFREY, ESQ.; AND A
CONCLUDING ESSAY IN PROOF OF ITS USEFULNESS, AS THE
TRUE PHILOSOPHY OF THE HUMAN INTELLECT, AND
APPLICABLE TO THE MOST IMPORTANT PUR-
POSES OF LIFE.

BY CHARLES CALDWELL, M. D.

Professor of the Institutes of Medicine and Clinical Practice, in
Transylvania University.

LEXINGTON, KY.

PRINTED BY A. G. MERIWETHER,

1827.

Mr. R.W. D. [unclear]

ANNEX
Phrenology

(REVEREND JOHN, GEORGE ENFIELD)

THE PHRENOLOGICAL INSTITUTION
LONDON

THE PHRENOLOGICAL INSTITUTION
LONDON

THE PHRENOLOGICAL INSTITUTION
LONDON

1841

ADVERTISEMENT TO THE SECOND EDITION.

IN this Second Edition of the Elements of Phrenology, it was the intention of the author to detail somewhat *fully* the evidence confirmatory of the *existence* and *locality* of the several cerebral organs, and of the manifestations of the *faculties* to which they give origin. But he has relinquished his design on a twofold ground. The execution of it would have augmented, to an inconvenient extent, the size of the volume; and most of the facts and views intended to be more fully established by it, are already established, in various other publications, in a degree sufficient for all the purposes of truth and science. He has exhibited the evidence, therefore, only *in brief*.

The space which would have been occupied by the details contemplated, he has devoted, he hopes more judiciously, to an exposition of the various practical and other purposes, to which the science may be usefully applied.

In a few of the discussions into which he has freely entered, he thinks it not improbable, that, with a certain and very respectable class of the community, he has hazarded something on the score of temporary reputation. But of this he makes no serious account. In every instance, he has fearlessly stated what he *believes* to be true; and whatever is true he knows is useful. His conscience, therefore, whose approbation he prizes infinitely beyond the mere applause of the world, will not fail to acquit him.

Nor, should his works outlive himself, does he shrink from an appeal to an enlightened posterity, for a full confirmation of the views it contains.

Of any severities toward anti-phrenologists, in which he may have indulged, the only explanation he has to offer is, that they have provoked them, deserved them, and must bear them as they may. It is not without extreme reluctance that he engages in a controversy; but when *compelled* to engage, or to abandon truth to the outrages of those who are resolved to trample on it, he knows no better law of combat, than, as occasion may serve, to measure out even handed justice to those who deal in invective and sarcasm, and, as far as possible, return the "poisoned chalice to their own lips." By this law, right or wrong, he acknowledges himself governed in the present work.

As respects his attachment to the science of Phrenology, and his humble endeavours to promote and propagate it, the author is indebted to his friends, in various parts of the United States, for a large amount of good natured and well meant advice. And he avails himself of the present opportunity to tender to them, in return, his honest thanks.

He has been told that Phrenology is a *baseless hypothesis*; that the pursuit of it is but empty "*speculation*" and will injure his character and standing, as a man of science; and that, therefore he ought to abandon it.

Were the premises true, the conclusion would be irresistible; for he freely acknowledges, that he has no scientific reputation to throw away. What little he possesses is barely sufficient, as a stock to trade on, and keep even with the world. Diminish it, and he will become a bankrupt.

But he is not yet convinced, that the warning, so earnestly and solemnly pressed on him, is well founded. On the contrary, he feels persuaded that it is altogether imaginary.

Since the period of his commencement of the study of his profession, the sound of warning and advice of nearly the same character and purport has been seldom out of his ears. Yet, as far as he now recollects, it has never been ought but an empty sound. Certainly it has never been, in its full extent, realized.

When, at a very early period of life, he became a public opponent of the doctrine of the *contagious* nature of the yellow fever, which then prevailed, not only in the United States, but throughout the world, and of which even his preceptor, the late professor Rush, was a strenuous advocate, he was pronounced to be a "*youthful visionary*;" and it was confidently predicted, that he would be certainly overthrown, and ruined in the conflict. Yet, in that arduous and long continued struggle between truth and error, the *few* triumphed over the *many*, and a belief in the contagious nature of yellow fever, is now considered a *mark of ignorance*.

When, after having frequently maintained in private the same opinion, he, in a public oration pronounced by appointment in 1801, asserted and endeavoured to prove, that the *pestis vera*, or oriental plague is *not contagious*, his medical heresy was proclaimed to be complete—it was declared that even "*madness could go no further in the extravagancy of error*;" and it was, for a time, apprehended by some of his trembling friends, that the *clay cap* and the *lancet* must be ultimately his lot. But he escaped both; and, with all who have seriously and intelligently inquired into the subject, the belief in the doctrine of pestilential contagion is *radically subverted*. It will very soon pass into the same tomb with a belief in the visions of alchemy and astrology.

When, with a very small band of associates, he embarked in the project of overthrowing the Brunonian doctrines in medicine, so eloquently inculcated by the late professor Rush, and at that time so dominant both in Europe and America, his failure and an injury to his reputation were again predicted. But, whatever might have been the effects of this enterprise on his own *personal interests*, the hypothesis was dissipated, and has entirely passed away.

When he assailed the chemical doctrines of animal heat, secretion, nutrition, and vitality generally, the prediction as to the issue were but little less sombrous. He was again proclaimed "*a deluded speculator*." But, with all, except mere chemists, those doc-

trines have passed into hypothesis as empty, as any vision that has ever issued from a monkish cloister, or the poet's *ivory gate*.

When, about the year 1800, he first broached his views of the "*original locality*" of fever, which he believed, at the time, to be *exclusively his own*, the same warning and condemnatory notes of "speculation and error" were sounded in his ears. But here, as in the other instances, truth has triumphed; as she always must triumph; and, by the aid of Broussais, and other writers and teachers, the doctrine has become predominant both in Europe and America.

Having thus escaped in so many instances of *predicted* overthrow and ruin it is not, perhaps, to be wondered at, that the author is undismayed at that which relates to the evils of Phrenology. At all events, he is undismayed, and holds the warning but as an unsubstantial sound.

He well knows, that on the truth and utilities of the science, he has periled no inconsiderable portion of what little reputation he may possess for soundness in philosophy. But, in the words of the Dramatist, he cheerfully "stands the hazard of the die." And, whatever may be the fortune of his own writings in favor of it, he ventures in his turn to *predict*, that Phrenology will be a rock of adamant in the stream of time, inscribed with the names of Gall, and Spurzheim, and Combe and their coadjutors, when the writings of its opponents shall have been washed to tatters, and buried in rubbish as worthless as themselves.

LEXINGTON, November 15th 1827.



PREFATORY NOTE TO THE FIRST EDITION.

To the Pupils of the Medical Department of Transylvania University.

GENTLEMEN,— This Essay is with peculiar propriety addressed to you, as it was prepared and published at your request, and under your patronage. Should it prove in any measure instrumental in dispelling error, eradicating prejudice, defeating calumny, or propagating truth, the merit of the issue will be in no small degree your own. But for your solicitation and encouragement, it *certainly* would not have appeared *at present*, perhaps not at all.

Acquainted as you are with the unusual haste, and the peculiar pressure of professional engagements, under which it has been composed, it would be superfluous in me to apologize to you for its literary imperfections. Whatever temper others may manifest towards it, on this account, you, I know, will receive it with indulgence.

Books are written for various purposes; some to instruct *directly*; some to amuse; and others to instruct *indirectly*, by at once awakening inquiry, and indicating its objects and its course.

For the latter purpose chiefly has this Essay been prepared. Amusement it is neither intended nor calculated to afford. The amount of matter it contains, even admitting it to be all correct, is sufficient to furnish but little instruction. But the subject of which it treats is pre-eminently important, and the field to which it directs inquiry is as ample in compass, and as rich and diversified in its productions, as any that man can be invited to cultivate.

In its brief and abstract disquisition respecting *matter and spirit*, it may be justly said to embrace the universe. As far as we are authorized to express even a conjecture on the subject, creation is composed of those two substances, and nothing else. They occupy and engross the entire bounds allotted for the residence and action of created being, and, in the most extensive meaning of the term, constitute collectively the *system of nature*.

They are equally creatures of the same goodness, the same wisdom and the same power, have assigned to them distinctly their appropriate offices, and, in their respective ranks, are alike perfect and alike efficient. Did there not exist between them an essential aptitude for co-operation, and a radical dependance on each other for the functions they are to perform, they would not have been, by an omniscient Being, thus closely associated in the economy of the universe. Derange the material fabric of creation, and as much confusion and disaster will ensue, as if it were *created spirit* that was disturbed. Take from matter its properties, its powers, and its place, and you may as well interfere with the attributes of spirit. Ascribe to spirit functions that do not belong to it, and the error is as gross, and thus far as dangerous, as if you attributed too much to matter. Here, as in most other instances, the well known and oft quoted sentence of the poet, "*ibis tutissimus in medio*," is perfectly applicable. Pure *spiritualism* is as rank heresy as pure *materialism*. The reason is obvious. Each hypothesis is a departure from truth, and calculated alike to degrade one kind of substance *below*, and elevate another *above* its appropriate rank. Each hypothesis takes from nature the simplicity, harmony; and adaptation which God has established. Thus far I speak in relation to the *universe*, as a *connected whole*.

To man as a systematized part of it, similar observations may be correctly applied. He, like the universe itself, is composed of two created substances, *matter and spirit*. To make him what he is, those two substances are *equally essential*. Remove either of them, he is man no longer. Take away his spirit, he is reduced to a mass incapable alike of perception, volition, or reason. Take away his material portion, and we know not what he is—a spirit still—"the ghost of what he was;" but under what form or mode of existence and action, we are perfectly ignorant. On this subject revelation *has not fully and distinctly informed us*, and human reason *cannot*.

Whether, when the spirit is separated from the body, it remains, for a time, a *disembodied* spirit, or is united immediately to another organized and *material fabric*, is a question respecting which the most enlightened and pious individuals differ in opinion. Nor am I forbidden by a due regard to scriptural authority to say, that those who adopt the latter view of the subject, would seem to be supported in their belief, by the most plausible evidence.

Every departed individual spoken of in Scripture, whether he be a patriarch, a saint, a mere worthy, or a sinner, is represented as possessing a *material form*. Abraham appears with Lazarus in his *bosom*, and the Rich man begs for a drop of water, to extinguish the tormenting fever of his *tongue*—expressions which indicate distinctly *material existence*.

Shall I be told that this is *metaphorical* language?—Be it so.—That which announces the resurrection from the dead is *not* metaphorical.

If it be true, that the mind of man can, as a *disembodied spirit*, think, and act, and enjoy, and suffer, where is the *meaning* or the *end* of the resurrection? If matter be not essential to the spirit, in these respects, why re-encumber it with such an associate? To say the least, the act would be supererogatory. But to the dispensations of heaven no act of this description must be imputed. Either the resurrection is useless, and the annunciation of it a fable, or matter in some form is essentially necessary to fit the mind for its functions and its rewards. As far as relates to this subject, then, I venture to assert, that the doctrines of Phrenology are much more consonant with the tenets of our religion, than the doctrines inculcated by Locke and his followers.

Phrenology maintains that material organs are essential to enable the mind not only to exercise the external senses, but to perform every other process, whether of feeling or of real intellection. Revelation confirms this doctrine, by teaching us that, after death, the spirit must be re-united to matter, to render it a subject of reward and punishment.

The *reputed* immoral and irreligious tendencies of Phrenology have not only very greatly limited the study of it, but have arrayed in opposition to it a host of enemies.

The proceedings against the science on this ground have been exceedingly illiberal. No doctrine ought to be denounced or rejected merely on account of its *supposed consequences*. Such an act is like condemning an individual to certain punishment, before he is convicted of any crime.

To proceed correctly, first prove the science to be *false*, and the *consequence* of its prevalence can be no longer doubtful. Or prove it *true*, and the nature of its tendencies is equally certain. Every false doctrine is necessarily *injurious*, and every true one, in some way *beneficial* to the interests of man. To predicate evil of truth, would be to slander and insult the *AUTHOR* of truth. Away, then, with the disingenuous and unmanly practice of attempting to black

en and defeat by calumny, doctrines that cannot be overthrown by reason!

By the intelligent and liberal, to whom alone I address myself, I trust that a sufficiency of exposition and argument will be found in the seventh section of this essay; to defend Phrenology from the charges of immorality and irreligion, that have been preferred against it.

One topic more, and I shall close this note. The tongue of slander has been busy with my public character on account of its connection with the science of Phrenology. On this ground I have been accused of irreligion, in every shape and under every appellation—*materialism, deism, and atheism*.

As a private individual, I make but little account of malicious gossiping and petty defamation. I cannot descend to soil myself in a foul stream, by attempting to trace it to its fouler source. A tattling and a slanderous tongue is always associated with an ignominious soul; and were I not so framed as to have an inherent disposition to despise both, and pass them by in silent scorn, my feelings would compel me to despise myself.

My appeal to you, therefore, on this subject, is in my public capacity. You have *all* been my pupils and auditors for three months; *some* of you for more than thrice that period. To yourselves, then, I leave it to make known, in any way you please, whether I have ever, in your presence, publicly or privately, advanced a position, or expressed a sentiment, *immoral, irreligious, or indecorous*.

Permit me to assure you of the sentiments of high and affectionate regard with which I have the honor to be, gentlemen, your sincere friend and faithful servant,

THE AUTHOR.

Lexington, January 15th, 1824.

PRELIMINARY DISCOURSE.

IT was the intention of the author of these Elements to have exhibited to his readers, in the form of a Preliminary Discourse, a succinct view of the commencement, progress, and present condition, of the science of Phrenology. Besides being, as he was willing to persuade himself, somewhat curious and interesting in itself, he did believe that such a paper would prove useful, in serving as a counterpoise to the positive and reiterated assertions of the foes of the science, that it is nearly extinct in Europe, or studied and supported only by the *superficial*, the *fanciful* and the *visionary*—individuals wanting in judgment and scientific standing, and devoted to *new* and frivolous pursuits, *on account of their novelty and kindred frivolity*.

Of such unfounded and injurious representations, a correct picture of the *existing* state of Phrenological knowledge, compared with that which truth would have warranted *twelve years ago*, or even at a much less distant period, would prove the most triumphant and deadly refutation.

But however valuable or desirable such a portraiture might be, the author feels himself unprepared to draw it. His reasons for abandoning the project are various.

The necessary limits of a discourse prefixed to a work like the present, would be too circumscribed, as he has clearly ascertained, for its satisfactory achievement. From his interior situation, so remote from the libraries, book-stores, and other sources of extensive information, which are enjoyed by those who reside on the sea-board, he is unprovided with documents to support certain statements which it would be his duty to exhibit. And he is too fully apprised of the character and conduct of the adversaries he has to encounter, to hazard an assertion which he might not be able fully to prove.

But the reason which operated most conclusively, in dissuading him from engaging in the enterprise referred to, is yet to be disclo-

sed. It is the *rapidity of the progress* of phrenological science. This rapidity might be compared to that of the march of settlement and cultivation presented to the eye of the geographer and statistical inquirer, in the frontier states and territories of our Union. A map of those improvements sufficiently accurate for the purposes of to day, is found, in a short time, to be *far within their limits*. So true is this, that maps which gave a correct representation of the extent of settlements, when they went into the hands of the engraver, have been insufficient, when finished, for accurate delineation. The march of population of the new state or territory surpassed in speed the execution of the artist.

To the improvements in Phrenology similar remarks may be correctly applied. So rapid is the progress of that science, especially in Great Britain, and several of the most enlightened parts of the continent of Europe, that before accounts of the actual condition of it, at any particular period, can have reached the United States, that condition, by its continued progress, and further improvements, has been not a little ameliorated. Even during the time I devote to the writing of this discourse, additional proselytes are flocking to its standard, while its old and well tried champions and friends are engaged in extending its limits, enriching and strengthening it by new facts and illustrations, and multiplying their views of its practical utility.

But it is not alone on the advocates of Phrenology that we rely for evidence of its rapid, pertinacious, and irresistible spread. As testimony to the same effect, we dare quote a passage from a celebrated paper, written, in great tribulation and wrath, by its most deadly and inexorable foe, who, in strength and vaunting, has been deemed the Goliath, and in the employment of such weapons as he chooses to wield, the Ajax Telemon of the anti-phrenological host.

With the name of Francis Jeffrey, the whole review-reading world has been long familiar. Nor can they be much less intimately acquainted with his "hatred, malice, and spirit of uncharitableness" towards the entire phalanx of phrenologists, from Gall and Spurzheim, down to the youngest neophyte of the party. They must be perfectly aware, that he has long affectedly regarded, and, in equal violation of courtesy and dignity, repeatedly denominated them by the lump, "fools, quacks, impostors, and charlatans" with other names of similar import; thus, like many other foiled

and unmagnanimous combatants, substituting hard and reproachful terms for sound facts and manly arguments.

In the 88th number of the Edinburgh Review, that great Journalist, for so we still consent to call him, has given, from his own pen, what he denominates a *Review*, but we a *pasquinade*, of the second edition of Combe's "System of Phrenology."

After having fairly lashed himself into a phrenzy, by the scorpion-whip of his own mortification and resentment, because Phrenology had not, long since, *died at his bidding*, he indites, no less in folly than in anger, the following extraordinary and *self refuting* paragraph.

"Long before this time, we confess, we expected to have seen them (phrenological figure-heads) turned into toys for children; and this folly (the science of Phrenology) consigned to that great Limbo of vanity, to which the dreams of Alchymy, Sympathetic Medicine, and Animal Magnetism, had passed before it. But it seems we had underrated the taste for the *marvellous* which still prevails in the world: For the science, we find, still flourishes in certain circles—and most of all, it would appear, in this intellectual city—(Edinburgh)—where there is not only a regular lecture on the subject, but a *Quarterly Journal* (he might have said a most able one) devoted exclusively to its discussion, and where, besides several smaller elementary works, this erudite and massive System of 566 very close printed pages, has come to a second edition in the course of the present year."

Such is the narrative; and, brief as it is, we refer to every impartial and competent judge, whether it does not, in the amount of the testimony which it affords *in favour* of Phrenology, infinitely outweigh all that Mr. Jeffrey has ever written *against* it?

The object of the Journalist, as his language and manner conclusively prove, is, not to treat the science *fairly*, but to lay it under the *scoffs* and *contempt* of his readers. Hence he asserts that nothing but the existing taste for the "*marvellous*" in other words, for *fantasies* and *fooleries*, has hitherto sustained it; and hence his assailing it with the most coarse and opprobrious epithets, throwing the utmost scorn into his manning when treating of it, and assorting it with "Alchymy, Sympathetic Medicine, and Animal Magnetism," visions which have never had a footing in nature, and which have long since irrevocably passed into oblivion. Yet, under this stern, and slanderous denunciation of the science, he announ-

ces the spreading of it with a rapidity far beyond that of any other doctrine or opinion he is able to name; and among a class of men not inferior in science to any of the age.

And *where is it* that it is thus rapidly and extensively spreading? Not in a place of ignorance and superstition, where alone a taste for the "marvellous" prevails; but in the "intellectual" city of Edinburgh, the most literary and enlightened community in Europe. Nor is its spread either furtive or secret, as if it were effected by management and intrigue. It is open, bold, and manly; and challenges fair opposition from its foes.

We ask Mr. Jeffrey, has Sympathetic Medicine, Animal Magnetism, Mesmerism, Perkinism, or any other whim, or "fantastical" vision, to which he may think proper to liken Phrenology, taken root, of late, in the city of Edinburgh, and attained the belief and commanded the homage of her most talented inhabitants? He knows that no such phenomenon of folly has occurred. Even when those fantasies and fooleries were afloat—and the world was less enlightened than it is at present—they never became fashionable in the city of Edinburgh. They were confined to places where the "taste for the marvellous" had deeper root—to "Vienna and Weimar" if Mr. Jeffrey pleases, where he teaches us to believe, that "*wonders* have better fortune."

But indeed one of the most wonderful points, in this whole affair, is Mr. Jeffrey's *wonderful conceitedness* on the subject. Why does he allege that Phrenology subsists alone on the "taste for the marvellous" which, so provokingly to his love of literary sway, prevails in Edinburgh and various other places? The cause is so obvious that no one can mistake it. Phrenology is not agreeable to *his taste*, which he holds to be perfection. The *taste* of the anatomists, physiologists, and naturalists of Edinburgh, London, and the continent, who are alone competent judges on the subject, is mere dross in value, and less in weight than the thistle's beard; while the *taste* of Mr. Jeffrey, who is perfectly ignorant of physical science, in all its branches, is paramount in quality, and surpassing in weight! It is the touchstone by which every thing valuable in knowledge is to be tested. Such is the only fair construction that his language and manner can possibly admit. He is the Juggernaut to whom authors must be immolated—the great *critical* and *scientific* I AM, before whom the *writing world* must fall down in adoration.

The reason which Mr. Jeffrey assigns, why the "intellectual" city of Edinburgh has, to use his own phraseology, become "the great nursing mother of this brood of Germany"—in language more intelligible, why she has so zealously and successfully cultivated Phrenology, is truly ludicrous. Let us hear it from himself.

"The phenomenon we think can only be solved by the circumstance of a person of Mr. Combe's sense and energy having been led, by some *extraordinary accident*, first to conceive a partiality for it, and then induced, with the natural ambition of a man of talent, to make it a point of honor to justify his partiality."

"Extraordinary accident"! Very extraordinary indeed, in the view of the self sufficient Mr. Jeffrey, that a person should, from "*accident*" or on any ground, *seriously examine*, instead of *haughtily and contemptuously rejecting*, a new science or doctrine, not originally started by himself. "Phrenology, (says Mr. Jeffrey,) is neither *my brood*, nor that of my fellow-labourers in the Edinburgh Review; but the *brood of Germany*; therefore it is not only untrue, but too absurd to be even examined, unless as the result of an *extraordinary accident*"!

That Mr. Combe has been highly instrumental in introducing Phrenology into the city of Edinburgh, and in diffusing among the enlightened inhabitants of that metropolis of science and the arts, a correct knowledge of its principles and doctrines, is perfectly true. For the exertions he has made and the services he has rendered them, in these respects, his cotemporaries admire him—none of them more highly than the writer of this discourse—and posterity will do ample justice to his memory, for the incalculable benefits they will derive from his labours.

But had Mr. Combe never been born, some other philosopher would have appeared in his place and acted his part; and Phrenology, early in its career, would have vigorously flourished in the city of Edinburgh. From the nature and imperious influence of existing circumstances, this must have been the case. Phrenology has been received and successfully cultivated in that distinguished seat of letters, not because Mr. Combe resides there, but because its inhabitants, enlightened and reflecting, in an extraordinary degree, are peculiarly calculated for such a pursuit.

Of the philosophy of the intellect, in some of its modifications, Edinburgh has been long the most prolific and celebrated nursery on earth. Of a very large portion of the most able and popular

*In the city of Glasgow, Stewart Reid,
Brown and Burns the first marks
of the metaphysical school was Phren*

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writers and teachers of that science that modern times have produced, she has been, if not the birth-place, at least the theatre of residence and action. If those gifted individuals have not imbibed their knowledge within her academic walks and classical halls, they have poured it out there, to eager, enlightened, and inquiring hearers.

Of this course of things, the effect could be neither equivocal nor slight. It necessarily was, to render a portion, at least, of the population of Edinburgh better informed, and more inquisitive, on the subject of intellectual philosophy, than any other community in Europe.

But they were too intelligent, and too ambitious of substantial knowledge, to rest content with the incomprehensible dogmas and shadowy phantasies of the School of Metaphysics. Hence, by the almost unprecedented force of his genius, the late lamented and eloquent Dr. Brown, made a wonderful advancement towards the true science of the intellect. And hence that community which he had favored with such a flood of new light, was perfectly prepared for the reception and cultivation of something better.

Under these circumstances Spurzheim arrived, and, in a course or two of lectures, scattered abroad the seed, which could not fail to germinate and flourish, although trodden on by bigots, placed, by certain zealots, under the ban of the church, and fiercely and frequently denounced and thundered on, from the Vatican of Jeffrey, Blackwood, and their associates.

Such, if we are not mistaken, was the train of causes, which first planted Phrenology in Edinburgh, has rendered it, in time, the lord of the ascendant, and will ultimately silence and extinguish all opposition to it. By enlightening, invigorating, and liberalizing their intellects, beyond the condition of the general intellect of other communities, Edinburgh had prepared Mr. Combe and his friends for the reception of Phrenology, and they, by their industry, perseverance, and intrepid enterprise, unmoved by taunts, and undismayed by authority, effected its establishment.

By way of counterpoise to his forced acknowledgment of the flourishing condition of Phrenology in Edinburgh, Mr. Jeffrey observes, "we do not hear that it makes much way in London or Paris—or even in Vienna or Weimar, where wonders have better fortune."

If he be serious in this intimation of his belief, that in London and Paris Phrenology is making but little progress, we do not hesitate to assert that, for a literary man, and the director of a public Journal, whose duty it is to have a thorough acquaintance with the general condition of Literature and Science, his information is lamentably and culpably defective.

We are inclined to believe, that this defect arises, in part, at least, from his declining, in consequence of his prejudices against Phrenology, to read the accounts which the public Journals contain, of the progress it has made and is daily making, in various places.

To the same cause would we attribute the fact, that many of the objections which, in the paper we are considering, he has made to Phrenology, and which *he* seems to regard as *new*, have been already so repeatedly *stated* by its enemies and *refuted* by its friends, that, to regular readers and inquirers on the subject, they are antiquated and *stale*. Let Mr. Jeffrey rest assured, then—and the fact ought to be mortifying to him—that, far from his being qualified to *instruct the public*, no inconsiderable portion of the public is competent to *give instruction to him*, on the subject of Phrenology.

As relates to this topic, therefore, we seriously and honestly advise him, to abandon the contest he has so long pursued, and to which he now shows himself to be entirely incompetent. And we will even venture to suggest to him a fit motto to be affixed on his escutcheon as he retires from the arena.

It is to be found in the fifth book of the *Æneid*, and consists of the last sentence of the short and pithy speech of Entellus, after he had vanquished Dares in a boxing-match. That it may be the better adapted to the case of Mr. Jeffrey, we would advise the very slight change of two letters in one of the words—*or*, for instance, into *us*. The clause which, in the original stands thus,

—“*Hic victor cæstus artemque repono,*”

Will then read

—“*Hic victus cæstus artemque repono,*”

a motto precisely adapted to our Journalist's condition; and which we venture very respectfully to recommend to his adoption.

It is notorious that, *at present*, the state of Phrenology in London, is nearly as prosperous, and its progress as rapid, as they are in Edinburgh. The Phrenological Society of that metropolis is daily

increasing in numbers and strength; and Spurzheim has lectured there to classes of from three to five hundred, *certainly*—one report says *eight* hundred—of the most intelligent of the inhabitants. In Paris, the classes attendant on the lectures, which are delivered under the *patronage* of the government, are extremely large; and Phrenology finds there a believer and an advocate in almost every individual distinguished for his attainments in the science of nature.

In Vienna and Weimar, we are inclined to believe that the condition of Phrenology is not quite so flourishing, merely because they *are* places where “wonders have better fortune”—in other words, *because they are not so intellectual and enlightened* as London or Paris. For let it never be forgotten, that when once introduced into a city or community, Phrenology flourishes in direct proportion to the cultivation and liberal philosophy of the place.

Hence, at present, its most resplendent blaze is poured over Great Britain and Ireland, where, in all the principal cities and towns, societies are formed and lectures delivered; and in most of them, phrenological cabinets established.

As already observed, it is also in a highly prosperous condition in Paris. So is it in Copenhagen, and many other places on the continent of Europe.

Nor does Europe set limits to the spread of the science. It has been translated to the continents of Asia and America, where it has taken such an indissoluble hold of cultivated minds, that all grave attacks on it by argument, every attempt to blast it by ridicule, and all other kinds of opposition to its progress will be fruitless. Even the ban of the church, thundered forth against it from the lips of the anointed, will be *still born* and harmless. For truth is omnipotent and *will* predominate.

And yet, in his dreams of self sufficiency and power, Mr. Jeffrey would fancy himself able to extinguish this brightening and wide-spreading blaze of legitimate science, by the drivelling of a little ink from his porcupine-pen. An error more glaring, vanity more consummate, and effrontery more unblushing, have never been witnessed. As well may he attempt *at once* to trample with his foot on the three quarters of the globe, to which the science has extended, or to send forth to those mighty regions the tones of his voice, and bid the waters of their rivers be still, as to arrest in them, by his railings, the progress of Phrenology. The presump-

tion and folly of Canute, in attempting to check, by his command, the encroachments of the wave, were not more signal, nor his failure more humbling. Like *liberalism* in general, Phrenology is rapidly and powerfully on the ascendant, and all alliances, *holy* and *unholy*, will be foiled and overthrown, in their efforts to arrest it, in its resplendent career. Let its *enemies* be dismayed; it has nothing seriously to dread. Its panoply is complete and impenetrable; and it *will triumph* under the everlasting banner of truth.

In the paper we have quoted, Mr. Jeffrey has put forth against Phrenology all his powers, and has exhausted, in the struggle, his means and resources to the very dregs. The enemies of the Science pronounce it his most potent and felicitous effort, and he himself has told us that it is likely to be his *last*. That it *will* be his last we entertain not a doubt; for we honestly believe him to be sick of a contest, in which he has too much sagacity not to perceive that neither honor nor profit can possibly await him, but that defeat and disgrace will be, inevitably, his reward.

There are many reasons for believing that the paper under consideration will be regarded hereafter as the strong hold of anti-phrenology—as a *common* citadel of defence, and place of refuge for the enemy to retreat to, when they find themselves driven from such humbler fortresses, as each one had been able to erect for himself.

Persuaded that this is likely to be the case, and believing the present to be an occasion not altogether unsuited to the purpose, we shall so far extend our consideration of the paper, as to disclose to our readers somewhat of its character, as a philosophical production, and a specimen of controversy.

The article was written, as the inherent qualities of every page of it testify, *for purposes of victory*. There is every possible reason to apprehend, that, in the composition of it, the mere establishment of truth, independently of the gratification arising from triumph, had no place among the motives of its author. The Journalist found himself engaged in a war of extermination; and, like a certain British nobleman, who, more solicitous about the end than the means, proposed to employ, as instruments of conquest and vengeance, in our revolutionary struggle, the tomahawk, the scalping knife, the slow-consuming faggot, and every other form of Indian warfare—like that nobleman, we say, whom the immortal Chatham rebuked in a tone of such withering indignation, as

stunned him, for a moment, like a bolt from the heavens, Mr. Jeffrey resolved, for the effectuation of his purpose, to avail himself of "all the means that God and nature had placed within his power."

And what *are* the means of which he has thus eagerly and unfeelingly availed himself? Facts shall presently answer the question, and show, that they are all of a most disingenuous and exceptionable character— that they consist chiefly of *sarcasm, irony, misrepresentation, invective, and sophistry*. Fair statement, and legitimate argument are not of the number.

Determined to prejudice his readers against the science he wished to prostrate, our author begins his *attack* on Mr. Combe's "System of Phrenology" (*examination* we cannot call it) in the style of *invective*—we might have said, of *denunciation* and *obloquy*. The very terms in which he commences his paper, amount to a decree of *positive* and *general condemnation* of the work he pretends to be about to review.

"This (the system) says he, is a long, sober, argumentative exposition of a very *fantastical*, and in our *humble* judgment, most *absurd hypothesis*."

Thus does he *introduce*, in no unequivocal language, and with no concealment of his intention, this mockery of a Review. A few lines further on, in the payment to Mr. Combe of a kind of hermaphrodite compliment, altogether at the expence of Phrenology, the Journalist observes of that able writer, that

"Phrenology, in his hands, has assumed, for the first time, an aspect not *absolutely* ludicrous;—and, by retrenching many of the *ridiculous* illustrations and inconsistent assumptions of its *inventors*, (*discoverers* would have been the term employed, had the writer been actuated by either *truth* or *candor*,) as well as by correcting its terminology and tempering its extravagance, he has so far succeeded in disguising its *inherent absurdity* as to afford a decent apology for those who are *determined*, or, at least, very willing to believe. After all, however, that *radical absurdity* is so *glaring*, that, in spite of his zeal and earnestness, we really have great difficulty in believing the author to be *in good faith* with us; and suspect that few reflecting readers will be able to get through the work, without many impatient starts of surprise, and a general uneasy surmise that it is a *mere exercise of intellectual ingenuity*, or an *elaborate experiment upon public credulity*."

An introduction to a review more resolutely intended, or more artfully contrived to prejudice the unsuspecting reader against the work to be reviewed, has never been penned. It is marked with all the revolting injustice of *condemnation anterior to trial*. The Journalist boldly pronounces the "system" to be "*fantastical, not absolutely ludicrous,*" but, of course, *ludicrous in part*, discredited by "glaring radical absurdity," and only worked up into a mere "semblance of strength and consistency," by a dextrous management of certain "*scanty and intractable materials.*" Such are his own words; and having thus, preferred the charge, he felt himself bound, *per fas et nefas*, to make it good, from every consideration of vanity and self esteem. And with what zeal and ingenuity he has laboured in his vocation, his paper exhibits a very offensive specimen.

In some points of view that paper is unique. It is exceedingly elaborate, occupies, in the American edition, sixty-five closely printed octavo pages, and yet exhibits, *in no one respect*, a correct view of the system of Phrenology to which it relates! On the contrary, it grossly misrepresents it, *in every respect*, in which it affects to set forth its principles, or exhibit its character. Of the work reviewed, no *just* conception can be formed from reading the Review, any more than from reading any other irrelevant paper. On the contrary, if the reader has no other source of information, *he will certainly be deceived*. The article is throughout, a *practical falsehood*, under the guise of a regard for truth and science, and the sanction of a distinguished Journal! Hence those who derive their notions of Phrenology only from the Edinburgh Review, (and of the active and inveterate anti-phrenologists *nineteen twentieths*, and perhaps more, have no other source of information,) are, in relation to the science, not only *ignorant*, but *steeped in error* and illiberal prejudice. From the wide circulation, therefore, of that popular work, the mischief it has done to intellectual philosophy, in limiting the spread of truth, and cherishing and supporting false notions and antiquated prejudices, *is beyond calculation*. For, not only in the paper here referred to, but in every other, in which it has touched Phrenology, it has given false views of it.

In its dictatorial spirit, and the dogmatism of its manner, the article under consideration has scarcely a parallel. Every thought it expresses is uttered with an air of Delphic authority. The reader is expected to yield, throughout, an implicit assent to this

Pythean assurance. Thus is confidence of manner made an unworthy substitute for solidity of matter. For, under this magisterial covering, are artfully concealed from the eye of the general reader, *ignorance* of the subject treated, false views in abundance, and we believe, not a little *intentional misrepresentation*.

But the air of high-toned authority, which every where pervades it, is not the only consideration, in point of manner, which renders exceptionable the paper we are examining. The article is characterized throughout by a strain of premeditated and biting sarcasm, cankered and embittered by a spirit of vengeance. The science of Phrenology has mortified the Journalist's pride, and awakened his wrath, by not only resisting the poisoned shafts which he has showered forth against it, but returning them in a most galling recoil on himself. Hence his hostility and ire are *inextinguishable*, and, in his envenomed invectives, which issue from his pen in a stream almost unbroken, he seems always under the irritation of *malice aforethought*. His object is to wound and discredit, not to *convince*; (for the shaft of satire and the beam of truth are far from being identical) and often to secure himself from detection and defeat, by a dense and darkening web of sophistry. Like the cuttlefish, which, when closely pursued by an enemy, darkens the water by an offensive emission from its own body, and escapes in the cloud which it has thus created.

For evidence to make good the various charges we have preferred against Mr. Jeffrey's Review, we need only refer to the paper itself. But as many of our readers may have no opportunity to peruse it, it is requisite that we should make from it further extracts, accompanied by such comments as they may fairly sanction.

To demonstrate the grossness of his misrepresentations, we shall quote what he lays down generally as among the genuine and recognized *fundamentals* of the science he professes to examine.

"The proposition of the Phrenologists is, as most of our readers probably know, that the degree in which any man possesses any intellectual faculty—moral virtue, *vice*, or propensity—nay, any *animal emotion* or power of *external sense*, or perception, or even, as we take it, any *acquired habit*, *infirmity*, or *accomplishment*—may be certainly known by the size of certain protuberances on the skull: While the only explanation that is afforded of this *startling*

assertion, is contained in the statement, that these bony excrescences indicate and correspond with certain other protuberances on the brain, which are the natural terminations of the organs of the said powers and faculties." See Edinburgh Review, American Edition, vol. 64, p. 255.

The extremely inaccurate and almost unmeaning use of terms displayed in this paragraph, shall be passed without comment; for verbal criticism forms no part of our province. But other matters in it are too extraordinary to escape animadversion.

Had any enlightened Phrenologist ever seriously made the "assertion" which Mr. Jeffrey here affects only to repeat, it might well, indeed, be pronounced a "startling" one. But will the candid and moral reader be easily induced to credit the fact (*for fact it is*) that the Journalist has, *for the first time compounded it himself*, and that no inconsiderable portion of it is the *spurious coinage of his own brain*, unmixed with any of the sterling of the science?

We call on Mr. Jeffrey or any of his friends and fellow labourers in deception, to say, what Phrenologist has ever spoken of an organ of "Animal emotion" or mentioned the existence of cranial "protuberances" as indicating "powers of external sense"? If the Journalist does not know, that no such organs are recognized in Phrenology, he is shamefully ignorant of the elements of that science: and if he does know it, he is still *more shamefully wanting in moral rectitude*. For, in the latter supposition, his object is to *palm a falsehood on the public*—an act, which, to carry his point, all his writings in opposition to Phrenology give too much reason to apprehend he would not be very reluctant to perpetrate. For those productions exhibit, throughout, a *most wanton disregard of the sanctity of truth*.

In common with our Journalist, Phrenologists admit the existence of "*powers of external sense*." But they do not admit that those powers are manifested, either in their *being* or their *strength*, by protuberances on the skull.

But the most profligate part of Mr. Jeffrey's misrepresentation, in the preceding extract, remains to be noticed. It is his effrontery in openly imputing to Phrenologists the recognition of an organ of "acquired habit," one of "infirmity," and another of "accomplishment," views that were never entertained by any mortal, until the Scottish Reviewer broached them.

All the world knows, Mr. Jeffrey not excepted, that "habit" and "accomplishment," are the result of discipline, and that, in harmony with discipline, they vary as it varies. Two individuals, alike in *natural* endowments, will differ most essentially in "habit" and "accomplishment" according to the different educations they have received. But it is to be distinctly understood, that the difference in natural endowment is accompanied by a corresponding difference in aptitude and facility, as respects the formation of "habit" and the acquisition of "accomplishment." And it is to be further understood, that *habit* and *accomplishment*, instead of being themselves *faculties* of organs, are nothing more than *states* or *conditions* of the *functions* of faculties, and are more or less predicable of almost every organ.

For Mr. Jeffrey, then, to impute to Phrenology the recognition of *specific native* organs of mere *general conditions* or *attainments*, is to *calumniate the science*, with a view to bring it into disrepute.

In the same calumnious spirit, the Reviewer speaks of an organ of "vice" and another of "infirmity" as actually embraced in the scheme of Phrenology.

This is another fabrication of Mr. Jeffrey; and we regret exceedingly that he gives, in his own character, evidence but too conclusive of having sitten for his *own likeness*, and of being himself the "great sublime" he has here drawn. If to *prevaricate*, *deceive*, and act *vindictively*, be received as proof of the possession of the organ of "vice;" and if to *exhibit ignorance*, and *discuss without effect*, be admitted as evidence of the organ of "infirmity," it is certain that Mr. Jeffrey possesses both. In confirmation of this, we offer confidently the article we are considering.

But Phrenologists know nothing of any organ of "vice" *in the abstract*. Vice is a mere *accident* or *contingency* of moral action. It may be the result of any propensity or sentiment *pushed to excess*. But, when duly regulated, no propensity or sentiment-is, *in itself* vicious. They are all essential in the composition of the human intellect, and *innocent and useful* when properly restrained, and directed to their legitimate objects.

To assert the existence of an organ of *vice*, therefore, is contrary alike to the principles of Phrenology and the dictates of common sense. Hence we repeat, that the charge against the science is made by Mr. Jeffrey either in a spirit of wanton slander, or from ignorance of the subject. In either case, it recoils on himself.

With the same view of rendering the science *ludicrous*, he speaks of the cranial protuberances as "*excrescences*." This term he knows he has misapplied. But he also knows the effect of "*calling names*." With the *vulgar*, this *vulgar trick* is much more potent than the soundest *argument*. The *former* but not the *latter*, they understand and feel. We regret to add, that, in the paper we are commenting on, expedients for the annoyance of Phrenology are selected, not on account of their fairness and legitimacy, but merely *from the effects they are likely to produce*. The Journalist writes as if he thought ridicule the only test of truth. If he can produce a sneer by the spurious use and application of a term, he fancies he has gained a momentary advantage, and exults in his success. Such pitiful shifts are the surest evidence of a bad cause. It is only the drowning man that catches at straws.

There is a *literary* and *scientific*, as well as a *political mob*. And it is by the *coarse tricks* and *low cunning* of the *demagogue* that both are excited to commotion and riot. For there are demagogue *Reviewers*, as well as demagogue *politicians*—*Jack Cade* spirits in all things. And, as means, in producing on the *vulgar*, whether *high* or *low*, a *vulgar effect*, a system of studied *misnomers*, *cant words*, and *terms contemptuously and sneeringly used*, are exceedingly powerful. In such a system may be fairly included the following terms, often repeated—"bumps!—German doctors!—Brood of Germany!—fantastical!—initiated!—oracular!—quack!—impostor—excrescence!—absurd!"—and various others of similar import, and employed in a similar spirit. Should Mr. Jeffrey be at a loss as to the application of these remarks, any of his intelligent readers can instruct him.

Excrescence means *accidental* and *exuberant* or *unnatural growth*. If Mr. Jeffrey will take the trouble to consult his dictionary, it will tell him so. But he well knows that Phrenologists represent the growth of the cranial protuberances as *natural*. The unfounded and *unnatural* opinion which he entertains of Phrenology, has much more the resemblance of an "*excrescence*" from his intellect, than the cranial protuberances have of bony excrescences.

Our Journalist proceeds in his cavils against Phrenology.

"It is assumed, first, that the mind is made up of a number of distinct faculties, of the greater part of which no one has any consciousness or perception, and some of them indeed not very conceivable—then, that these several faculties can only operate

through the instrumentality of certain material organs; next, that though all this is quite certain, and not to be questioned, the mind is all the while utterly *unconscious* of being obliged to act by organs—then, that it is nevertheless indisputable that all these organs are parts of the brain, and nothing else—and, finally, that the force or perfection of every faculty depends entirely on the size of its peculiar organ.

“Now, the only organs of which we really know any thing—and the only ones we humbly conceive, which there is the least reason for supposing to exist in subserviency to our mental operations—are, first of all, organs of faculties of the precise nature of which every one is constantly and intensely conscious—they are all exclusively organs of external perceptions, and of the sensations immediately connected with them: The mind is perfectly and continually aware of their agency—they are none of them merely parts of the brain—and the strength or perfection of the faculties to which they minister have no dependence on *the size* of these organs.

—“The truth, we do not scruple to say, is, that there is not the smallest reason for supposing, that the mind ever operates through the agency of any material organs, except in the perception of material objects, or in the spontaneous movements of the body which it inhabits—and that this whole science rests upon a postulate or assumption, for which there is neither any shadow of evidence, or any show of reasoning.” p. 256-7

This quotation presents to our consideration several points of no common interest, to which the attention of the reader is particularly invited.

Respecting the faculties or powers of the human *mind*, considered in a *separate* or *insulated* capacity it is known that we differ in sentiment from the Phrenologists of Europe, and perhaps also from many of those of the United States. We do not believe that, in such capacity, the mind either does or can possess “a *number* of *distinct* faculties” but that it is *as single in its power*, as it is *in its substance*. It is a quickening and operative principle, essential to all the intellectual faculties, but does not, by any means, *possess them itself*. It is no more made up of *parts*, in relation to *power*, than in relation to *substance*. In both respects it is *one and indivisible*.

To advocate a proposition the opposite of this, is to contend that the mind, like the body, is *compound*. To be *single* in essence and

multiplex in power, implies a contradiction. Conformably to the present arrangement of creation, we consider such a case *impossible*. In support of a belief the reverse of this, no evidence presents itself, either *primitive* or *analogical*. On the contrary, all attainable evidence is against it.

We can conceive of but one possible way, in which the human mind, *single* in its essence, can be tributary to the existence of a *multiplicity* of faculties. That is, by being united to a *system* of organs, instead of a *single* one, and serving as the spring of action to the whole. In this case, the multiplicity of the organs, each different in structure from the other, although acting from the same principle and impulse, will secure, in the result, the requisite variety. For every organ must necessarily act in a manner corresponding with its specific structure.

But this topic will be more fully discussed in a future part of these Elements. In the mean time, we cannot withhold an expression of our deliberate belief, that the doctrine of the perfect *unity* of the human mind, both in *substance* and *power*, constitutes, most certainly, that foundation of the science of Phrenology that nothing can shake; and which the progress of time and improvements in knowledge will only render more stable and secure. For if it be true, that the mind, as a *unit*, possesses but unity of power, it follows, of necessity, that the multiplicity of power, manifested in the functions of the intellectual faculties, must arise from a *multiplex* system of cerebral organs, acting in conjunction with the mind, And such we believe to be the case.

But it is not true, as the Journalist asserts, that "no one has any consciousness or perception of the greater part of the intellectual faculties." Every reflecting individual, who carefully examines the condition and movements of his own intellect, must be conscious of the existence and action of the whole of them.

We call on Mr. Jeffrey to specify any *one* of the thirty four faculties, which compose phrenologically the human intellect, of which we do not possess a distinct and recognized consciousness? Are we not *conscious* of the existence and exercise of the faculties of *physical love* and the *love of offspring*? and that they are essentially different from each other? as much so as the faculties of *seeing* and *hearing*?

These faculties are all evident to our own consciousness,

Are we not equally conscious of the feeling of *adhesiveness* or *friendship* and *general attachment*? and do we not perceive it to be a propensity as different from the two former, as they are from each other?

The same is true of *Combativeness*, or a propensity to resist insult, opposition, or wrong. Every one has a consciousness of its existence and action. Nor can less be said of *destructiveness*, and the propensity to amass and possess, as property, things that are valuable.

Of the *Love of approbation* and the sentiment of *Self-esteem*, operating as *native, fundamental* faculties, no one can be unconscious. Nor can consciousness fail us in relation to *hope, veneration, conscientiousness*, and *benevolence*. We clearly recognize the exercise of them all, as feelings essentially distinct from each other, and that belong to our nature.

Nor can Mr. Jeffrey name one of the *knowing* or *reflecting* faculties, of which the same thing is not true. We feel that we have one faculty to learn *language*, another for *mathematics*, a third for *music*, and a fourth for painting; and consciousness tells us that the function of each is specifically different from that of the other.

Even Mr. Jeffrey will not deny that he has a well defined consciousness of a power to *compare*, to *reason*, and promptly to *associate ideas* in such a manner, as to awaken in his readers or hearers a sense of the ludicrous. Were he not conscious of the possession of these, he would not be so entirely devoted to the exercise of them.

To recognize this consciousness as clearly and distinctly as we do that of *seeing, hearing, or smelling*, nothing is requisite but a faithful attention to the operations of our intellects.

Although we learn the functions of all these faculties, chiefly by observation practised on others, we are not the less sensible of possessing them ourselves.

But, says our Journalist, consciousness certainly does not tell us that we exercise these faculties *through the medium of material organs*.

This in part, is true. We are not sensible of the exercise of each faculty through the medium of its specific organ. But, as respects our knowing and reflecting faculties,—those by which we acquire, compare, and assort ideas, and trace the relations of cause

and effect, we are perfectly conscious of exercising them *through the medium of the brain*. When pursuing with intensity a chain of reasoning, on an intricate subject, we are equally as conscious of exerting our brain, as we are, when walking, that we are exerting our limbs.

If, in the one case, we are not sensible of the *particular organs* which are immediately in action; neither are we, in the other, of the *particular muscles*. Had we this specific consciousness, we would be *anatomists by nature*.

As relates to the *feeling* faculties, our consciousness of their connexion with the brain is much less distinct. But with regard to some of them, particularly Combativeness, Concentrativeness, Veneration, Conscientiousness, and Firmness, we are yet to be persuaded that it does not exist. If Amativeness, Philoprogenitiveness, and Adhesiveness, are felt, and seem to be felt *exclusively*, in other parts of the body, it is on account of the powerful sympathy between those parts and the organs of the specified faculties.

Keen and strong as are his powers of discrimination, and eminent his reputation, as one of the ablest analysts of the age, we seriously apprehend that Mr. Jeffrey does not always distinguish with sufficient accuracy between the offices of *consciousness* and *observation*.

It is not true, as he confidently asserts, that "the mind is perfectly and continually aware of the agency of the organs of external perception." At least it is not true, that *instinctive consciousness* is the source of this knowledge.

That we see with the eye, hear with the ear, smell with the nose, and taste with the tongue, we learn exclusively by observation and experience. Without these, we would be as ignorant of the immediate agency to which we are indebted, for these external faculties, as Mr. Jeffrey pronounces us to be of any of the organs of the internal faculties.

But, whether, independently of all other aid, consciousness alone would or would not teach us the mere fact, that we see with the eye, and hear with the ear, it would certainly give us no knowledge of any peculiar organization of those parts. It would not even give us to understand that the eye is different in organization from the ear, the nose from the tongue, or the tongue from the eye. All knowledge of this description we derive from observation. And were the internal organs as accessible to observation as the exter-

*muscles in arm not conscious
of any particular*

nal, we would attain, from the same source, the same familiar acquaintance with them. Had Mr. Jeffrey ever encountered the patient and protracted toil, and the close and painful examination essential to the acquisition of anatomical science, he would not be prompt in fancying that any one can ever become an anatomist by the influence of consciousness. He might as well allege that a Reviewer may be manufactured in the same way. Yet, to a great extent, every one is born an anatomist, if consciousness be competent to teach him the organization of certain parts of the body.

The declaration, by Mr. Jeffrey, "that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organ, except in the perception of material objects, or in the spontaneous movements of the body which it inhabits," is one of the most groundless and inconsiderate that has ever been hazarded. The opinion is irrecoverably overthrown, by facts and events that are familiar to every one.

The lofty and brilliant conceptions of the orator, the profound calculations of the mathematician, and the inspired flights of the poet, are operations of the intellect totally different from those of the "perception of external objects," and the "spontaneous movements of the body." Yet, by an injury done to certain portions of the brain, they are as completely and certainly extinguished, as vision is by an injury of the eye, or hearing, by the destruction of the organization of the ear. But this could not be the case, if those intellectual processes were not performed through the instrumentality of the brain, which our Journalist will admit to be a material organ.

Why does a blow on the eye destroy vision? Because the eye is the instrument with which the mind sees. Let the eye recover from the injury, and vision is restored.

Why does a severe blow on the head destroy, in the poet, the power of conception, and, in the mathematician, the power of calculation? Because the brain is the instrument with which, in both cases, the mind operates. Remove the injury which the brain has sustained, and, in both cases, the faculty is restored. The analogy, here, between the internal and external organs and faculties is in all things, complete. There is the same evidence of the mind's entire dependence on the brain for every degree and modification of thought, that there is of its dependence on the eye for vision, the ear for hearing, or the nerves and muscles for voluntary motion.

Mr. Jeffrey's assertion that "the strength and perfection of the external faculties of the intellect have no dependence on the size of their organs," is an error too gross even for him to have committed, notorious as is his ignorance of physical science. The veriest tyro in comparative anatomy and physiology is competent to correct it. That those animals most remarkable for their acuteness in seeing, hearing, and smelling, possess, other things being alike, the largest amount of optic, auditory, and gustatory nerves, is reduced to a truism, of which it is disgraceful to be ignorant—disgraceful, we mean, to those, who make a profession of any fitness either to speak or write on the subject. It is in a high degree surprising, that, on account of his own reputation, if not for the sake of truth, Mr. Jeffrey does not first acquire a knowledge of the subject on which he affects to instruct the public. For he is surely aware of its being as true in his own time as it was in that of Smollet, that an author will rarely write the worse, for knowing something of the subject which he ventures to treat.

"It is very remarkable, (says Mr. Jeffrey,) that even Mr. Combe has assigned no cerebral organ to any of the five senses!—and Spurzheim, as he quotes him (p. 268.) has said distinctly that he "sees no reason to suppose that the functions of the external senses require a particular portion of the brain for their determinate sensations"—a concession which we must own surprises us not a little, in a philosopher of this school—since, if the mind really performs all its other functions by means of portions of the brain, there was still stranger ground for supposing that its external perceptions depended on parts of that substance, in which the nerves of the senses originate." See p. 258.

Had the reviewer stated this objection in a serious and respectful way, we would have unhesitatingly expressed our concurrence with him in opinion. But here, as in other cases, he mars every thing by his undignified sarcasm, and the offensiveness of his sneer.

We confess ourselves compelled to believe, that each of the five external senses has appropriated to itself a peculiar portion of the brain, which is alone capable of performing the cerebral function in harmony with it. The reasons that can be rendered in support of this opinion, appear to us entirely satisfactory.

That it may be qualified to receive a specific impression, the nerve of each external sense must be itself specific, in structure

and endowment. The impression received, it conveys to the brain, and there delivers it. But it delivers it with the same specific character which it originally possessed.

If, then, to be susceptible of the impression, the nerve must be specific, how can the brain be susceptible of it, without being possessed of a corresponding quality?

We cannot conceive it possible for five portions of the brain, identical in organization and endowment, to be alike fitted to receive, *one*, the *visual* impression, another the *auditory*, a third the *olfactory*, a fourth the *gustatory*, and the fifth the *tactual*. This would be subversive of the great principle of specific adaptation—a principle, which, as far as we are permitted to scan it, pervades the entire fabric of nature.

To this view of the subject, great probability at least is given, by certain late discoveries in relation to the nerves. We are now taught, that, for the purposes of sensation, voluntary, and involuntary motion, three distinct sets or families of nerves are requisite; and that the nerves of one family cannot perform the functions of those of the others. This we believe to be true; and had publicly announced our belief of it, as our class in physiology are ready to testify, several years before Bell, Magendie, or Flourens had published on the subject. We were led to the opinion, by a thorough conviction, that no *one* organ can perform *two* or more functions specifically different from each other; but that each organ must be single alike in function and endowment. Such a phenomenon would be in perfect opposition to the laws and principles of cause and effect. As well might the heart circulate the blood and secrete bile, as the same set of nerves be tributary to sensation and voluntary motion.

For the same reason we are much inclined to suspect that for the *sensation of heat and cold*, a peculiar set of nerves is provided by nature. That sensation is no less *sui generis* than those of *hearing, tasting, and smelling*. There is no ground to believe, therefore, that it can exist without a specific organic arrangement, any more than they.

Mr. Jeffrey says much about the *immediate locality of sensation*, and proves himself to be any thing but a philosopher, on that subject.

“Is it,” he inquires, with seeming amazement, “meant to be said, that we do not know *certainly, naturally, and immediately*, that we

*difference is not in the internal organ
reception is kindly but the variation
is made by the peculiar construction
of the nerve and system*

see with our *eyes*, and hear with our *ears*, and feel with that part of our bodies, on which an external impression is made?—When a man is struck hard on the hand, does he not instantly refer his sensation to that part of his body? When he is dazzled with excessive light, does he, in any state of his reasoning or experience, stop his ears, instead of closing his eyelids?"

These questions savour of puerility, and are unworthy of the years and reputation of Mr. Jeffrey. Had they been proposed by a pert member of a sophomore class, they would have been in character. And so indeed they have been; for in physiology and all other branches of physical science, our Journalist is as very a sophomore, (*sophos-moros—anglice, conceited simpleton,*) as ever disgraced himself by a blundering college exercise.

Strictly and *philosophically* speaking—and, in the present case, our Reviewer is *affecting* to be *strict* and *philosophical*—we do not see with our *eyes*; hear with our *ears*, or feel with the part of the body on which the *impression is made*. *Seeing, hearing and feeling,* are *mental* operations: and the mind is no more in the eye, ear or hand, than it is in the enamel of a tooth, or the nail of the great toe. The brain alone is its *residence* and *organ*, and if the part of the body impressed be, by any means, *separated* from *that*, no sensation is produced by the impression—And why?—Because the impression is not conveyed to the brain, the *immediate* and *only* seat of *feeling*.

True, when we receive a blow on the hand, we refer the sensation to the spot that is stricken. But that is the mere result of habit. When the limb has been amputated even above the *knee*, and the *end* of the stump is *irritated*, the sensation is referred by the patient immediately to the *excised foot*. Yet our Journalist will not himself allege that it is here the foot that feels the irritation.

When light enters the eye, it is not the eye that actually *feels* it. The anterior coats being as insensible to it as any portion of the cutis, the retina merely receives the impression, which, to produce *sensation*, must pass to the *brain*. Hence, when the brain is *apoplectic*, or very deeply concussed by a heavy blow, light falls on the *eye* in vain, although *that organ* is uninjured; and, when an individual loses both eyes, the brain remaining sound, he still *remembers* light and colours, and *conceives* and *dreams* of them, as clearly and distinctly as before. But this could not be the case, if the brain were not the only seat of the sensation produced by

light. When, to aid our vision, we employ a microscope or a telescope, the *optical instrument* is just as sensible to the light as the *eye*; and it would be, in all respects, as philosophical and true, to refer the *sensation* of vision to the *former*, as to the latter. They are means alike for the direction of light, which, to be felt, must send its impression to the brain. And when the physician employs the stethoscope in aid of *hearing*, the instrument and the ear are alike tributary to the conveyance of impression to the *brain*, the *seat* and *material organ* of sensation.

To the other external organs of sense, similar observations are equally applicable. They are mere pieces of apparatus to receive impressions and forward them to the *brain*, but not to be themselves the seats of *sensation*. And it is alone by *habit*, and not by *instinctive consciousness*, that we refer sensations to them. The real physiologist, when he exercises his philosophy, makes no such reference. In every case, the true and only seat of sensation is the brain.

How exceedingly crude and thoughtless, then, and unworthy of the reputation of a distinguished Reviewer, is the following paragraph.

“The organs of the external senses, the *only material organs* which the mind is known to employ, are admitted not to be parts of the brain; although all the nerves through which they act may be traced into that substance, and depend on their immediate connexion with it for their vitality.” P. 260.

The only meaning of this very silly sentence, if indeed it has any meaning at all, is, that the brain is, and can be, in no case, the *organ of the mind*; but that, by being, in some way, connected with them, it “vitalizes” the nerves of the external organs of sense, and thus fits those organs to act in this high capacity, and to become the immediate seats of sensation.

Besides its palpable absurdity, this is rank and gross materialism. Sensation is unquestionably a mental operation. The mind is not, by any one, believed to make the external organs of sense its residence. And yet those organs, which are plainly material, are here pronounced to be the seats of sensation. In plain and undeniable terms, the matter composing the external organs of sense, is said to feel. But if mere matter can perform one genuine mental operation, it can perform them all. This, we repeat, is the broadest and coarsest materialism imaginable.

Mr. Jeffrey, by way of explanation of means, talks of the nerves of the external organs of sense depending on their connexion with the brain "for their vitality."

Here again, as in all other instances, he is at fault in his physiology. The nerves depend "for their vitality," not on the *brain*, but on the *blood*. Separate them from the brain, by section, and they do not necessarily die. But deprive them entirely of blood, and they die immediately. When a nerve is divided, the parts on which it is distributed become insensible, not because the nerve is dead, but because, in its state of division, it can no longer convey to the brain the impressions which are made on its separated branches. Mr. Jeffrey has not a sufficient acquaintance with physiology to know, that the *life* of a part and its *aptitude for its function* are not the same. He does not know, that the *vita propria* or *specialis* of an organ is in any way different from its *vita organica*.

But on this topic let us hear him once more.

"But the faculties to which the phrenological organs are supposed to minister, have no perceptible or intelligible connexion with the brain, more than with any other part of the living body. They are many of them mere sentiments or contemplative faculties, that have no relation to any thing extrinsic or *material*—such as veneration, concentrativeness, adhesiveness, and others."

To be thus interpreted. Veneration, concentrativeness or the power of intense and undivided application of the faculties of the intellect, and adhesiveness, or the feeling of general attachment, being "sentiments or contemplative faculties" that have no degree of connexion with the *brain*, will be no more deranged by a severe injury inflicted on *that organ*, than they would by a fierce collision between the foot of an assailant and the *seat of honour*! Such being the Journalist's view of the subject, that the world may enjoy the benefit of his opinions more at large, we would advise him to write a new work on the *seat and pathology of mental derangement*. Being much of a piece with the other lucubrations on that side of the question, we doubt not it will find among *anti-phrenologists* a ready market, and prove to them an exceedingly edifying production—certainly not less so, than the several diatribes Mr. Jeffrey has already written against *Phrenology*—For he cannot be more radically ignorant of *madness*, than he has shown himself to be, of *that science*. Were the intellect of the Reviewer actually trans-

tated to an *inferior and less noble* part of his body, it could scarcely, on certain subjects, work to worse purpose, than it does at present.

Mr. Jeffrey objects to the phrenological faculties, that they are not clearly and accurately *defined*—that they do not exhibit themselves in bold relief—that they are not sufficiently distinct from each other, as primitive faculties ought to be—and that, instead of being original and simple, they seem to be *factitiously compounded*, in correspondence with certain conditions of man.

“Thus, says he, love of approbation presupposes an habitual communication of sentiments with other men,—Veneration, a custom of observing and comparing the powers and qualities of different beings,—Acquisitiveness, the general developement of the idea of property,—and Cautiousness, an experience of the occasions and consequences of many forms of danger—and all of them, in short, are so far from resembling primitive and independent faculties, operating through separate organs, and provided each with its own material apparatus in the brain, that we cannot conceive of their existence, *till society has made a considerable progress*, various tastes and habits been cultivated, and much knowledge been accumulated and diffused.” P. 263.

As relates to the faculties here specified, this objection will be completely prostrated, by showing that they have no one element *in common*; but that they are radically and essentially different from each other—as much so as seeing, hearing, tasting, and smelling.

There are four grounds, on which the several *sentiments* referred to may be correctly and satisfactorily judged of, as to their *identity* or *difference*. These are, the *nature* and *character* of the sentiments themselves, *as recognized by consciousness*—the *objects* that excite them—their *mode of operation* and the *effects* they produce—and the ends to be attained by them. If, in all these respects, the sentiments be essentially different from each other, and from all other sentiments, they must be considered as primitive faculties of our nature. It is from considerations like these, that we regard as primitive faculties the external senses.

The faculties specified by the Reviewer, and claiming our present attention, are, love of approbation, veneration, acquisitiveness, and cautiousness.

In relation to the *nature* of these feelings, when experienced in full operation, what says consciousness? To every intelligent and

ingenuous individual, after a faithful process of *self examination*, we leave to answer this question for himself. Nor do we believe that he will find any difficulty in answering it correctly.

As to ourselves, our consciousness testifies as decisively to the *radical difference* of the sentiments we are considering, as it does to the difference of *seeing* and *smelling*. As a feeling of our nature, love of approbation has no affinity to either veneration, acquisitiveness, or cautiousness. This being a matter of *plain sensation*, no doubt can be entertained on the subject, by those who are attentive to their own feelings. And this testimony alone ought to be considered sufficient to decide the entire question. For if we refuse confidence to our own feelings, we unsettle the foundation of all our knowledge. Of such procedure, universal scepticism would be the inevitable result.

But the *objects* of these sentiments are as different as their natures. Nor, on this topic, can the slightest discrepancy of opinion exist.

Of love of approbation the object is *man*, in his capacity to *judge* of human qualities and human actions, and his susceptibility to be *influenced* by them. This sentiment has no reference to the fact, whether he be an *equal*, an *inferior*, or a *superior*. It is sufficient that he is deemed capable of forming a judgment, and awarding censure or bestowing applause.

Veneration has for its object *superior things*—man for example, *superior* in years, in wisdom, in virtue, in sanctity, or in piety—Beings superior in their *nature*, as the spirits of departed ancestors or saints, angels, and, last and highest, the *Deity himself*.

Of acquisitiveness the object is *possession*, or *property*—something that can be turned to personal benefit, or that can add to personal consideration.

Of cautiousness the object is any thing *dangerous*.

In their *operation* and *effects* on the individuals they actuate, these sentiments are exceedingly different. Hence we readily infer their existence from external manifestations. We learn from observation, that love of approbation is expressed by one kind of action, veneration by another, acquisitiveness by a third, and cautiousness by one very different from all.

Nor do the *ends* of these sentiments differ less than their other attributes.

Love of approbation incites to the cultivation of such qualities, corporeal, or intellectual, or both, as the possessor deems best calculated, in his own case, to secure to him distinction. Veneration leads to the manifestation of deference and reverential regard to *things superior*. It is the source of patriotism, of piety towards parents and ancestors, and of the homage and worship paid to the Most High.

Of acquisitiveness the end is the accumulation of property—Of cautiousness, the avoidance of danger.

Thus, were it requisite, and had we room for the analysis, we could pass over the whole of the phrenological faculties, and show satisfactorily, that they all differ essentially from each other, in the same points in which those differ, whose consideration we have just finished. The inference, then, is irresistible, that they are necessarily *primitive*.

A grosser error Mr. Jeffrey never committed, than when he alleged, that the four faculties we are considering are *factitiously compounded of*, or at least grow out of, a particular condition of action of certain other faculties.

Thus of veneration he says, that it is the result of “a custom of *observing and comparing* the powers and qualities of different beings.”

Were this true, it would follow, of course, that in each individual, the *strength* of the sentiment of veneration would be in direct proportion to that of his powers of *observation and comparison*.

But every one is sensible that this is not the case. In many, very many instances, where all the knowing and reflecting faculties are exceedingly weak, the sentiment of veneration is unusually vigorous: and the *reverse*, veneration being weak where the intellectual faculties are vigorous—Hence in women generally, veneration is stronger than it is in men, although the powers of the intellect are confessedly inferior.

In fact, a sense of Deity, which is but another name for the sentiment of *veneration*, is as essential a part in the *composition of moral man*, as the capacities to taste, swallow, and digest food are in the composition of his *animal nature*. Without a primitive sense of Deity, man would be as perfect a monster, as he would be if born without arms or legs. Nor could he, in such a case, ever become *religious*, any more than he could walk without his lower extremities. For veneration is, in man, the *native soil of religion*,

without which it can never take root, vegetate and flourish. He is *constitutionally* religious, or he cannot be rendered religious *at all*. For however education and management may *improve* faculties, they can no more *create them*, than they can create *muscle and bone*. In relation to the human intellect, *circumstances can originate* nothing. They can only improve what already exists. We may add to the foregoing, that the rudest and most ignorant nations have a sense of Deity as *deep* and *impressive*, as the most enlightened. They fail only in the character with which they invest their Deity. But that character is made out and bestowed, not by the faculties of *sentiment*, but by the *knowing* and *reflecting* faculties. In reality, then, among the most rude and uninformed of the human race, whose powers of *observation* and *comparison* are in the humblest condition, veneration, to say the least of it, is as well defined, and maintains a rank comparatively as fair and prominent, as it does in the intellect of more cultivated man.

Nor are these things less strictly and undeniably true of love of approbation, as could be easily made appear, had we leisure to dwell on it.

Alike unfounded is the anti-phrenological belief, that acquisitiveness, or a *desire of possession*, is a *factitious attribute*, and depends on "the *general development* of the idea of property." Without any such *artificial* "development," even the child contends for the possession of its toy, and the savage defends from usurpation his hut and his hunting-ground, with the same resolution with which the monarch makes war for his sceptre and his kingdom.

But this is not all. The *inferior animals* have a sense of property, and are strongly influenced by it in many of their actions.

The eagle fiercely defends his cliff, the lion his lair, and the tiger his jungle. The herds of buffaloes, wild sheep, and wild horses, banish from their pasture ground all intruders. The dog wars for his kennel and his bone, the horse for his stall and the contents of his trough, the goose for her bathing place, and the domestic cock for the privilege of his walk. Even the smaller birds, that we so much delight in for their plumage, and their song, take possession of our groves and pleasure grounds, and beat and banish all competitors for their selected dwellings. But Mr. Jeffrey will not contend that these uneducated tenants of nature are influenced, in their actions, by a "general developement of the idea of property."

How thoughtless! how wantonly absurd in him was it, then, to de-

clear, that no ideas of Acquisitiveness could "come into existence till men had entered into all the competitions of society, and become familiar, not only with innumerable external objects, but with their several utilities and values!"—a process no more essential to the *production* of Acquisitiveness, than to that of vision. That the training here alluded to, *modifies* and *strengthens* the sense of property, no one will deny; but that it generates it, is not true. Our Journalist ought to be aware, that discipline and experience can no more create an intellectual element, than a material one.

In relation to Cautiousness, the case is still, if possible, stronger. By all observation we are taught, that, in man, this sentiment is, by no means, powerful, in proportion to his experience of the "occasions and consequences of danger." Were this the case, the enlightened would be cowardly, and the ignorant brave; and while the novice in arms would rush fearlessly to battle, the well trained veteran would retreat in dismay. But such, we know, is not the course of things. Some men are so cautious and timid *by nature*, that nothing can make them brave; and others so constitutionally bold and intrepid, that nothing can intimidate them. And each class may be made equally acquainted with the "occasions and consequences of danger" without having their character materially changed.

When we extend our observation to the inferior animals, evidence to the same effect presses on us from every quarter. Whatever tribe of animals is destined to be preyed on by others, whether they are inhabitants of air, earth, or water, there we find implanted by nature, and independent of all experience, an *instinctive dread of their natural foes*.

The young hare retreats from the hound, as promptly as the old. The first time the newly fledged bird perceives above it the ominous hovering of the hawk or the kite, it flies to covert, without admonition from its elders in experience. The young mouse is as fearful of the cat, as the latter is wily in stealing on her prey. The frog flies affrighted from the snake, and the inhabitant of the water from the enemy that would swallow it.

To every correct observer of nature, these facts must be perfectly familiar. Nor would Mr. Jeffrey be ignorant of them, had he studied things but half as attentively as he has studied books. The labours of the closet have led him into error; and he possesses, if we mistake not, in strong development, two or three organs, which

we shall hereafter name, and which we seriously apprehend will long prove barriers, difficult to be overthrown, between him and truth in the philosophy of the intellect. But we still trust that he is destined to become a true son of light, and that, to fit him for its reception, the scales that close them will yet drop from his eyes.

We cannot forbear a few adimadversions on Mr. Jeffrey's singular descant on Hope and Cautiousness—or, in simpler language of the same import, on Hope and Fear. Without attempting to pursue him through his wilderness of words, or to thread all the mazes of the dextrous puzzle, which he has laboriously constructed, with his well known ingenuity and powers of sophistry, we shall only state, in his own language, the conclusion at which, he arrives, and then make it the subject of such remarks, as truth, and the fair understanding of the matter may seem to require.

“But the truth, says he, is, that the two principles (Hope and Cautiousness) are substantially one and the same, and necessarily imply each other—as much as heat and cold do. The *increment* of the one is necessarily the *decrement* of the other. If, in the contemplation of a danger, a man fears much, he, by necessary consequence, hopes little—if he hopes much, he fears little. It is no matter which form of expression is used, since they both obviously mean the same thing; and indicate exactly the same state of mind or feeling. They are the two buckets in the well:—and it is not less absurd to ascribe them to different principles, than it would be to maintain, that the descent of the one bucket depends on causes quite separate from those which occasion the ascent of the other:—and the superfluity of the Phrenologists, in these instances, is but faintly typified by that of the wiseacre who made two holes in his barn-door; one—to let his cat in, to kill the mice, and the other—to let her out! They might as well maintain, that besides the eye to give us intimations of light, we must have another sense, and another organ, to give us the impressions of darkness.” p. 284.

When, hereafter, in what ought to be a grave and philosophical discussion, conducted with a dignity and decorum befitting the occasion, Mr. Jeffrey descends to his cat-mouse,-and barn-door-story, we humbly advise him to tell it *correctly*. For we assure him that correctness is a virtue, even in the smallest things, although he, as a Reviewer, places no value on it in the largest.

The “wiseacre,” referred to, when we last heard from him, had *two* cats, a large and a small one; and made two holes in his barn-

door, a large one for the large cat, and a small one for the small, confiding in their feline discretion always to go in and out by the same. And truly, as relates to his metaphysical barn, which is swarming with vermin of sundry descriptions, Mr. Jeffrey would do well to follow so sage an example. The "wiseacre" made at any rate the requisite preparation to let his cats in, to clear his premises and save his grain. But how stands it with our Journalist? His barn, having been collecting metaphysical vermin, from myriads of sources, not for *thirty*, but *two thousand years*, is more difficult to cleanse, than the Augean stable, of its accumulated filth. And yet he has not left a single opening for the mousers to enter; but has even, from inveterate prejudices, and an inflexible resolution to protect his long cherished brood, whose genealogy he traces to the family of *Aristotle*, strengthened and barricadoed the door to bar all admission. But enough of this puerile trumpery and badinage! We ask pardon of our readers for having followed the unworthy example of the Reviewer; and offer them an assurance that we shall do it no further.

Of Mr. Jeffrey's words, which we have here quoted, the fair and faithful interpretation is, that, *not to be buoyed up and elated by Hope*, and *to be harrowed, depressed and shattered by Fear*, are *synonymous expressions*, conveying precisely the same idea—In other words, that the moment we cease to feel the exhilarating and delightful emotions of hope, we are arrested by the chilling apprehensions, and withering sensations, that constitute fear.

On this topic the Journalist and ourselves are perfectly at issue; and let him, as a writer, analyze other subjects as he may, we assert that he is ignorant of the nature and composition of the human intellect, and is, therefore, incompetent to the analysis of it.

Strictly speaking, Hope and Fear are neither the absences nor the opposites of each other. They are two distinct sentiments, in all respects as independent of each other, as seeing and tasting, or secretion and muscular motion.

Indeed were not this the case, but were the representation of them given by Mr. Jeffrey true, they would be alternately or rather perpetually absolute nihilities. For a negation of feeling can be nothing else. The *mere absence* of Hope is nothing but absence; nor is the mere absence of Fear any thing more. But, in the present case, absence and non-existence are synonymous. Hence, ac-

According to the metaphysics of our Journalist, neither Hope nor Fear has any existence.

Again, Feeling is known to be the result of *excitement*, and of nothing else. Hope and Fear are *feelings*. They are both alike, therefore, the product of excitement. Excitement, again, is necessarily the result of an *active* cause. But is it possible for the mere *cessation* of the excitement of Hope to become *active* in producing the excitement, of Fear? or the reverse? Can a mere *absence* of excitement, in any case, prove itself a *cause* of excitement? These we think are fair interrogatories. If Mr. Jeffrey can answer them in the affirmative, let him do so, and further emblazon his escutcheon, as a philosopher and logician, with absurdity and folly.

Further. Were our Journalist's hypothesis true, Hope and Fear must have always precisely the same degree of strength. According to that hypothesis, neither of them can *begin*, until the other has *entirely ceased*, to exist; inasmuch as the *entire cessation* of the one is the cause of the *beginning* and *existence* of the other. But as Hope arises from the mere *non existence* of Fear, and not from any *existing reality*; and as fear cannot do *more than not exist*, the *only cause* of Hope can have but one degree of strength; and, therefore, Hope itself can have but one degree. Reverse this reasoning, making Hope the *cause*, and you prove that Fear can exist in but one degree of strength. For, as the Journalist considers Hope and Fear to be but different affections of the *same substance* or *essence*, he will not, we presume, so far steep himself in the very lees of folly as to maintain their *co-existence*.

Hope and Fear are not the *absences* of each other, because the one does not necessarily *rise*, as the other *declines*. Nor are they *opposites*, because they may be *both in operation*, at the same time.

Were *hope* and *fear* nothing but mutual absences, then would they, of necessity, alternate with each other, in all their shades and degrees, like light and darkness, or heat and cold. But that this is not the case, the experience and observation of every one, who is attentive to what passes *within* him and *around* him, must conclusively testify.

Hope and *fear* are *feelings* of the intellect; and neither can be in action without the fact being perfectly known to the individual whom it actuates. In other words, no one can either *hope* or *fear* without being sensible of it. The object of hope is *anticipated* but *uncertain good*; the object of fear, evil present or expected.

But do we always and necessarily begin actually to feel the *hope* of good, as soon as we have ceased *actually* to feel the *fear* of evil? Most assuredly we do not. We are not always and necessarily under the influence of either hope or fear, any more than we are under that of love, hatred, or active resentment. It is the law of the intellect, that while some of its faculties are in action, others are at rest. But there is no *necessary alternation* between them.

There are times, as every man's experience must convince him, when, in relation to the sentiments we are considering, the intellect is in a state of perfect neutrality—When neither hope nor fear is in active operation, but both have given way to other feelings, or to the exercise of the knowing or reflecting faculties. But were they in reality *mere reciprocal absences*, *this could not be the case*. One or the other must be always present. Yet we venture to say, that, in most persons, these sentiments lie dormant during a greater portion of time than they continue in action. And for proof of this we appeal to general experience and consciousness.

But how stands the case with those things that are related as *mutual absences*?—with *light* and *darkness*, *heat* and *cold*? Between them there is no compromise, or neutral condition. They can never be, at once, both *absent* nor both *present*. It is in the nature of things that they must alternate. Even twilight, which is never of long duration, is nothing but the passage of light into darkness, or the reverse.

According to the principles of intellectual philosophy which he advocates, we ask Mr. Jeffrey to account for the phenomena of *sleep*, during which he will not deny the dormant condition of both *hope* and *fear*. Ingenious and full of resources as he is, he will find the enterprise to be a gordian knot. He may, in his own estimation, cut it by assertion; but he will prove incompetent to untie it by reason.

A brave man is condemned to be shot. All hope of pardon and escape is extinguished. Yet he is a stranger to *fear*, and meets his fate without the least trepidation. Bring the poltroon to the same trial; and he will fall *quaking* into the arms of death. The former is sustained by *courage*, a noble feeling which the later never knew. On neither does Hope shed her cheering influence.

In the intellect of the inferior animals, there is no reason to believe that the sentiment of Hope has any existence. Beyond the immediate reach of their senses, they have no anticipation of ap-

proaching good. But they are not always under the influence of *fear*—not even so frequently, perhaps, as man himself. Were *hope* and *fear*, however, according to Mr. Jeffrey's creed, the *absences* of each other, the case would be otherwise. In that state of things, the lives of the inferior animals would be one unbroken series of terror.

We have said that Hope and Fear are not the genuine *opposites* of each other, any more than the *absences*; and we trust that, in favour of our position, testimony not inconclusive can be adduced.

In the intellect of the same individual, the existence of one of these sentiments is not incompatible with the co-existence of the other. At the sight of imminent danger, an individual flies under the influence of *fear*, but is actuated, at the same time, by the *hope* of escape. This is no paradox, but a plain fact, to the truth of which experience and observation bear testimony. Even amid the terrors of a wreck at sea, one of the most appalling scenes that man can encounter, when the stroke of fate seems to be deferred but *by the moment*, some lingering sentiment of *hope* animates the sufferers to struggle for their lives. By actual experience we know this to be true.

If, according to our Reviewer, Hope and Fear be nothing but the mere result of the *calculation* of *chances* of approaching but uncertain *good* or *evil*, the stronger and clearer the powers of calculation are, the more intensely will the individual possessing them feel the sentiments. But the reverse of this is nearer to the truth. *Castle-builders*, who are the genuine sons of *hope*, in common with those who are habitually trembling under a load of apprehension, are rarely distinguished for patient and accurate *calculations* of *chances*. On the contrary, it is believed that they seldom calculate at all; and have hence the reputation of *hoping* and *fearing* *beyond reason* or *without reason*.

Again. If *Hope* and *Fear* were the result of the calculation of chances, the same individual ought to be subject alike to the influence of both; because his abstract calculation will be as likely to forbode *evil* as *good*—and the *reverse*. But it is perfectly understood, that such is not the case. The man of *Hope* is seldom depressed; while the constitutionally *timid* and desponding is but rarely cheered by the "sunshine of the mind." Although the former may encounter disappointment to day, his prospects are bright and beamy to morrow; while, in the latter, even success itself can but

momentarily lighten the gloom of apprehension. No two intellectual constitutions can be, in their nature, more wide of each other, than those of the *hope-sustained* and the *desponding* individual. In the one, a balmy spring, sunny, fragrant, and unchanging, brightens its evergreens with unfading flowers; while, in the other, a bleak and shadowy winter prevails, beneath whose influence no plant can bloom, and no fruit ripen. Yet our Reviewer dogmatically pronounces them the same. As well may he contend for identity in the frosts of December and the sunshine of May; or in the fragrance of the pomegranate, and the bitter of the colocynth.

The feeling which is the real opposite of *Fear*, and which cannot co-exist with it, is *Courage*, or the propensity to combat. But they do not stand related as *reciprocal absences*. The *want* of one of them, does not presuppose the possession of the other. They are different and distinct original feelings, the result of cerebral organs equally distinct. The most arrant coward is not always and necessarily labouring under the influence of awakened fear, because danger, the exciter of fear, is not always before him. But let actual danger appear, and his recreant character instantly shows itself.

In fact, so wide and radical is the difference between the sentiments of Hope and Fear, that it is to us matter of real and deep surprise, that any one of the slightest pretensions to philosophical knowledge, could ever have seriously considered them *identical*.

In their nature as feelings, they are as wide asunder as imagination can conceive. In their objects, they are the very reverse of each other—Hope being a sentiment of prospective, but *uncertain good*; and Fear a sentiment of anticipated *evil*.

In their modes of manifesting themselves, they are altogether different, the expression and general action of the body, when under their influence, being totally dissimilar.

Nor are they less discrepant in the uses and ends they are intended to subserve. Hope awakens to action the other faculties of the intellect, and unites them in exertion for the attainment of the good that presents itself in prospect.

Fear, on the contrary, urges to flight from anticipated *evil*, when it makes its appearance in the guise of danger.

We have spoken of *Fear*, as if it were, in itself, a *primitive* faculty. But the Phrenologist will understand that we mean by it nothing more than a state of high excitement of the faculty of cautiousness.

Mr. Jeffrey withholds his belief from the science of Phrenology, because, says he, were it true, it could not have lain so long concealed, but would have been indubitably discovered by some one of the thousands of great men, who preceded Gall and Spurzheim, in inquiries respecting the brain and its functions. Indeed, from his repeated employment of the terms, "German Doctors"—"Erood of Germany," and such like contemptuous expressions, intended to discredit the science and its authors, and from his disrespectful reference to the taste of Vienna and Weimar, for what he calls the "marvellous," there is strong ground to suspect his opinion further to be, that, were Phrenology true, it would have been discovered by some other person, than, in the discourteous language of one of his brother-anti-phrenologists, a "thick skulled Dutchman."

This objection in the lump is unspeakably silly. The veriest driveller that wields the pen of a hireling Reviewer, should blush at being concerned in it. It may be urged against every other discovery with the same force and propriety as against Phrenology. And indeed against others it has been urged; so that it does not possess so much as the pitiful merit of *novelty* to recommend it. To "put down" even Harvey, when he discovered the circulation of the blood, it united its puny power to that of other objections no less puny.

Mr. Jeffrey would have manifested just as much common sense, had he objected to the truth of Phrenology, because it was discovered *so soon*, as he does in objecting to it because it was not discovered *sooner*, and by some other person than a "German Doctor."

Will he, in his profound sapiency, please to favor us with a good "metaphysical" reason, why, in the course of human events, some other date than the existing one was not affixed to the discovery of the New World, of the circulation of the blood, of the identity of lightning and electricity, of galvanism, of the absorbent vessels in animals, and of the metallic character of the alkalis; and also to the inventions of gun-powder, printing, the telescope, the quadrant, the art of steam-navigation, and every other discovery and invention, by which the world has been improved, and mankind benefitted! Why were not all these discoveries and inventions effected either *earlier* or *later* than they actually were? Against the truth of each of them, there is the very same reason to object, on ac-

count of the *anachronism of its birth*, as against that of Phrenology.

We are perfectly sensible how presumptuous it is in *us*, to offer instruction to the veteran Editor of the Edinburgh Review. Yet, on the topic we are considering, we do humbly believe that he needs instruction; and, as we doubt much whether his *self esteem* will permit him to encounter any trouble in searching for it, we venture, unsolicited, to lay it before him.

If Mr. Jeffrey will examine the subject with the attention it deserves, he will find, that, in general, there is between every discovery and invention, and the condition of human knowledge, at the period at which they are made, a peculiar aptitude. The condition of knowledge has so prepared the way for them, that they *must appear*. If one individual, therefore, does not make them, some other will. Hence it so frequently occurs, that, without any concert with each other, several individuals make the same discovery about the same time. Inventions and discoveries belong, then, fully as much to the *epochs* at which they are made, as they do to the *fortunate individuals* who make them. They are usually the result of the aggregate knowledge of the time. Had we leisure to go into the requisite details, we could easily prove the truth of this position. Were it possible for a discovery or invention to be made previously to the fitness of the world, from the condition of knowledge, to receive it, it would be made *prematurely*, and, for the time, at least, the discovery or invention would prove unavailing. Further knowledge would be requisite to prepare mankind to understand it, and turn it to account. Hence, many centuries ago, certain doctrines, resembling, in no small degree, those of Phrenology, were *broached* or *conceived of*; but for want of the necessary condition of knowledge in the world, were not actually *discovered, established, and applied*; and therefore fell into disrepute and were forgotten.

Nor was it until about the end of the eighteenth century, that physical science was sufficiently matured to lead to the discovery of Phrenology, and the human mind sufficiently enlightened to receive and apply it.

As is necessarily the case, then, in relation to discovery in general, there was a peculiar aptitude between that of Phrenology, and the condition of human knowledge at the time it was made. Had the case been otherwise, the discovery would not have been

made, or, if made, would have continued neglected, until the arrival of a more propitious epoch. And had not Gall made the discovery when he did, some other gifted and fortunate individual would have effected it, the period being ripe for the important event.

It is not our intention to notice all the palpable misrepresentations and errors that Mr. Jeffr y has perpetrated in the paper we are examining. To do that would be impossible, unless we were to make a point of discussion of every page which that article contains. For we challenge the Reviewer or his friends to designate in it a single page, in which there does not exist error, misrepresentation, false colouring, or some other mode of departure from truth.

Nor is it requisite that we should go into a full and detailed analysis and refutation of it. In the thirteenth number of the Phrenological Journal, which came into our possession a few hours ago, we perceive that Mr. Combe himself has undertaken the task of replying to Mr. Jeffrey, and has executed it in a most able and satisfactory manner. He has turned on his assailant, in a manly and dignified, but somewhat of an excited and indignant spirit, and, employing, for the most part, the weapons of substantial argument, but sometimes those of wit and sarcasm, has fairly foiled and overthrown him in the conflict. A more complete triumph by the *Reviewed* over the *Reviewer*, has never been achieved. That of Byron, in his "British Bards and Scotch Reviewers," is not more signal. As an anti-phrenological champion, Mr Jeffrey's career is at an end. He is Ajax Telemon no longer. On the contrary, he is prostrate, disarmed, and mortified; and, if he has the least magnanimity, and should ever write again on the subject of Phrenology, it will be to acknowledge his error, retrace his steps, and, having correctly informed himself of the true principles of the science, which he has never yet done, become its advocate. *In his present state of ignorance of it, his advocacy would injure it.* At least it could not possibly benefit it. There are, however, one or two points more, in Mr. Jeffrey's paper, to which we solicit the attention of our readers.

"The energy of any faculty or propensity, says he, may be increased, it seems, by any disease or morbid affection of its organ, without any augmentation of its size. This is a very favourite resource, we find, of these learned authors; and seems to us ad-

mirably to illustrate their *hostility to common sense*. Very many of Dr. Gall's discoveries were made, it seems, in madhouses. He found an insane person under the ungoverned influence of some strong propensity; and almost always found that he had the organ of that propensity enormously large. Now if the patient had been mad, in the same key, *from his birth up*, there might have been something in this reasoning—but as there is no example, we believe, of such a case, it seems to us very plain, that madness of a particular character, supervening in mature life, in a person who had lived many years with a remarkably large organ of some propensity, could not, in common sense, be referred to the size of that organ. The man had the organ of that size for *forty years*, and was not at all mad, or in any way over-mastered by the propensity it denoted. The natural conclusion, then, would be, that the size of the organ had nothing to do with the excessive force ultimately developed in the propensity; and the cases would be all *against* the phrenological assumption."

Of Mr. Jeffrey's *sentiment, hostile or friendly*, in relation to "*common sense*," it belongs to himself to judge. No man less presumptuous than he is, will attempt to judge of the motives and feelings that influence others. *We shall not, therefore, of course, embark in such an undertaking.*

But we venture boldly to tell our Journalist, "even in his pride of might," that, *practically speaking*, a more gross violation of "common sense" in medical science, has never been committed, than that which he has perpetrated in the paragraph we have quoted. It is truly astonishing, that, to say nothing of that scrupulous regard for truth, which every one ought to cultivate as the most sacred of feelings, a sentiment of *self respect*, has not prevented him from manifesting such confidence, and magisterial pretensions to knowledge, on a subject, where he speaks only to *betray his ignorance.*

Had Mr. Jeffrey the slightest acquaintance with the true philosophy of *hereditary predispositions* to disease, he would know, that they manifest themselves in the very mode, and are governed by the very laws, which he here so dogmatically and mistakenly condemns. He would then know, that they consist in a *peculiar faulty condition* of some organ or part of the body of an individual, which *scarcely ever* discloses itself from "his birth up," but usually lies *dormant* until a *more advanced period*—often until the

meridian—not unfrequently until the “*fortieth*” year, of life, before it appears in the form of *actual disease*.

Let the hereditary predisposition be to pulmonary consumption, to dyspepsia, to gout, or to apoplexy—affections to which a peculiar constitutional liability is evidently transmitted from parents to their offspring. Now, in what does this peculiar “liability” consist? We answer, that, as relates to pulmonary consumption, it consists in a faulty *condition* of the lungs—to dyspepsia and gout, in a faulty condition of the stomach and others of the chylopoietic viscera—and to apoplexy, in a like condition of the contents of the cranium.

But does this faulty condition show itself *in actual disease* from “the birth up?” Even Mr. Jeffrey himself, ignorant as he is of physical science, must know that it does not.

Pulmonary consumption and dyspepsia very rarely appear until the age of puberty, and often not until a much later period. Gout is a disease of adult life, attacking generally after the age of thirty; and apoplexy, being a complaint of a still more advanced period, withholds its attack until after the age of forty-five. Yet does the faulty condition of the organs concerned exist, in each case, in a *latent state*, from birth until its open manifestation in the form of disease. And that manifestation for the most part occurs, as the result of some strong exciting cause.

As relates to “madness,” the same thing is known to be proverbially true. That disease is usually *hereditary*, and, if not as a general rule, at least very often, does not appear until near the *fortieth* year of life. But from birth until that period, the predisposition to it has existed. And in what does this predisposition consist?—In the very condition of some one or more of the *organs of the brain*, which Dr Gall has specified, and of which Mr. Jeffrey is pleased to speak with such taunting disrespect.

Does madness arise from a derangement of the faculty of *Amativeness*? The *predisposition* to it has consisted in the *preternatural size* and the accompanying *augmented excitability* of the organ of that faculty, from the time of its complete development at puberty. But the actual derangement does not take place until a late period of life; because, until that period, the requisite exciting cause has not been applied.

Is madness produced, as it sometimes is, by a derangement of the faculty of *Destructiveness*? and is the organ of that faculty

unusually large? In the uncommon *size* and *activity* of the organ has consisted the predisposition, which, by an exciting cause, has been ripened into disease.

Is deranged Self-Esteem or Love of Approbation the source of madness? and are the organs of those faculties, in the language of our Journalist, "enormously large"? Here again the *predisposition* has existed, awaiting some exciting cause of sufficient strength to irritate it into disease. For it is to be distinctly understood, that, a predisposition to any complaint existing, nothing is wanting but an *exciting cause*, for its actual production.

To madness arising from the deranged condition of any of the other phrenological faculties, similar remarks are equally applicable. An enlargement of the organ, with the accumulated excitability which naturally attends it, constitutes the *predisposition*, and the application of an exciting cause produces the disease.

Hence, in general, an "enormous enlargement" of any cerebral organ may be correctly regarded as constituting a predisposition to madness, arising from the derangement of the faculty of that organ; and, that for the actual awakening of the disease, nothing but some powerful exciting cause is necessary. It must not be forgotten, that the *changes* which take place in the system, in the *natural progress* of life, seem oftentimes to serve as the exciting causes of hereditary disease. Those changes the ancients designated by the term *climactericks*. As relates to *madness*, the master climacterick has been placed at about the fortieth year of life.

After all we have had occasion to say of the habitual disingenuousness and gross discolorations of our Journalist, it is with sincere regret that we find ourselves compelled to convict him of an error too palpable to be attributed, we think, to any thing but intentional misrepresentation.

In page 301, American Edition, he expressly charges the Phrenologists with ascribing the *strength* and *vigour* of a faculty to the *size* or *bulk* of its organ *alone*, without regard to any other quality.

Now we venture to say that by no enlightened and correct Phrenologists has such an ascription ever been made: and we call on Mr. Jeffrey to produce the authority, by which he sustains the contrary assertion. If such authority exist, he must know where to find it: and if he cannot find it, he must be content to stand convicted of an error too gross to be considered accidental—an error tantamount to *actual falsehood*.

Phrenologists do say and conscientiously believe, that, *all other things being alike*, the *strength* of a faculty *does* depend on the *size* of its organ. But, as far as we have been able to make ourselves acquainted with their opinions, either by their writings or from other sources, they do not refer to *size alone*, to the entire exclusion of other attributes. On the contrary, cavillers at the science have often accused them of *retreating to other attributes*, when they could not maintain themselves on that of *size*—of attributing the strength of a faculty, for example, to the “*intensity*” of its organ, when its “*extensity*” was insufficient to serve their purpose.

The phrenological tenet here contended for, is supported by the fairest and most correct analogy.

As a general rule, the *strength* of a *muscle* of any description is in *direct proportion* to its *size*. But to this rule exceptions exist. Owing to the superiority of structure, vitalization, or some other quality, the smaller muscle is, at times, the stronger. Hence a man of moderate size, in the prime of life, is found occasionally to be more powerful than a much larger man, at the same period; but more especially at an *advanced* period. And hence the same individual, when strongly excited by passion or wine, is often much more powerful both in *muscle* and *intellect*, than he is when entirely free from such excitement. Madness also confers oftentimes a preternatural augmentation of muscular strength, but not of size.

Contrary to phrenological orthodoxy on the subject, Mr. Jeffrey undertakes to prove, that intellectual *power* and *activity* are the same—of course, that an intellect cannot be *active* without being *powerful*—and the reverse.

An opinion more palpably erroneous, and more easily subverted than this, can scarcely be presented to public inspection. In refutation of it, facts press on us from every quarter.

A dominant and distinguishing characteristic of the female mind, as contrasted with the male, is *activity*; while that of the male is rather *power*.

Of individual intellects of the same sex, it must be perfectly familiar to the observation of every one, that many are sprightly, active, and efficient in *small* affairs, but altogether incompetent to *great* ones; while others operate with great power in transacting the *latter*, but have no liveliness or aptitude in the *former*.

Between intellects of *activity* and those of *power*, a striking point of contrast is, that, from the very commencement of an effort, the

former more with perfect facility, while the *latter* seem *clumsy at first*, and more rapidly and with facility, only when under *high excitement*.

Thus at the very *beginning* of its flight, the trochilus flits as swiftly and gracefully, as it does in any *future part* of it; whereas the eagle and the condor are obliged to exert themselves a considerable time before they can attain the summit of their speed, and the elegance of their movement. and yet they ultimately outstrip the trochilus. And it is well known that no great orator is either as fluent, fervid, or forcible in his exordium, as he is in his peroration, and in many other parts of his speech. Intellects *merely active* but not powerful. are ready and apt in *conversation*; but can never rise above the colloquial standard; while others of great power, and not ready in conversation, are opulent, sublime, and irresistible, when under the excitement of public debate. The dark and mighty river, sweeping along slowly and smoothly in its silent majesty, gives a manifestation of *power*; while the noisy rill, sparkling in the sun-beams, and lightly dancing over its shining pebbles, is an emblem only of *activity*. The passing breeze will agitate the *latter*; whereas nothing but the tempest can ruffle the *former*.

Activity and *readiness* are much more nearly synonymous than *activity* and *power*. An intellect may be *active*, without being *powerful*; and *powerful* without being *active*—or, at least, the latter cannot manifest activity unless when under the influence of very potent excitement.

“If, says Mr. Jeffrey, a steam-engine or elephant moves slow, a cannon-shot, a war-horse, a thunder-bolt, a comet, move fast; and beyond doubt, the most fervid orators, the most sublime poets, the most famous warriors, and the most commanding geniuses in all departments, have been remarkable for the combined depth and rapidity of their conceptions.”

Now all this is pretty enough, and when properly explained and understood, not only *true*, but perfectly *consistent* with the phrenological principle which our Journalist is so pertinaciously labouring to subvert.

Who ever denied that a “cannon-shot” moves *rapidly*? But does not a *rifle-bullet* move at least as rapidly, without a *hundredth part* of the *power*? And does not this conclusively show, that rapidity i. e. *activity* and *power* are two attributes of motion *essentially different* from each other? Were they not thus different, they would be

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constantly and necessarily associated. The very fact of their being *dissevered*, proves their *difference*, in opposition to all that Mr. Jeffrey's sophistry, and all the cavilling of the whole reviewing tribe can urge to the contrary.

To propel the cannon-shot with *velocity*, *great power of impetus* must be given to it; while to throw the rifle-bullet with equal *velocity* a *small power* is sufficient. According to the very terms of the proposition, then, as well as in the nature of the case, *power* and *velocity* or *activity* are two qualities of motion essentially distinct.

Of the movements of the "war-horse" the same may be said. It is swift when produced by the exertion of great *muscular power*. But is not the movement of the hare equally swift, although it is the product of a *small power* of muscle? Mr. Jeffrey will not have the hardihood to answer in the negative. Nor will he contend that the war-horse can be thrown into swift motion with the same facility, and in the same brief period of time as the hare. The latter animal, therefore, has *activity without power*, the former *with it*.

As respects *intellectual* movement, the same thing is palpably true. *Activity* and *power* are attributes of it *essentially distinct*.

When under *deep excitement*, the intellect of the "fervid orator" and the "sublime poet" moves unquestionably with *great rapidity*; but it moves also with *great power*. But does not the intellect of the mere *poetaster* and the *word weaving babbler*, move with *equal rapidity*, although it is utterly destitute of *power*? Mr. Jeffrey knows that it does.

Of Homer and Milton, the conceptions were at once *sublime* and *powerful*. But were their intellects characterized by as much *vivid activity* as those of Anacreon and Horace? Did the two *epic* poets conceive as readily and compose as rapidly, as those that touched so inimitably the *harp* and the *lyre*? Our Journalist will pause before he will answer these questions in the affirmative.

The real and great orator is often less fluent in words, and less rapid in intellectual action, than the mere dabbler in language and thought that opposes him.

In public address, fluency and force are very different attributes. In the British parliament, we have listened to speakers much more fluent than Brougham, Mackintosh or Canning; and in the Congress of the United States, there are members, who, in *rapidity* of intellectual action, outstrip, not a little, Daniel Webster and Henry Clay.

In listening once to a member of the House of Commons, who de-

bated, or at least talked, with great *fluency*, we made a remark complimentary of his *free elocution*; when the friend to whom we addressed ourselves, and who possessed uncommon sagacity and point, declared that the *fluency* of the speaker was attributable to his *weakness*. In fine, there are no two qualities of intellect more easily distinguished, or more universally regarded as *distinct* than *activity* and *power*. A small *intellect* may have *activity*; but to have both *activity* and *power* it must be *great*.

These are plain, common sense views of the subject, which observation sanctions, and every one can understand. It will be in vain for the Reviewer to attempt either to subvert them, by pretended argument, or to hide them from the public eye by a web of sophistry. Yet that which he has woven on this topic is certainly one of the most dense and entangled his paper contains.

Mr Jeffrey dwells at no inconsiderable length, on the *alleged fact*, that the *brain* is oftentimes very seriously injured, without any corresponding injury being sustained by the *intellect*.

Although this supposed objection to the science of Phrenology has been already urged and answered so often, that it is as trite and stale as a thrice repeated story, yet, as our journalist holds it of great moment, and does not even seem to know *that it is not new*, we shall make it the subject of a few observations.

Mr Jeffrey, on the authority of Dr. Ferriar and Mr. Rennel, the latter, if possible, more ignorant of physical science than himself, asserts that the cerebral injuries referred to have been carried to such an extent, "as successively to *dispose of* (i. e. *destroy*) *all the phrenological organs*" without producing in the intellect, any shadow of a corresponding affection.

This is doubtless a very daring position, taken by the Reviewer on elevated ground. We are compelled involuntarily to admire his intrepidity, however faulty we may think his indiscretion. Were he able to maintain himself in his fancied strong hold, he would annoy from it, not a little, the advocates of Phrenology.

But the citadel is founded on sand, which the waves will wash away, and constructed of rubbish which the winds will scatter. Dr. Ferriar and Mr. Rennel, and all other writers combined, do not furnish facts to justify the *sweeping* and *unconditional* assertion of Mr. Jeffrey. They do not produce authenticated instances to show that all the phrenological faculties, nor the half of them, have been even *injured*, much less *destroyed*, without *correspondingly* affecting

the *intellect*. Let the writings of the specified authors be faithfully examined, and on the truth of the assertion here made, we fearlessly peril the fate of our Science. It is *unpardonable*, not to say *unprincipled*, in Mr. Jeffrey, thus to deceive the public, by statements, which, if he has attentively and understandingly read the writers he refers to, he knows to be *untrue*. Dr. Ferriar and Mr. Rennel have not furnished the evidence he wantonly ascribes to them.

But, for the sake of argument, we admit that those writers have collected cases in which injuries have been inflicted successively on all the phrenological organs. What then? Is it the same thing for an organ to be *injured* and to be *destroyed*?—to be *impaired in function*, and rendered totally *incapable of function*? For Mr. Jeffrey's sake we trust it is not. By want of candour, vindictive feeling, and a defective knowledge of the subject treated, he has not a little *injured*, but, we trust, not entirely *destroyed*, his reputation as a Reviewer.

It is to be recollected that the cerebral organs extend from the *circumference* to the *basis* of the brain; and that it is the *central* and *inferior* (i. e. the *medullary*) portion of them that is considered *intellectual*. The *cortical* part, which constitutes their *surface*, does not appear to be so essential to *that function*.

But the injuries referred to by our Journalist, are always confined to the surface. They do not penetrate deep into the interior. They could not thus penetrate, without proving *fatal*.

In the cerebral accidents we are here considering, then, the violence done to the true *intellectual* portion of the phrenological organs, was necessarily slight. In a large and well formed brain, many of those organs are five inches in length, and some of them more. But in no instance that can be cited did the wound extend, in *reality*, and by *actual admeasurement*, (which is the only mode of ascertainment to be at all relied on) to the depth of more than one inch. It reached, perhaps, through the cortical portion of the organ, and no further.

In the very nature of the case, then, unless the brain were seriously concussed by the injury, or compressed mechanically, or unless considerable inflammation should ensue, we would not expect the *intellectual derangement* to be very great.

Instead of the brain, suppose it to be any other organ—the eye, for example, the ear, the lungs, the liver, the stomach, or a muscle.

If the injury be slight and partial, the functional derangement will correspond in degree. And if the wound be inflicted, not on the organ itself, but only on a part closely connected with it, the diseased affection will be still lighter. But, as already stated, the cortical portion being, in general, the only part injured, and that being regarded as not essential to the *intellectual* function, it is not to be wondered at that that function does not suffer in a very high degree. The wonder would be, if it were thus to suffer.

But we have yet another reply to make to the objection of the Reviewer, on this subject.

Physiology is the only true foundation of pathology. Unless the healthy and natural function of a part be known to exist, and be understood in its nature, neither can its *diseased* condition be either understood or even discovered. He that knows nothing of the healthy action of the liver, can be no better informed in relation to its diseased action. But to the several *native functions* of the brain—we mean by this the *phrenological faculties* which were first disclosed by Gall and Spurzheim—the authors of the cases of cerebral injury reported by Dr. Ferriar and Mr. Rennel, were *necessarily strangers*. It was impossible, therefore, for them to know whether they were actually diseased or not. If they had no knowledge of their *existence*, they, of course, had no knowledge of them *at all*; and hence, any report they might make in relation to them, would be necessarily *nugatory*. Nothing but ignorance of his subject, therefore, could induce Mr. Jeffrey to attempt to convert that report into an argument.

But we have not yet done with this objection. Its very *foundation* is defective, and hence it is essentially defective throughout. It is not true that an extensive injury can be done to *any portion* of the brain, and the intellect remain *entirely unaffected*. It appears to be unaffected only to those who are incompetent judges, or who do not make it a subject of *sufficient attention*, to ascertain its actual condition. To be able to understand a topic so thoroughly, as to make up a correct opinion respecting it, *after a deliberate and close examination*, is as much as any one has a right to claim. Without such examination, no one's opinion is worthy to be *remembered*, or even *listened to*. But we venture to say that not once in a hundred times, in cases of injured brain, is the state of the intellect examined sufficiently, to warrant the correctness of the opinion that may be given in relation to its *soundness*. Nor ought the fact

to excite our wonder. The task is very far from being an easy one. To perform it satisfactorily, besides being in the habit of making such examinations, the person who engages in it ought to have an accurate and minute acquaintance with the character and *peculiarities* of the intellect he examines. It is not enough that he compare it with other intellects. He must be able to compare it with itself—its condition at the *time of examination*, with its condition at a *former period*, when it was known to be *sound*. Without this state of preparation in the person who officiates, the examination and the opinion founded on it are abortive and useless. But could the truth be ascertained, we would not be afraid to peril on the issue our reputation and existence, that such preparation and pointed attention did not prevail, in a single one of all the cases, on which Mr. Jeffrey relies for argument in opposition to Phrenology. We have not, at our period of life, to learn how loosely and inefficiently even physicians of high standing often conduct their examinations, when called on to decide on cases of real or suspected insanity. At blunders and inaccuracies on this subject, we have not unfrequently been *shocked and disgusted*.

What is more common than to hear it asserted, that a person in *hemiplegia* enjoys his intellectual faculties *unimpaired*? Yet an assertion more perfectly unfounded was never hazarded. For a hemiplegiac patient to possess his intellect in all its antecedent vigour and activity, is *physically impossible*. Could such a phenomenon occur—were it possible for *one* hemisphere of the brain to perform, *without defect*, the functions of *both*, then would one of the hemispheres have been *created in vain*. It would be mere lumber in the cavity of the cranium. Were one sufficient, to create two would be wanton supererogation.

Indeed as relates even to very local injuries of the brain, the same thing is true. It is inconsistent not only with all *analogy*, but with *reason* and *common sense*, to contend, that, under the influence of such injuries, that organ can perform all its functions with unaffected efficiency. It will and must perform some of them with a vigour preternaturally diminished, preternaturally augmented, or in some way perverted. In either case, disease exists—as truly so, if the organ act too vigorously, as if it act too languidly. This is and must be true, whether the brain be a *single organ*, or a *system of organs*. In either case, it is the *apparatus of the intellect*, and cannot perform well if out of repair. This is so very a *truism*—a propo-

sition sustained by so many hundreds and thousands of facts, familiar to every one, that to deny it bespeaks profound ignorance, or prejudice tantamount to a perversion of the intellect.

We must not here omit referring to the *duplex* character of the brain, the two hemispheres being *separate* and precisely *alike* in structure and function, a fact which alone, in a very great majority of cases, serves as a satisfactory answer to the objection we are considering.

It is exceedingly rare that wounds or injuries are inflicted, at the same time, on any two corresponding points of the two hemispheres of the brain. Of course it is equally rare for any two corresponding phrenological organs to be, at the same time, deranged in structure and function. This is a fact which observation sanctions and candour must admit. When one organ, therefore, is injured, its fellow continues to perform the appropriate cerebral function, although not in the same degree of perfection, in which it is performed, when the two organs co-operate in a sound condition. Thus, one eye being injured or destroyed, vision is still performed by the other, although not so perfectly as when both are unhurt.

There are certain organs, such as Comparison, Benevolence, Veneration, Firmness, Self Esteem, Concentrativeness and Philo-progenitiveness, which, although *double*, are so situated along the line of junction of the two hemispheres of the brain, that they seem to be single. These Mr. Jeffrey considers in the same light as if they were actually single, and asserts that an injury cannot be done to one of them without being extended to the other; and therefore, that a wound or injury thus inflicted, must extinguish or derange the function of both.

This again is a flagrant mistake, arising, as we presume, from *anatomical ignorance*. Were our Journalist acquainted with the position and general arrangement of the parts, he would know that it is very easy for *one* hemisphere of the brain to be injured, in the region of either of these organs, while the *other* is untouched. To the truth of this no anatomist will refuse to testify. If Mr. Jeffrey wishes to know more of this matter, we advise him to become honestly a *student of anatomy*, which he ought to have been, before he had the hardihood to present himself as a *teacher* of it, and he will then be satisfied. Further to him, on this point, we say not.

Perhaps the most silly and glaring combination of ignorance and folly, with which our Journalist has contrived to disgrace his pages;

is that in which he denies that Gall and Spurzheim have made any *improvements* in the anatomy of the brain; alleging that *all those* which they claim *as their own*, had been previously made by other *anatomists*. This allegation merits no other notice than the simple declaration, in which the whole anatomical world, whether friends or foes to Phrenology, will sustain us, *that it is false*. The contributions of Gall and Spurzheim to the anatomy of the brain, are numerous and invaluable. It is neither unmerited nor extravagant praise, to denominate those writers the *Fathers of that anatomy*. They are almost as real *discoverers in it*, as Harvey was in relation to the *structure and functions* of the heart and blood vessels.

Another blunder (whether the fruit of *ignorance* or *intention* we neither know or care) not much less gross and shameful than the preceding, is presented to the reader in the following quotation.

“According to the Phrenologists, *character* should be always *indelible*, or affected only by *physical accidents on the head*. According to fact and observation, it is liable to the greatest revolutions, in consequence merely of events and moral experience—the head, as a physical mass, continuing of its original form and dimensions. And those alterations are most commonly observed to take place in the propensities which make the most conspicuous figure in the phrenological arrangement. Is there any thing so common, for instance, as to see a young spendthrift turned into an old miser?—a man who was scandalously prodigal from twenty to forty, becoming extravagantly avaricious from fifty to eighty? But how is this to be reconciled with the stationary condition of his organ of acquisitiveness; through both these opposite stages? Is it at all unusual for one who was a scoffer in his youth, to become most humbly and zealously devout in his maturer age?—What again, is more ordinary, than to see a generous confiding disposition, soured into misanthropy and distrust—not by any subsidence of the bump of Benevolence, *but by the experience of some signal perfidy and ingratitude?*—Are there not many amorous youths, who degenerate into absolute woman-haters in their middle age?” &c. pages 210—211.

Here as in many other instances, Mr. Jeffrey *fabricates an assertion*, and falsely affixes it on Phrenology, that he may afterwards, make a parade of his ingenuity in refuting it.

It would be gratifying to us to know, what Phrenologist has ever said or dreamt, that the human “character should be *always indelible*, or affected only by physical accidents on the head.” As far as we

have any knowledge on the subject, this sentiment is here, for the first time, promulgated by the Edinburgh Reviewer himself. We challenge him and all his coadjutors, from the *Reverend* Mr. Renel to the *irreverend* Mr. Paulding, to indicate a single phrenological production in which it has a place.

On the contrary, Phrenologists represent, that the human character is *not* "indelible" but changes *necessarily* with the progress of life, and under the influence of other agencies, inasmuch as, by those causes, the *condition of the brain itself is changed*. And, as Phrenology teaches that the intellectual character is determined by the condition of the brain, according as the latter changes, it is impossible for the former not to change also. As this is a topic important to the science, it is our wish in our remarks on it, to be distinctly understood. With a view to this, we shall consider it somewhat fully and in detail.

In *early* infancy, the only organs of the brain that are so far developed and matured, as to be capable of performing *functions*, are those of the *propensities*. Accordingly, propensities alone compose, at this period, the infantile character.

As childhood advances, the knowing faculties, which are situated at the *inferior* and up to the *middle* portion of the front of the brain, are progressively developed and matured. At this period, children become actively cognisant of the *external world*. But their knowledge is confined to objects and their properties, in an individual capacity. As yet they know nothing of the relations of things. They are, therefore, so ignorant of the obligations of *duty*, as not yet to be regarded as moral agents.

As youth advances, another developement takes place, of the organs situated in the *upper part of the forehead*, and along the whole *top of the head*. The former are the reflecting organs, the latter those of moral sentiment. The youth acquires now a knowledge of relations, and, being competent to feel and distinguish right from wrong, becomes, in the true interpretation of the expression, a moral agent.

It is also at this period that the developement of another organ occurs, which modifies character in the most peculiar manner, and in the highest degree. It is that of the organ of Amativeness. It is now that man begins to be intensely sensible of the real object and end of his existence. He feels that he no longer lives for himself alone, but that his destiny is indissolubly entwined with the destiny of others—

He feels, in a particular manner, that he is the natural friend and protector of *woman*, and that he lives for posterity. Physical love is awakened, and diffuses throughout the whole character its modifying influence.

The brain has acquired now its full size, but not its perfect organization and tone. Like the muscles, tendons, bones, and other parts, it is yet immature, and does not attain its highest perfection, until the period of manhood. Nor is it until that time, that its faculties and functions are so strengthened and matured, as to constitute a well balanced condition of the intellect.

In childhood and youth, the balance of the intellect is imperfect, because the organs of propensity, having attained the highest maturity and tone, preponderate, in influence, during that period, and give to the character a fervid, impetuous, unreflecting, and animal cast.

By the time of manhood, the organs of reflection and moral sentiment have acquired equal perfection with those of propensity, and hence the character becomes now more equable, calm, intellectual and steady.

Instead of pronouncing the human character "indelible" then, as our Journalist unblushingly declares it does, Phrenology represents it as constantly and necessarily, *in the order of nature*, changing, from the period of infancy to that of mature life.

Nor does the change, as still directed by nature, stop here. During the real prime of life, the intellectual strength and flexibility, like the strength and flexibility of the muscles, continues permanent. But they begin, at length, to suffer diminution, in consequence of changes that take place in the brain. Every portion of the system, the brain not excepted, begins to grow rigid—at least to become less capable of easy, active, and graceful motion: and, of course, all the faculties, corporeal and intellectual, suffer in the same way, and in an equal degree. For the intellectual faculties and functions depend as essentially on *cerebral* action, and are as necessarily modified by it, as voluntary motion does on the action of the muscles. And as that muscle or set of muscles, which is most severely exercised during life, is the first to lose its flexibility and power, the same is true in relation to the brain. That organ which is under the most constant and intense excitement, decays first, and gives to the others an ascendancy over it. This fact is of great importance, in the exposition of intellectual changes.

In the progress of this decline, some of the cerebral organs, like various other parts of the body, begin, at length, to *diminish* in size, and the cranium immediately over them to be *thickened*. This modifies still further the *intellectual character*, instead of allowing it to remain "indelible."

But this deterioration of the organs does not take place in the same order with their development and maturation. In one respect, at least, it is directly reversed. The organ of Amativeness, which is one of the latest in its development, is among the foremost in decay. Next, perhaps, follow Destructiveness, Combativeness, Hope, Ideality, and Language. To these, perhaps, succeed, in the process of decay, the reflective organs, while Covetiveness, Cautiousness, Conscientiousness, and Veneration, are among the last to experience the debility of age. Hence, in *advanced* life, men are, in the course of nature, less *daring*, more *timid*, and more devoted to *religion* and *riches*, than they are in *youth* and the *meridian of life*.

This is the doctrine which Phrenology inculcates, because it is sanctioned by observation, instead of teaching, as our Journalist would make the world believe, the unfounded and absurd opinion, that "character is always *indelible*, or is affected only by physical accidents on the head." On the very fact, that the character of the intellect does change, in conformity to *every* changing condition of the brain, does the science of Phrenology in a great measure rest. Subvert that fact, and the science must fall.

But the mere changes that occur in *that organ*, in the natural progress of human life, are not the only ones by which the intellect of man is affected. Those arising from accident, and from certain *processes of art*, are no less influential in the production of corresponding effects.

Intellectual and *moral* education is nothing else but the effects resulting from changes produced in the condition of the brain. The condition of that organ is *ameliorated* by discipline, and from that *alone* arises all the benefit that is achieved. There is no reason to believe that the *spirit* or *thinking principle* is in the slightest degree changed. No discipline can reach it.

But the term education is of extensive import. When properly understood, it does not mean merely the effects produced by institutions erected for the inculcation of science and letters. It in-

cludes all changes effected in the condition of the brain, by incidents and events in the general course and business of life.

These incidents are numerous and of sundry descriptions. They may be *pleasurable* or *painful*—of *prosperity* or *adversity*, according to circumstances. The only quality essential to them is, that they be *deeply and permanently impressive* on one or more of the cerebral organs.

By being thus impressive in so high a degree, they may and often do effect an alteration in the balance of the intellect, on principles which, to the educated physiologist, are not only intelligible, but perfectly familiar. The principle more particularly alluded to, is that of *revulsion*; which is known to be founded on the fact, that there cannot be, in the same system, at the same time, *two* seats or points of very *powerful* and *equal* irritation or excitement. One point *will* take an ascendancy over the other, and ultimately in a great measure swallow it up. Thus a blister, a seaton, an issue, or any kind of deep and permanent *cutaneous* irritation, effects the removal of irritation *within*.

In like manner, let any cerebral organ, as that of Amativeness, Combativeness, Destructiveness, or Love of Approbation, be under such strong and habitual excitement, as to sway the intellect, and impress on it a corresponding character. An event occurs—and many such may and do occur— which, by a deep countervailing impression, transfers the excitement to Conscientiousness, Veneration, Benevolence, or the *reflecting* organs. The consequence will necessarily be, a very material change in the intellectual character.

Now the event that has occurred produces neither an augmentation of size in one cerebral organ, nor a diminution in another. Nor is such an effect, in the slightest degree, necessary to the result. It simply effects a *translation* of excitement from one organ to another, or to *several others*, and nothing further. For it is not only true, but in perfect harmony with the principles of Phrenology, that *superior excitement* serves as a substitute for *superior size*. Of the truth of this, proofs innumerable might be easily adduced.

By a judicious application of these principles, there is no difficulty in explaining any or all of the intellectual problems, which our Reviewer has stated, in a manner so pompous, and with feelings so triumphant—no difficulty in assigning satisfactory reasons, why the youthful *spendthrift*, and the *scoffer at religion*, have become, in

age, the miser and the devotee; and why the young, amorous and licentious gallant, has become a woman-hater in middle life.

Let Mr. Jeffrey specify the intellectual change produced, and faithfully detail the circumstances connected with it; and we cheerfully stake our reputation on the issue, that we will furnish him with an explanation of it, not only rational and satisfactory, but in perfect accordance with the tenets of Phrenology.

It is worthy of observation, that most of the changes of intellectual character, to which our Journalist refers, are precisely such as the *alterations* necessarily affected in the condition of the cerebral organs, by the natural progress of life from youth to age, united to those inevitably effected by *excessive indulgence*, are calculated, in a considerable degree, to produce. For it must not be forgotten, that, as already intimated, indulgence to excess, in the particular function or exercise of almost any organ, tends to weaken it, and to give to the others an ascendancy over it; and thus materially alter the character. A little additional aid from adventitious and intentional circumstances is alone necessary for the completion of the change.

On this topic we cannot permit ourselves to enter into details. But should Mr. Jeffrey be dissatisfied with the principles of the explanation here given, we are justified in calling on him for one of his own. According to his tenets, all intellectual character is seated in the *mind alone*. And what is the mind?—A simple, immutable substance, without either size, form, or parts. We pronounce it *immutable!* and if *simple*, it must be so; or else, on its first change, it passes necessarily into *another being*. To change a simple substance is tantamount to *annihilating* it; for it is certainly the same substance no longer. That a substance may be changed in *condition* or *state*, and still continue the same in *essence*, it *must be compound*. In reference to a simple substance such *mutation* and *identity* are impossible. The musician cannot play a variety of tunes on an instrument possessing only a *single string*. To be able to do this, it is essential that he have an instrument of *many strings*.

Change, as we have already said, the *state* of the human *mind*, it being a *simple substance*, and you necessarily change its *essence*. You convert it into *another substance*. But, in changing its essence, you change also its *consciousness* and extinguish its recollection of

all antecedent feelings. These positions cannot be denied; but are to be received and respected as primitive truths.

Consistently with them, then, we again call on Mr. Jeffrey to explain *any change*, whatever, of an *intellectual character*, supposing it to be seated in the *mind alone*, without changing also the *mind itself*, and extinguishing entirely its *recollection* and *consciousness*. We give to him, for this purpose, his own problems.

The spendthrift becomes a miser—the scoffer, a fanatic—the confiding youth, a misanthrope—and the amorous spark, a woman-hater.—We ask our Journalist to explain all this, on principles of genuine *old-school metaphysics!*—to inform us *intelligibly*, how it is, that the *mind* being *simple*, without *size*, *composition*, *organization*, or *parts*, can change its *condition*, and still itself continue the *same!* We do not hesitate to tell him, that the very conception of the possibility of such an event, is the essence of absurdity!—a most palpable violation of all that deserves the name of *reason* and *common sense!* As well may he attempt to tell us how the rose can forego, at once, its odour and its hue, and still continue to breathe forth all its native fragrance, and blush in all its native crimson!—or how the night can be, at the same, the period of darkness and of light—or as well essay to reconcile any other contradiction that imagination can conceive!

As if to confirm the truth of these remarks, Mr. Jeffrey attempts to account for the conversion of the scoffer, and the spendthrift, by attributing it to what he calls its “moral causes.”—“That reflection has been suddenly awakened by danger or affliction—that attention has been roused by the impassioned eloquence of some great preacher, or that errors of opinion have been detected by more careful reasoning”—or, he might have added, in imitation of Swift, in his effort to assign the cause of drinking, “any other reason why”—For a more weak and silly attempt at *real explanation* he could not have made, had he tasked to the very utmost his ingenuity to do so.

What he has here so sagely endited, may suit himself exceedingly well as tea-table harangue, in a party of old-school metaphysical gossips, where empty crones and shallow greybeards are his “wonder-wounded hearers”—but, when offered to philosophers, it will be necessarily regarded as “the attempt without the deed,” and contemptuously rejected as words without a meaning—*vox inanis, et preterea nihil*—for, most indubitably, they *explain nothing.*—

They unfold nothing of the process by which the mutation of character is effected. They simply present an *antecedent* and a *consequent*, as morning is the antecedent of night, and a wet day of a dry one, without showing their relation as *cause* and *effect*, or without unfolding the intermediate steps, by which the operation of the former may be traced along to the production of the latter.

An unanswerable argument in favor of *Phrenology*, as contrasted with *metaphysics*, is derived from the fact, that while the former is competent to the solution of the most *complex* intellectual problems, the latter is incompetent to the solution of the most *simple*. We shall only add, that in the paper we have been examining, its distinguished author has shown himself to be but very little better acquainted with the science of *Metaphysics*, especially in its improved condition by Brown, than with that of *Phrenology*. The entire production is unworthy alike of his talents and attainments, as manifested in his writings on other subjects.

But we must positively bring this discourse to a close. Every thing admonishes us to that effect, and there is no reason why we should further protract it.

Although we have already devoted to the paper of Mr. Jeffrey a much more ample allotment of time than it truly merits, we have not exposed one half of its faults. In a particular manner, we have not spoken in terms sufficiently damnatory of that malignant and demoniacal sneer, which, like the writhing of the adder, when preparing to strike, seems to have curled on his lip during the whole time he was composing it. There is a light and playful vein of sarcasm, which may be occasionally indulged in without injury or offence: but there is also a dark, empoisoned, and vindictive one, which, on whatever occasion it may be manifested, is revolting and detestable. It is the latter vein alone, "With Hecate's ban thrice blasted, thrice infected," that runs through the whole of Mr. Jeffrey's tirade. But, leaving to "time and circumstance," the full measure of contempt and abhorrence which the article is to receive, we shall finish with a partial exposition of our Journalist's *cerebral developements*. We shall confine ourselves chiefly to those which are most prominently disclosed in the paper we have examined.

Combativeness	-	-	full.
Destructiveness	-	-	large.
Secretiveness	-	-	do.

Concentrativeness	-	-	full.
Self-Esteem	-	-	large.
Love of approbation	-	-	full.
Benevolence	-	-	moderate.
Conscientiousness	-	-	small.
Ideality	-	-	moderate.
Firmness	-	-	large.
Individuality	-	-	full.
Language	-	-	full.
Comparison	(we think	but)	moderate.
Causality	-	-	full (at least) perhaps large.
Wit	-	-	full.

We challenge our Journalist patiently to submit to phrenological admeasurement, the "capital of his spinal column," duly oiled, soaped, or shaved; and if the above exposition be not found, in the main, correct, its failure will amount to stronger evidence of either the fallacy of Phrenology, or our ignorance of the application of the science, than any thing contained in the Edinburgh Review, Blackwood's Magazine, Rennel's Folly, Paulding's *Tomthumb*, (we beg his pardon,) *Go-tham*, and the hundred other specimens of anti-phrenological trumpery, which are destined to become the property of grocers and confectioners pastry-cooks, and book-worms.

ELEMENTS OF PHRENOLOGY.

INTRODUCTION.

This science is divided into Phrenology *proper* and Craniology.

The *first*, which is a compound derivative of the two Greek words *Phren* the *mind*, and *Logos* an *essay*, treats of the connexion and reciprocal influence of the mind and the brain, the *innate* faculties they constitute, and the *specific* functions they perform, when acting in union.

The second, which is also of Greek origin, being derived from *Kranion* a skull, and *Logos* an *essay*, treats of the dimension and figure of the brain, as manifested by the size and form of the cranium.

By a knowledge of both, the experienced phrenologist is enabled to judge of the *native* amount and general character of the intellects of individuals, from an inspection of their heads.

But he does not affect to disclose the *modifications* of character that education may have produced. He can point out, however, the kind of education best adapted to every description of original intellect. This presupposes in him a power to foresee, from his knowledge of the intellectual constitution of man, the effects that must necessarily arise from a system of early and skillful attention to the cultivation and improvement of the primitive faculties.

If then Phrenology be true, its practical utilities are manifold and great beyond those of any other branch of science; a consideration which should be alone sufficient to lead to an *unprejudiced* examination of it by every individual who is friendly to that amelioration of the condition of man which it is calculated to produce. If, on the contrary, it be found false and untenable, the sooner it is refuted and overthrown, the better. In either case, justice requires that it be faithfully studied, which is all that its advocates ask in its behalf.

This publication, although not a little enlarged, in the present edition, is still but a *text book* on the subject of Phrenology, being but

little more than a digest of a few lectures delivered by the author in his course of instruction on the institutes of medicine. He prints it again at the request of his class, to whom it will serve as a remembrancer of what they have already heard, while it may indicate to others topics of inquiry, which, without some aid of the kind, might not have occurred to them. He hopes it will not be without its influence in achieving one object further. By making the real principles of the science better and more extensively known, and presenting them in the innocency and usefulness which rightfully belong to them, it will remove, or at least weaken, conscientious scruples, and lead to honest research. In doing this, should it exhibit no higher claim to regard, it will contribute *indirectly* to the diffusion of truth.

Independently of other considerations, the rapid spread of Phrenology, in Europe, and the irresistible force with which it is prostrating all opposition, ought to secure to it, in the United States, the prompt and deliberate attention of those who are qualified to judge of its truth.

As some representation of the existing state of things, in relation to this point, the author has not only prefixed to these Elements a discourse, but has appended to them a memoir on Phrenology, which he once read to a society of gentlemen in Lexington, but no part of which has yet been published. In that memoir he has also endeavoured to exhibit a view, somewhat extended, of the applicability of Phrenology to various interesting and important purposes.

FUNDAMENTAL PROPOSITIONS.

I. MAN is a *compound* being, consisting of *soul* and *body*, or *simple* spirit, and *organized* matter.

As respects the *nature* of the human soul, this proposition is a mere *postulate*. Touching that topic nothing is proved. Nor, constituted as we now are, is it possible for us to attain proof in relation to it; for we possess no capacity to collect available evidence on the subject. Our safest course, therefore, is, to adopt that opinion which seems most probable, and which best comports with the general belief of the most enlightened portion of mankind.

II. Matter and spirit can exist and act *independently* of each other; but, as far as our knowledge of them extends, neither the spirit or mind of man, nor the matter of which his body is composed, can *thus* act *intellectually*.

III. *In his present condition*, the co-operation of both is essential to *every intellectual process*. For all the purposes of intellect, his mind, during his state of compound existence, is as inefficient without the aid of *organized matter* as that is without the aid of mind.

IV. The brain is the organ of the intellect—the necessary associate and co-partner of mind in *every intellectual operation*. It is the apparatus or instrument through which the spirit acts, and by which alone it is capable, *in its present state of being*, of manifesting either its existence or its power. At least, it is the only instrument by which it *does* manifest them.

V. The brain is not a simple but a *compound* or *multiplex* organ. It is divided into three regions or leading compartments, each containing several subdivisions, or minor portions of cerebral matter. Of these compartments, one is the seat of *active propensities*, another, of *moral sentiments*, and the third, of the *real intellectual faculties*. This, as will be more particularly stated hereafter, is analogous to an ancient division of the intellect into *anima*, *animus*, and *mens*, each power occupying in the brain a separate seat.

As we have already intimated in our introduction, and purpose to prove more fully hereafter, the human intellect is greatly diversified by the different degrees of size and strength in the whole of

any one of these compartments, or in any of the individual or minor divisions of brain that belong to them.

VI. To the existence and exercise of each *primitive* power, whether it be *propensity*, *sentiment*, or *intellectual faculty*, a specific cerebral organ is necessary.

VII. Originating interiorly at the basis of the brain, these organs run towards its surface, somewhat like radii from a common center, and constitute collectively the cerebral mass. The basis of the brain is nearly in the direction of a straight line passing from the external opening of one ear to that of the other.

VIII. Their situations and functions are known; and, when strongly developed, they produce cranial protuberances or fulnesses, which render their existence and size a matter of observation. Their dimensions, moreover, can be easily and accurately taken, by an instrument lately constructed for the purpose.

IX. Respecting the condition of the mind, when separated from the body, or the particular mode in which it may then act, phrenology hazards no opinion. Nor does it attempt an exposition of the manner in which, when connected in man, mind and matter influence each other.

These propositions constitute, collectively, the strong hold meant to be defended in the following pages. All mere fault-finding and caviling at points that are not essential to the establishment of the science, will be disregarded. From such petty annoyances, even divine truth is not exempt. Human science, then, must patiently submit to them. Those whose ability extends no further, can clamour and call names. Nor is it possible to silence them, except by neglect.

“Let Hercules himself do what he may,
The cat will mew, the dog will have his day.”

Under this head I shall only further state, what must have been already observed by the attentive reader, that Phrenology differs essentially in the three following fundamental points from all other schemes of mental philosophy.

1. That there is an absolute necessity for the *union* and *joint operation* of *matter* and *mind* in every *intellectual process*.

2. That every *specific intellectual* operation can be performed only by means of a *specific* and appropriate *organ*.

3. That by their growth, these organs so modify the figure of the head, that their situation and relative size can be discovered by an inspection of it.

Phrenology further maintains, that neither *accident* nor education can *add* to the intellect a new faculty; but that they can only awaken, regulate, and improve those that are derived from nature.

Hence the consummate folly of the belief, that the event of falling in love made poets of Dante, Petrarch, and Waller; that Newton was inspired with his genius for astronomy by witnessing the descent of a falling body; and that Vaucanson became the first mechanician of his time, in consequence of being confined, for a few hours, by way of punishment, in an apartment that contained a clock as a piece of its furniture.

All such stories, and there are many of them afloat, should be classed and rejected with the anile trumpery of ghosts and witches, that disgraces the kitchen, and cultivates a spirit of superstition in the nursery. Accidental excitement often *awakens* talent, but never *creates* it.

SECTION 1.

Postulate. The mind of a man is a *simple*, immaterial, *indivisible* substance, immortal in its existence, and in its nature more exalted and excellent than matter.

But with matter it must have some affinities, otherwise it could neither be intimately connected with it, influenced by it, nor dependent on it in its susceptibilities or operations. To contend that it is, in all respects, the *opposite* of matter, is, to say the least, a gratuitous allegation, not to pronounce it a violation of probability.

Matter although inferior to spirit, has been created by an all-wise and all-perfect Deity, as a fit associate for it, at least in this world, and united to it as a worthy co-partner and necessary instrument in all its transactions during its continuance in its sublunary abode.

Let no one, then, become the scandalizer of matter, by representing it as in its nature degraded and ignoble. Such defamation is libellous towards HIM who created, endowed, and configured this substance for high and important purposes in the universe; and who, by the uses he has made of it, and the station he has assigned it, has virtually declared, that without it the scheme of creation would be abortive.

Of the various purposes for which matter was intended, one of the most exalted would seem to be its union with spirit, to be made

its associate and vehicle, to communicate to it the elements of knowledge, and to serve as its instrument in all its operations. I mean in all its *effective* operations, in the *existing state of things*. For, however active spirit might be, without the instrumentality of matter, we are compelled to believe that, on this earth, it would be active to no end.

The more clearly to demonstrate the importance of matter, let us fancy its instant and entire extinction. In such an event, where would be the beauty, the harmony, or the utility of the universe! Where, indeed would be the universe itself! or what would be its character! I answer, it would be more, perhaps, than half annihilated. Instead of that magnificent pageant of peopled suns and systems rolling through space, and exhibiting a scene of sublimity and grandeur, worthy of the conceptions and exertions of a God, *existence*, could we so name it, *creation*, could the term be used, would be a lightless, noiseless, tenantless void! Spirit would doubtless still remain; but what would be its objects, its employments, or its efficiency? In what way or on what subject would it exercise its powers? Could it act on itself, or on another ethereal essence like itself, in such a way as to produce either obvious or useful results? The phrenologist is privileged to ask these questions. Let the mere metaphysician answer them as he may.

For aught we now *know* to the contrary, were matter thus annihilated, spirit would want both the means and the sources of further improvement, and further enjoyment. Indeed there are not wanting strong reasons to believe that such would be the fact; and that, *in the abstract*, for all efficient and useful purposes throughout creation, matter is fully as essential to spirit, as spirit is to matter.

What at present, are the *means* and the *sources* of improvement and enjoyment to the mind of man, the only spiritual being of whose operations and efficiencies we possess any knowledge? I answer *matter*, and *that alone*—the *senses* the *brain*, and the *material universe*, the two former, as the *means*, the latter, as the *source*. *Matter* alone constitutes both the means and the subject of the mind's research. In our present condition we possess no powers to inquire *directly* into any thing else. Nor have we any assurances that such powers will be hereafter bestowed on us. Of the universe of Spirit, apart from our own minds, we know nothing; nor, with our present faculties, can we learn any thing, except by the aid of material analogies.

To be more specific. The subject of the science of astronomy is matter. The instruments we use in the pursuit of it are matter, and the mind studies it by the aid of material organs. The same is true of meteorology, of experimental philosophy, of physiology, of natural history, of chemistry, of mineralogy, and of every other science attainable by man. Of theology, the leading subject is indeed immaterial, but the study is prosecuted by the aid of matter. This is true as well of revealed as of natural theology. Admit that spirit is the most efficient principle, matter constitutes the machinery of the universe.

Matter, then, although it holds a lower rank, is no less essential in creation than mind. Nor does it fill with less perfection the station assigned it. It is, I repeat, fitted in all respects, by its divine author, as a worthy and suitable associate, co-partner, and co-adjutor of spirit in the economy of the universe. And that economy could be conducted as well without spirit as without matter. Deprived of either, it could not be conducted at all. For the perfect accomplishment of the great scheme of things, these two substances are necessarily united and adapted to each other by infinite wisdom. What God himself, then, has thus, for the highest and best of purposes, joined together, let no man irreverently attempt, even in imagination, to put asunder; or presumptuously pronounce unsuitably associated. As relates to improvement in knowledge and virtue, let no one have, at once, the hardihood and folly, to proclaim matter a drag-weight on spirit. In the present condition of man, his material portion is, for all intellectual purposes, as essential to his spirit, as its own existence.

These remarks are made with a reference to those philosophers who in relation to intellection generally, make it their business to elevate mind and degrade matter—(I mean particularly cerebral matter)—who, in this respect, manifest a strong disposition to make mind every thing and matter nothing—who take peculiar pleasure in debasing and calumniating matter, as if it were an offensive, intruder into creation. I might, with truth, remark, that, until very lately, such were both the disposition and the practice of every philosopher belonging to the *orthodox school of metaphysics*. Although facts and phenomena, which they could neither deny nor resist, compelled them to admit matter as an occasional co-partner in the operations of the mind, their admission of it was reluctant, forced, and sullen, and they never assigned to it its legitimate rank.

An examination of their writings will show, that this assertion is neither incorrect in substance, nor extravagant in degree.

From the sentiments here expressed, let no one do me the injustice to call me a materialist. The charge would be equally unfounded and offensive. It would be regarded as a disingenuous and unmanly attempt, in a baffled adversary, to check discussion, trammel free inquiry, and arrest, for a time, the progress of truth. Ignominious expedients of this description are often resorted to, by those whose resources in argument are exhausted. Nor have occurrences of the kind been more multiplied, or marked by circumstances more inconsistent with the love of truth, and the spirit of philosophy, than in relation to the topic under present consideration.

In reference to the composition of man, I believe, as already stated, that he consists in part of *spirit*, and in part of *matter*, the former being the nobler portion of his nature. But I cannot unite in the degradation of the *latter*. It also is noble and excellent, although in the second degree. It also is the child and creature of God, and I can neither speak, nor think, nor feel, disrespectfully towards any of *his* works. They are all equally excellent in their kind and degree, and such did HE HIMSELF pronounce them, as soon as he had finished the business of creation. "And God saw every thing that he had made, and, behold it was *very good*," a sentiment of approbation which embraces all matter, as well as all spirit.

While I do homage to the *mind* of man, I do little less to the substance and exquisite structure of his *body*. Nor can I estimate very highly either the knowledge or the feeling of that individual, who coldly refuses to unite with me in sentiment. I can cherish no sympathies with that philosophy, which makes a merit of *libelling* the body of a man—of representing it as a tenement unworthy of his mind, and thus calumniating the material *chef d'œuvre* of God on earth. HE *deliberately* constructed it as a suitable mansion and instrument of the mind, and it is impossible that he could have been either mistaken in his plan, or defective in his workmanship. Were it a blot in the universe, or in any measure unworthy of his other works, he would new-model it, that creation might be, in its kind, as perfect as himself. To assert the reverse of this, would be to deny the perfections of God. To represent any of his works as *imperfect in their place*, and unfit to act their part in a system of

universal optimism, would be to declare him *finite* in his *wisdom*, his *power*, or his *goodness*.

To those who have examined the subject with fidelity and knowledge, the aptitudes of the body to all the purposes and exigencies of the mind, appear, in the highest degree, striking and exquisite. Alter but one of them, and harmony is violated. Renovate the aptitude, and harmony is restored.

Who does not know, that as the body increases in health, and strength, and every perfection, the mind exults in a simultaneous augmentation of all its efficiencies? and that as the former declines through age or disease, the latter experiences corresponding infirmities? Who does not know that their condition is identified by a decree of Heaven, which nothing but the dissolution of the body can abrogate?

However much I may be delighted, then, with his simple beauties of expression, I can never concur in sentiment with the poet, when he declares, that

“The soul’s dark cottage, batter’d and decayed,

“Lets in new light through chinks that time has made.”

On the contrary, it is known to every one, that the decay of the “soul’s cottage,” like that of other dwellings, is productive of serious inconvenience to the tenant. And this phenomenon, as will hereafter appear, is explicable only on phrenological principles. It is through these principles alone, that, in the estimation of man, matter can be restored to that rank which its Creator assigned it in the general arrangement and economy of the universe, and of which metaphysicians have laboured for ages to deprive it.

It is to be clearly understood, that the preceding remarks are not intended to degrade spirit, or deny its powers. They are meant merely to show, that *created* spirit is not *all-efficient*, in relation to the attainment of knowledge; but that, in this respect, *the spirit of man*, at least, must co-operate with matter, and that the latter substance possesses also, as a co-adjutor of the former, high intellectual rank and capacity. Considered on a general scale, spirit and matter are the right and left hand of the Deity in his government of the universe.

We are told by metaphysicians, that *spirit* or *mind alone* feels. The assertion is *gratuitous*, and the position it would establish a *mere hypothesis*. It may be granted as a postulate, but cannot be claimed as a theorem. It is neither a primitive nor a demonstrated

truth. Nor has it, indeed, in its favour, even the shadow of probability. It is as mere and as arbitrary a *dictum*, as any that the records of metaphysics afford. It is one of the multitude of *assumptions*, which that scheme of error has palmed on the world, under the denomination of *fact*.

Mind is indeed *necessary* to feeling. But, if we rely on *evidence*, which alone must govern us as rational beings, so is matter.

As far as our knowledge of nature extends, no being feels that has not mind. But every being which observation can reach and sense recognize, possesses also matter. Disorganize this matter, and it feels no longer. It may, indeed, be *asserted*, that the mind still continues to feel. But, in no case is it philosophical to receive *assertion* for *proof*. Nor will it be offered as such by any one acquainted with the nature of evidence, whose real object is the establishment of truth. The sophist may use it to delude the multitude; but the honest and competent inquirer rejects it as trash.

Show me a place where feeling exists, and I will prove to you that there is matter.

Feeling is an intellectual act or state of being, in the achievement or enjoyment of which, mind and matter must mutually cooperate. In man, it is the offspring of his compound existence. Destroy his material organs of feeling, and he feels no longer. His mind still exists; but of its state or condition of existence, we are totally ignorant.

To study man either as a *feeling* or a *rational* being, we must study him in his *compound character*. To attribute feeling either to his *mind* alone, or his *matter* alone, is alike gratuitous and unphilosophical. Of neither of these substances, *exclusively*, is that attribute predicable. It is the offspring of both *in a state of union*. Disunite them, and we have no evidence of its being possessed by either. As well may we assert that the material offspring of animals is the production of the *male alone*, or the *female alone*, while truth proclaims that it is the joint and common production of both. So is intellection, of every kind and degree, the common production of the mind and the brain.

Is it our wish to understand the nature and effects of *water*? and can we learn these by studying separately the nature and effects of *oxygen* and *hydrogen*? or can we acquire a knowledge of sulphuric acid by studying the character of oxygen and sulphur?

If we wish to attain a knowledge of the functions of the liver, we can never accomplish our end by dissecting or decomposing that organ, and studying its elements apart from each other. Nor shall we ever acquire a correct knowledge of man, composed as he is of mind and matter, until we relinquish our attempts to separate these two substances, and study him faithfully in his compound capacity.

As well may we maintain that, without the liver, the vital principle can secrete bile, or urine, without the kidneys, as that the mind can feel without the brain. Or as well attempt to prove, that the influence of the brain can move a limb, without the instrumentality of the requisite muscles.

SECTION II.

CAN the mind of man, as a simple, indivisible substance—a *mere unit in essence*—possess, *of itself*, a plurality of faculties?

This question, intricate as it is, *must* be examined. It lies in my path, and is of primary importance in the science I am considering. By a correct solution of it, much light will be thrown on the subject generally, but more especially on that of organology.

If, as a *single* substance, the mind possesses but a *single* power, then must it, in the multiplex operations, which it is known to perform, be aided by a corresponding multiplicity of means. This is an inference which no one will deny.

In admitting that mind is *different* from matter, I cannot believe it to be the very *opposite* of it. On the contrary, I have already declared, and now repeat, my firm conviction, that these two substances have strong affinities for each other, else they could never be intimately united, nor be made to act in harmony and concert, their operations arising from their reciprocal influence. Although this is not offered as an opinion susceptible of *positive proof*, it could be easily shown to be directly corroborated by *all analogy*.

Of mind we possess no *immediate* or *primitive* knowledge. Nor have we any faculties by which to acquire it. The elements of all our primitive knowledge are admitted through our senses. But we have no senses to give admission to the elements of the knowledge of mind. We can neither *see* it, nor *hear* it, nor *taste* it, nor *smell* it, nor *feel* it. Nor does *consciousness* give us any informa-

tion of it, except that it *exists*. Consciousness tells us that we have a *thinking principle*; but of the substance or nature of that principle it gives us no information. It apprizes us, moreover, that it acts differently, both in manner and degree, according to the difference of external circumstances, and of our own personal condition. Nor does it give us, perhaps, any further intelligence.

Our knowledge of mind, then, is purely *analogical*. We are indebted for it exclusively to our knowledge of matter. That this is true, appears conclusively from the very terms by which we designate both mind itself and all its operations, and all those powers, or rather functions, which metaphysicians have erroneously denominated its faculties.

When we trace to their roots the English terms by which we express the *thinking and immortal* principle of man, we find that the original of *soul* signifies, in the Saxon language, a *refined and subtle kind of matter*.

The Latin word *spiritus*, from which is derived the English, *spirit* signifies the *wind*, or the *mind*. But wind is a *material phenomenon*.

In Greek, *Anemos* signifies at once the *mind or spirit* of man, and the *wind*. In the same language, *Pneuma* and *Psyche* mean the human soul or spirit, and are derived, the former from *Pneo*, to *blow like the wind*, and the latter from *Psucho*, which has the same signification. I might refer to other languages, and show satisfactorily that the same principle of nomenclature there prevails. It cannot, then, be doubted, that the human soul receives its name, with a reference to matter. In fact it can receive it from no other source.

In relation to what metaphysicians denominate the human faculties, did the nature of this elementary work permit me to go into the analysis, I could show conclusively, that they have all received their names from *material analogies*. But it will be sufficient, for my purpose, to state a few of the names, as those who are acquainted with the Latin and Greek languages, will be able to trace the words to their origin. Under the *mistaken* name of *faculties* the functions or operations of the intellect have been denominated as follows:

Sensation, perception, imagination, understanding, attention, association, abstraction, analysis, synthesis, reflection, emotion, and conception. All these names, I repeat, like those bestowed on the

thinking principle itself, can be readily traced to *material analogies*.

Let it not, from this, be alleged, that I mean to insinuate that the mind is material. No such thing. My only meaning is, that all our knowledge of the mind is, of necessity, drawn from material sources. It is *derivative* knowledge, traced from the *known* to the *unknown*. Primitively we know something of matter, and from that derive our opinions of spirit.

We possess, then, ourselves, with the mind of man no *primitive* or positive *acquaintance* to authorize in us the belief, that single in its essence, it is notwithstanding endowed with a plurality of faculties. Nor have we immediate access to any source from which such information can be derived, other individuals having no more primitive knowledge of the subject than ourselves.

But all *reasoning* dissuades us from the belief, that, *in created beings*, unity of essence can never be compatible with a *plurality* of faculties.

Were this the case, then would the predicate be superior to the subject, the latter being *unity*, the former *plurality*.

Then would the thing *contained* be superior to that *containing* it.

The *effect* superior to the *cause*.

The *endowment* superior to the thing *endowed*.

But these conclusions imply contradictions. Their premises, therefore, are necessarily unfounded.

If, then, neither our own primitive knowledge, information derived from others, nor reasoning on first principles, can lead us to a belief in the plurality of the faculties of the mind, let us have recourse to analogy, the only remaining source of instruction, and examine the evidence imparted by that.

Here, again, every thing announces the incompatibility of unity with plurality.

Throughout her whole empire, Nature presents us with a universal scheme of *aptitudes* and *specifics*, by which alone her order, regularity, and harmony are maintained.

Specific cause, *always* followed by specific effect, and no other.

Unity of cause, by unity of effect, and nothing more.

Singleness of nature, marked by singleness of endowment, power and mode of operation.

Were the case otherwise, chaos would prevail. Past experience would be useless, and calculations as to the future impossible

Chance would usurp the place of established order, and uncertainty and doubt become the *master* feelings, if not the *only* feelings, of the mind.

Did not the same specific cause produce always the same specific effect, and nothing else, unity of cause, unity of effect, and nothing else—did the same cause produce *one* effect *today*, *another* *tomorrow*, and a *third* on the *day following*, then would the connexion between cause and effect be dissolved, memory rendered unavailing, and judgment and reason become unmeaning terms. It is on the well known, acknowledged, and undeviating connexion between specific cause and specific effect, unity of cause and unity of effect, that all our reasonings, calculations and judgments are necessarily founded. And it should never be forgotten, that, in their relation to their effects, *all causes are alike specific*.

The same cause, indeed, acting on *different subjects*, produces *different effects*. But, here, the subjects uniting their different influences with that of the cause, *it is virtually* no longer the *same*, but varies with every different subject on which it acts. To continue the same, it must, under the same circumstances, act on the same subject, in which case the effect can never vary.

It appears, then, to be a fundamental law of creation, that unity of substance possesses unity of power, and nothing more. Indeed, the very proposition may be regarded as an axiom in philosophy. It presents to the mind a primitive truth, which is immediate, universal, and irresistible in its influence. The contrary presents a palpable incongruity, not to call it an absolute impossibility.

Hence, the mind of man being single in its essence, cannot possess a plurality of faculties.

Nor can it, *alone*, be thrown into a *plurality of states*. Unless it be united to something else, in order that complexity may be produced, to predicate of it plurality of any kind, is to assert a contradiction.

Change the *state* of a *simple* substance, and you change essentially the *substance itself*. *The thing cannot be otherwise*. A substance perfectly simple can have but *one* state, because it is, in *all respects*, but *one*. Scrutinize this proposition with the requisite severity, and you find it to be true.

Unity of cause producing plurality of effect!—unity of essence possessing plurality of power!—unity of substance passing successively into a plurality of states!—Simply to present such notions

to an unprejudiced mind, is to demonstrate their fallacy. They stand, by their inherent evidence, *self-condemned*.

Throughout creation, nature exhibits, in her chain of causation, nothing but a vast scheme of unbroken correspondences. Unity of cause producing unity of effect—unity of substance, unity of power—complexity of cause, plurality of effect—complexity of substance, plurality of power—identity of cause, identity of effect—diversity of cause, diversity of effect—identity of substance, identity of power—diversity of substance, diversity of power. Abrogate or reverse this law, and confusion will ensue, as certainly as it would follow the extinction of *gravitation*. The one is as clearly a law of nature as the other.

But the intellectual processes in which the mind is concerned, are exceedingly *various*.

Shall I be asked, in what way, being a simple substance, it produces this *variety*?

I answer, by being united to a diversity of means.

Illustration by steam.

The *power* of steam is *perfectly simple*—as much so as that of the mind. *Alone*, its action is unity, being *mechanical propulsion*, and nothing more.

But, in its *operations*, steam may be rendered exceedingly *multiplex*, by being united to *multiplex machinery*.

United to one kind of machinery, it turns a mill.

To another, propels a boat.

To a third, spins cotton, wool, or flax.

To a fourth, elevates water. And

To a fifth, moves a wheel-carriage, instead of horses.

By the same diversity of means, a like diversity of effect may be derived from the *propulsive power* of running water, which is also *simple*.

The power gravitation.

This power is *perfectly simple*—as much a unit, as spirit itself.

But its action may be diversified by a diversity of means.

Make it act, by a pendulum, on one system of horological machinery, it announces the hour by the striking of a hammer on a bell.

On another, a cuckoo appears at proper intervals, and proclaims the hour by its native call.

On a third, a nightingale makes its appearance every hour, and sings a tune.

On a fourth, two herculean figures, each armed with a club, make known the hour, by the correct number of blows on a massy bell.

On a fifth, an ox and a butcher make their appearance, the latter armed with an axe, with which he strikes the former on the forehead, until the last blow that tells the hour, fells the animal, when both disappear.

The vital principle.

This is also a simple agent—a *unit* both in nature and power, and can *alone* perform *no* function. But united to matter, *variously organized*, it performs *many*.

—To *vegetable* matter, organized in *one* way, it produces a peach.

—In *another*, an apple.

—In a *third*, a pear.

—In a *fourth*, a plumb. And

—In a *fifth*, a grape.

—To *animal* matter, organized in *one* way, it secretes bile.

—In *another*, gastric liquor.

—In a *third*, pancreatic juice.

—In a *fourth*, urine. And,

—In a *fifth*, saliva.

But in no instance can either of these specific structures do aught but perform its own function. A peach-tree cannot produce an apple, nor an apple-tree, a peach. Nor can the same organ secrete both urine and bile. A proof that a specific effect, and no other, must be always the offspring of a specific cause.

In like manner, the mind, although simple in its substance and its power, acting on, and aided by, *diversified material organs*, achieves a *variety of intellectual processes*. It sees with one organ called the eye, hears with another called the ear, tastes with a third called the tongue, and smells with a fourth denominated the nose. Each of these organs is specific in its character, and is, therefore, fitted for but one specific function. The mind can neither see with the nose, smell with the eye, hear with the tongue, nor taste with the ear.

The mind, then, does not, in intellectual operations, act *alone*. Matter is its necessary associate and coadjutor. Nothing, indeed, in nature, either *acts or exists alone*. Absolute *solitude* is not known

in creation, because there is in creation *no vacuum*. But to actual solitude, a vacuum is necessary. Nor does any thing exist exclusively for itself. The universe is a *system* in which all things are associated and in action, reciprocally influencing and aiding each other in the performance of their allotted parts—analogue, in this respect, to the *human* system, in which all the parts are connected by sympathy, as those of the *universal* system are by attraction, and where the healthful play of each individual organ contributes to the welfare and efficiency of the whole. It is alone in consequence of this beautiful, harmonious, and magnificent scheme of *action* and *reaction*, every thing performing well its specific part, that the works of creation stand self-balanced. Render any thing *inactive*, and disaster will ensue.

SECTION III.

The Brain is the organ of the Intellect.

Were antiquity and high authority to be received as definitive evidence, the truth of this proposition could be easily proved. The opinion it announces is coeval perhaps with the study of metaphysics. It is as ancient, at least, as our earliest notices of that science. In every enlightened age and country, of which we have any knowledge, some of the *greatest* and *best* of men have been its advocates. It is not a little singular, then, that it should now be considered by many, who ought to be better informed, as a new, an immoral, and a dangerous heresy.

But in whatever estimation I may hold the opinions of distinguished individuals, my belief of the proposition I am considering does not rest on their authority. Consulting nature as the only oracle that never deceives nor answers equivocally, I believe the brain to be the organ of the intellect, for the following reasons:

1. In whatever order or description of living beings cerebral matter is found to exist, there exist also some manifestations of intellect. And where no cerebral matter exists, there is no intellect. Nor is this all. The amount and complexity of intellect are always in direct proportion to the amount and complexity of the cerebral mass. This is the *general* rule. If, in any case, an exception presents itself, it can be easily explained on the principle of exceptions.

2. The brain remaining sound, every other part of the body, not excepting the nerves, the ganglia, and the spinal marrow may be injured to any extent compatible with life, and the intellect continue unimpaired. This state of things cannot long continue, on account of the *sympathy* between the brain and the injured parts. Through *that medium*, the brain becoming affected, the intellect will suffer.

3. In tetanus, a disease which never assails the brain, but shatters completely the functions of the nerves, the intellect is not affected.

4. The other parts of the body remaining untouched, compress, concuss, or otherwise severely injure the brain, and the intellect* suffers,—is often extinguished.

5. To mere *organic life*, brain is not necessary. Hence vegetables and many of the lower orders of animals, which possess life in great vigour, have no brain.

Hence acephalic monsters, even among the more perfect animals, have been born of full fœtal size, healthy and vigorous, and lived some time, though deprived of brain.

Hence, also, large portions of the superior parts of both hemispheres of the cerebrum, and likewise some portion of the cerebellum, may be destroyed by suppuration or otherwise, and life not be extinguished.

If, then, the brain be not essential to *mere life*, it is either *useless*, or intended for other and *higher* purposes.

But nature makes nothing in vain, more especially an organ so *exquisitely constructed* as the brain. That organ, therefore, must be destined to the performance of some function corresponding to its character.

6. In ascending the scale of animated nature, from the lower to the higher orders, we find that the number of the intellectual faculties increases in proportion to the increase of the number of cerebral parts—i. e. in proportion to the complexity of the brain, is the multiplicity of the faculties. Nor is this increase in the number of intellectual faculties proportioned to any thing else in animals but the increase in the number of their cerebral parts.

Corresponding to this view of things is the growth of the brain of man himself. First, in the fœtus in utero, is formed the spinal marrow. To that is superadded the medulla oblongata, to that the

*By "Intellect," I mean neither the mind nor the brain; but the compound machine constituted by their union.

cerebellum, to that again, portion after portion, perhaps I might say, organ after organ, of the *cerebrum*, until the whole is completed. Nor is this completion *really effected* until the age of puberty.

Thus, in relation to brain, man exhibits in his progress towards perfect organization, nearly the same gradations which are manifested by an ascending series of the lower orders of animated nature. And in proportion to the developement of his brain is that of his intellectual faculties.

7. Is the developement of the brain *defective*? So, in a corresponding degree, is the intellect.

Proof of this we derive from the brains of *idiots*, which are never well developed.

8. Corresponding to the changes in the organization of the brain, in the progress of life from its commencement to its close, are those of the intellect.

In infancy and childhood, the organization is imperfect. So is the intellect alike imperfect.

In youth, a better organization—a better intellect.

In manhood, a perfect organization—a mature intellect.

In the evening of life, organization and intellect are both on the decline.

In extreme old age, organization is greatly decayed, and intellect is nearly extinguished. A *second intellectual infancy* now occurs.

Either the mind, then, grows old like the body, and like the body *dies*; or the brain, as its organ, *grows old*, and becomes unfit for the business of intellection.

The *latter is true*. The mind neither grows old nor dies, but “*flourishes in immortal youth*” and vigour, while the brain decays and becomes unfit for intellection, as the muscles do for voluntary motion.

My conviction of the immortality of the mind, then, compels me to adopt and cherish the belief, that the brain is the organ of the intellect.

Strong developements of brain, and energetic manifestations of intellect, are always united. Hence the head of every individual who is truly great, has something in its appearance peculiarly expressive—something that bespeaks superior excellence.

9. Are the developements of the brain and the completion of its organization *precocious* or *tardy*? *Precocious* or *tardy*, in the same

degree, are the manifestations of intellect. Some individuals manifest, at the age of *ten* years, as much maturity of intellect as others do at that of *sixteen*. Their brains are also as much developed.

10. In men and women the cerebral developements are exceedingly different, as is manifested by the different forms of their heads. So, in like manner, are their intellectual faculties.

No one will contend for the existence of *male* and *female* minds, in the literal acceptation of the terms. Such an opinion, being totally incompatible with any idea we can form of spirit, must be deemed preposterous. In *perfect simples* no difference can be effected without an entire *change of species*. It is in *compound* bodies only, of the same species, that a difference can exist. *Entire simples* of the same species, must be *perfectly alike*. The difference, then, of the *male* and *female intellect* must depend on different organization alone.

11. Intellectual faculties descend, by inheritance, from parents to children. But this is known to be the case, only in proportion as similarity of cerebral developements thus descend.

The child whose developements of brain resemble those of his father, resembles his father in native intellect, while he whose developements resemble those of his mother, possesses his mother's intellect. But it is not, I believe, contended by any one, that the *spirit* descends from parents to their offspring. That must be derived from another source.

12. When engaged in intellectual operations, we are perfectly conscious that we are exercising the brain—as clearly so, as we are of exercising our muscles of voluntary motion when we are speaking or walking. This is particularly the case when our intellectual exertions are intense. On such occasions, the temporal arteries often throb with unusual force, and a preternatural fulness is felt in the cerebral vessels.

Nor is this all. When intellectually engaged, we are conscious of exercising some one portion of our brain more than any other. for the truth of this I confidently appeal to the consciousness of any individual, who will be strictly attentive to his own feelings.

13. Detach from the brain any part of the body, by cutting or destroying the nerve that has connected them, and that part can be no longer acted on by the mind. Nor can the external senses perform their functions if their nerves be cut or otherwise destroyed. Hence the brain is obviously the organ and dwelling of the mind. Nor does the mind reside *immediately* in, or act *immediately* on, any other part of the *nervous system*, as distinct from the cerebral.

SECTION. IV.

Objections to the opinion maintained in the last section stated and answered.

Objection I. The brain, say certain physiologists and metaphysicians, is not the seat of all the intellectual faculties, the moral sentiments in particular being seated in the *heart*, or some of the *abdominal viscera*. Hence the expressions, a *benevolent heart*, an *excellent heart*, a *feeling heart*, *bowels of compassion*, &c.

It is not a little singular that so enlightened a physiologist, and a philosopher of such acuteness as the late M. Bichat, should have fallen into an error so perfectly palpable. He placed the moral sentiments in the *heart*. Others have assigned them to the *stomach*.

The fallacy of such notions is evinced by the following considerations.

1. The inferior animals, although greatly deficient in moral sentiment, have all the viscera of the thorax and abdomen in as high perfection as man.

2. The same thing is true of *idiots* and *acephalic monsters*. Defective in moral sentiment, some of them entirely destitute of it, they also have the lower orders of viscera in due size and perfect organization. They are wanting only in the brain.

3. In most quadrupeds, the thoracic and abdominal viscera bear a strong resemblance to each other, while their moral qualities are exceedingly different. This is true of the dog, the wild boar, the sheep, the stag, the ox, the beaver, the horse, the hare, the tiger, the lion, and many others. But their brains are widely different. And to this difference alone can the difference of their dispositions be reasonably ascribed.

The *passions* are believed by many to have their seat in the heart or the stomach, because those organs are deeply affected by them.

But this is to be explained through the medium of sympathy. The brain is specifically impressed by the several passions, and the heart, stomach, and other parts of the system, sympathize with it in its affections.

Objection II. We are told that the *brain* cannot be the organ of the *intellect*, inasmuch as the *latter* remains unimpaired under deep and serious læsions of the *former*—even under the destruction or loss of a considerable portion of it.

Answer. This objection has no weight, because the brain is *double*; and, in the cases referred to, the injuries are done only to *one hemisphere*, the other remaining sound.

One eye, one ear, or one nostril, may be much injured, or even destroyed, and the senses of seeing, hearing, and smelling, but slightly affected.

Mutilate or otherwise deeply injure both hemispheres of the brain, in corresponding parts, and the intellect must suffer. This is as certainly true, as it is that vision will be impaired by an injury done to both eyes.

The duplex character of the brain, and the independence of the two hemispheres, are proved,

1. By dissection. This, when skillfully performed, demonstrates as clearly the existence of two brains, as it does the existence of two optic nerves.

2. By the existence of insanity on *one* side of the head and not on the *other*, the sane side sometimes *correcting* the aberrations of the *insane*.

A case of this kind is mentioned by Professor Fiedemann—the diseased individual was named Moser.

Another, of a clergyman, by Professor Gall. This gentleman heard constantly with his left ear vituperative and offensive sounds, which his right ear, or rather the portion of brain connected with it discredited.

Another case perfectly analogous, produced by a fall from a horse, exists in Kentucky, not far from Lexington.

Several others are reported on authority that must be respected.

However singular these cases may appear, they are perfectly and easily explicable on Phrenological principles. Nor is it possible to explain them on any other ground.

3. By the opposite condition of the two hemispheres of the brain in hemiplegia, one being paralyzed, the other sound.

Hence the intellect may continue unaffected, unless both hemispheres of the brain are injured.

Objection III. In Hydrocephalus internus, say our opponents, the brain is sometimes entirely absorbed, or *resolved into water*, as they assert, while the *intellect continues*, and is not much impaired—they, indeed, affirm, that it is not impaired at all.

Answer. Tulpinus, Vesalius, Morgagni, and other writers, distinguished for their knowledge of morbid anatomy, deny *this statement*, and declare that the brain is neither entirely liquified, nor entirely absorbed, but only *lessened in size*.

After numerous dissections in presence of competent and disinterested spectators, Gall and Spurzheim assert the same. And their assertion is true. Pressed by the secreted waters, the cerebral absorbents carry off a portion of the cerebral mass, but never the whole. It is unquestionable, then, that often, in hydrocephalus, the brain is diminished in bulk, but, in no case, is it ever entirely removed.

Professor Dudley authorizes me to say, that in every dissection of hydrocephalic patients he has made or seen, he never failed to find a considerable amount of brain.

It is not true that even a large portion of the brain is ever removed in hydrocephalus internus, and the intellect unimpaired. It is impaired but not entirely destroyed; and the mere reduction of its vigour is not noticed. The amount of intellect remaining is *often*, perhaps *always*, *unintentionally* exaggerated, especially by the friends of the diseased. The reason of this is obvious. More intellect remains than under such cerebral derangement was expected; and we are always anxious to conceal the intellectual imbecilities of those that are dear to us.

Objection IV. It is asserted that, in other cases, the brain has been found ossified, and even *petrified*, without an entire obliteration of intellect.

This assertion is also unfounded. A minute and accurate investigation of all cases that could be designated, has proved it so.

Ossifications of certain portions of the brain or its membranes have been often found. So have osseous tumours, on the inside of the cranium, filling a part of its cavity, and pressing on the brain. But a brain *ossified throughout*, the intellect still remaining and not much impaired!—such a phenomenon has never presented itself. The spectacle, should it occur, would be miraculous. As well might

we look for a perfectly ossified heart maintaining, by its action, the circulation of the blood! or an ossified stomach performing digestion.

To a *petrified* brain we might apply, with even more propriety and force, the same remarks. Such an affection of that organ has never been seen. A more preposterous idea than that of a petrified brain being united to a *sound* intellect, or *any intellect at all*, was never conceived! Nor can any thing short of stupidity or madness deliberately adopt and seriously propagate such a notion. As well may you predicate intellect of a *statue* which is *all of stone*.

SECTION V.

The brain is not a single organ, but an aggregation of several. It is a system of organs.

That the brain is a compound or multiplex organ, is an ancient opinion.

This belief was maintained by Thomas Aquinas, Descartes, Stahl, St Augustine, and many others of equal celebrity.

Even the ancients, as already mentioned, divided the intellectual or more elevated portion of man into three parts. The *anima*, (the soul or life) the *animus*, (the agent or source of moral sentiment) and the *mens*, (the *intellectual* agent, properly so denominated)

The first of these they seated in the base of the brain. The second, in the upper and middle portion of it; i. e. chiefly in the region of the sagittal suture. And the third, in the forehead.

The Arabian physicians, many of whom were men of great observation, and high distinction, believed in the compound character of the brain, and placed *common sense* in the anterior part of it.

As early as the thirteenth century, Albertus Magnus, arch-bishop of Ratisbon, persuaded of the multiplex character of the brain, delineated a head, and marked on it the seats of the different faculties of the mind. He also placed common sense in the forehead.

Near the close of the fifteenth century, another delineation of the head, marked in a similar manner, was published by Peter de Montagnana, a *savant* of the time, of considerable distinction.

Because *imagination* is active in our dreams, and *judgment* during our waking ours, Boerhaave assigned to these two faculties seats in different portions of the brain.

The several internal senses were regarded by Haller and Vanswieten as occupying different portions of the brain.

Soemmering, Tiedemann, Wrisberg, and many others, are firm believers in the plurality of that organ.

As far, then, as *antiquity* and *high authority* may avail, the compound nature of the brain may be regarded as a truth.

But nature herself furnishes also abundant evidence confirmatory of the opinion.

By a skilful dissection of the brain, the compound nature of the organ may be demonstrated.

Analogy leads us to the same belief.

Nature, as already stated, never produces *diversified* effects by *unity* of cause. Throughout all her works she produces uniformly specific effects by specific causes—the *same* effect, and no other, by the same cause.

Each animal possesses its own specific form, suited best to its own peculiar mode of life. In like manner each organ of the animal system is specifically fitted for the function it performs, and no other. The liver secretes bile, and nothing else, the kidneys, urine, the stomach, gastric liquor, the parotids, saliva, the skin, the matter of perspiration, and the lungs alone are suited to respiration.

The organs of external sense are specifically different from each other, and suited each to perform its own allotted function, and no other.

Even in the mechanical processes conducted by ourselves, we are compelled to have recourse to specific adaptations.

We cannot saw with an auger or bore a hole with a hand saw, shoot with a sword or cut with a musket, write with a hammer or drive a nail with a quill. Unless we apply each instrument to its destined purpose, and to that alone, our labours are fruitless and our life confusion.

But the several intellectual functions performed by the co-operation of the mind and the brain, are exceedingly and specifically different from each other.

The study of music is essentially different from the study of drawing, the study of languages from that of numbers, the study of colouring from the study of localities, while the study of architecture is different from them all.

By fair analogy, then, and legitimate induction from the premises laid down, we are not only justified in believing, but compelled to

believe, that these diversified processes of intellect are necessarily performed by means of different cerebral organs. If the same organ cannot be employed by nature to secrete bile, perspiration, urine, and saliva; how can she adapt the same *single, individual brain* to the different studies of language, mathematics, painting and locality? Surely the more *elevated* intellectual processes require for their perfect performance as much of wise and specific adaptation, as the *inferior* processes of organic life.

No one doubts that the *mind* of the entire range of inferior animals is *the same*. We cannot believe that the Deity formed one mind of a specific character for the horse, another of another specific character for the ox, another for the dog, another for the sheep, another for the fox, and another for the lion. One for the eagle, another for the raven, a third for the vulture, a fourth for the turkey, a fifth for the goose, a sixth for the crane, and a seventh for the stork. Such a belief would disgrace its entertainers.

The mind, I repeat, then, of all inferior animals is the same. But their manifestations of intellect are exceedingly different both in kind and degree. This difference can arise from nothing else but a difference in the cerebral organs, by which those manifestations are made. Hence, among the inferior animals, as far as the subject has been examined, the discrepancies of development and manifestation always correspond. Comparative anatomy, which alone can shed light on this subject, is daily augmenting the amount of testimony in favor of Phrenology.

The same individual manifests the several propensities, sentiments, and intellectual faculties, in very different degrees of strength.

One person acquires, with great ease, the knowledge of *languages*, but has no capacity for *philosophical pursuits*. Another is an excellent painter, but his powers of ratiocination are feeble. A third is an excellent mathematician, but has no capacity for music; while a fourth is an able mechanician, but no poet. Did the *mind* and the *brain* co-operate, in relation to every subject, as if the latter were a *unit*, these phenomena could never be presented to us. In that case, a brain perfectly well organized for one pursuit, would be equally well organized for every other, within the sphere of human attainment.

In the same individual the different intellectual faculties are developed at different periods of life. But this could not take

place did the brain, *as a unit or a whole*, preside over them all. In that case, their development would be necessarily cotemporaneous.

By refering different faculties to different organs, the successive development of them is easily explained. As its appropriate organ is developed, each faculty manifests itself. This state of things not only accords with reason, but is founded in fact.

It is thus that the various organs of the body generally are developed as they are wanted, and their faculties are manifested in the order of their developement.

Taste and smelling are manifested earlier than seeing and hearing, because their organs are earlier developed.

For the same reason the functions of the chylopoietic viscera are manifested long before those of the organs of generation. In fact, every organ in the animal system, whatever may be its character, description, or name, manifests and *must* manifest, its faculty and energies, in correspondence with the order and rate of its development. For the truth of this, our appeal is to *observation*, the only correct interpreter of nature.

To allege that the gradual developement of intellectual faculties arises from the actual growth and developement of the *mind*, as a substance distinct from its *material associate*, would be *virtually* to deny, at once, both its *unity* and its *immortality*.

By long perseverance in any one kind of study, that of *mathematics*, for example, intellectual fatigue is induced. Vary the object of pursuit, by changing to the study of *music* or *poetry*, and the *fatigue is removed*. But this could not be the case, were the same portion of the brain still kept in exercise.

Are our *eyes* fatigued by a severe and long continued employment of them? This does not disqualify us to listen with pleasure to the tones of music, or to inhale with delight the perfume of the rose. But, did we see, hear, and smell, with the same organ, the case would be otherwise.

To this the enemies of Phrenology offer an objection. They allege that, by passing from one subject of study to another, you do not change the *organ exercised*, but only the *degree* or *intensity* of its exertion. You gain relief by passing from a severer to a lighter study; in like manner as you may relieve the eye by passing it from the glare of flame, or the full blaze of reflected sunshine, to the green of the shaded forest, or the mild cerulean of the heavens.

But this objection rests on an unfounded assumption; and is, therefore, fallacious.

To dissipate the fatigue produced by one process of study, it is not necessary to resort to a *lighter one*. By a course the *reverse* of this, the object is attained with equal certainty. Change from *music* to *mathematics*, from *painting* to *logic*, or from mere *reading* to *composition*, and the fatigue is dissipated. The relief is derived, then, from the change of *organ*, not of the *degree* in which it is exercised.

Indeed, to speak of fatigue of *mind* in the abstract, is to utter a contradiction, not to call it an absurdity. Did the limits of this work permit me to indulge in an analysis of the subject, I could satisfactorily show, that fatigue is predicable only of a *compound substance*. Fatigue implies necessarily an *actual loss*, in the subject of it, of some of its component parts. But loss of parts cannot be predicated of un-compounded mind.

Fatigue is a *diminution of vitality*, i. e. of the *amount of the vital principle*, in the organ fatigued. It is a temporary *loss of a portion* of that principle. An organ *fatigued* has less vitality than when it is not fatigued. Of this every one who has experienced the sensation must be conscious.

To render a part, then, susceptible of fatigue, it *must* be compound. It must consist of *substance to be vitalized*, and the *vital principle*, or *materia vita*, to quicken it.

But such is not the condition of the mind. *Simple* in its nature, it has nothing to lose. To predicate fatigue of it, therefore, is to speak without knowledge, if not without *meaning*.

Dreaming, which is nothing but *imperfect* or *partial* sleep—some intellectual faculties being asleep and some awake—is explicable only on the ground of the existence of a plurality of cerebral organs.

If the brain be a *single organ*, it is not possible for *one part* of it to be *asleep* and another part *awake* at the *same time*. Nor is it possible for several faculties residing exclusively in the *indivisible mind*, to be thus, *at the same moment*, in opposite conditions.

Sleep is rendered *necessary* only by exhaustion or fatigue. The object of it is to remove fatigue.

Nature does nothing in vain. But, as a simple substance, I repeat that the mind *cannot be fatigued*. Hence, it does not *require* sleep, and therefore does not sleep. Sleep, like fatigue, is predicable only of a compound substance.

Those who speak of the sleep of the simple indivisible mind, show themselves to be ignorant of the nature and the intention of sleep. They know neither what it *is* nor what it *does*.

Were the *mind* to sleep, being indivisible, it must *all* sleep. In that case, it could derive from sleep *no refreshment*, nor could it ever awake again. *Fatigue*, a *necessity for sleep*, and *immortality*, are not predicable of the same being. Sleep is essentially a predicate of *compound matter*, not of simple spirit.

Somnambulism, like dreaming, is explicable only on the ground of a plurality of organs in the brain.

The same thing is true of visions, or fancied intercourse with supernatural beings. These hallucinations arise from the *ultra-excitement* of one or more organs, the other portions of the brain being, *comparatively inactive*—perhaps *preternaturally* so, on account of the *absorbing* action of the deranged organs.

Nor can *mono mania*, i. e. madness on *one subject*, and sanity on every other, be otherwise explained. Here one organ is deranged, while all the others are sound. It is thus that we may see without being able to hear, the eye being perfect and the ear not; or smell without being able to taste, for a similar reason. Or one or more muscles may become paralytic, while all the others of the body retain their vigour. But a *portion* of a muscle cannot be thus paralysed, while all the remainder of the *same organ* is sound. Nor, were the brain, like a muscle, a *single organ*, could it be so deranged as to produce partial insanity.

The foregoing considerations prove conclusively the plurality of the brain. Extinguish prejudice, and supply its place with judgment, reason, and a liberal spirit, and the arguments that have been advanced will be deemed conclusive.

Objection. The brain, say our opponents, does not consist of a plurality of organs, each performing a different function, otherwise we would have a plurality of consciousnesses.

This objection has no weight. We have a plurality of eyes, and yet see objects *single*, a plurality of ears, and hear *single* sounds, and a plurality of nostrils, with a *single* sense of smell.

Our consciousness should be *plural* only when the two hemispheres of the brain are not in unison; and so it is, as in the several cases of *one-sided* madness already mentioned.

Anatomical Objection.

Certain anatomists have denied both the plurality of the brain and its subserviency to intellection, because, in their examinations of that organ, they had failed themselves to discover these things.

Ans. Before they had been taught by Gall and Spurzheim, anatomists were unacquainted with the true mode of dissecting the brain. Nor is it possible to discover the function of a part by a mere inspection of its anatomical structure. Such discovery can be effected by observation and experience alone.

Were its uses unknown, no one, by a dissection and inspection of the liver, could discover that the function of that organ is to secrete bile. Nor could a similar inspection teach the anatomist that the office of the kidneys is the secretion of urine. Even respecting the muscles, the stomach, the blood vessels, and the heart, the same thing is true, as well as respecting the several organs of external sense. Much less could unskilful dissection be expected to point out the uses of such a delicate and complicated organ as the brain.

On what does the energy and excellence of the brain, as the organ of the intellect, depend?

Ans. On its *size, configuration, and tone*—its *extensity and intensity*.

In this respect it is analogous to the muscles, whose size alone does not always determine their strength. Their tone or intensity avails them much. Hence, although a large man is *very generally* stronger than a small one, the reverse is *sometimes* true.

In like manner, although some men whose heads are small have more intellect than others possessing large heads; yet, take, promiscuously, a hundred men with large heads, and another hundred with small, the general balance of intellect will be *always* in favour of the *former*. The heads of individuals pre-eminent for general intellect are uniformly large, and striking in figure. Enter a deliberative assembly, like the Congress of the United States, and, with competent experience in practical Phrenology, you can select, by the size and figure of their heads, the most distinguished and influential members, or at least those that ought to be most influential, according to the comparative endowments of nature. From the issue of such an experiment the science has nothing to dread.

The brain and nerves, being parts of the intellectual system, are governed by the same laws. But it is a well known fact, that

nerves boldly developed are *more sensitive*, than those that are slightly developed.

In the beagle or common hunting hound, the sense of smell is exceedingly acute. In the grey hound it is much less so. But, in the *former*, the size of the olfactory nerve predominates greatly over the size of the same nerve in the *latter*. Large glands, moreover, secrete more vigorously and copiously than small ones. In selecting nurses for children the truth of this principle is fully recognized. By those who are skilful, no nurse is employed unless the *glandular* portion of the breast is well developed. But here a distinction must be carefully made between the amount of *glandular* and that of *cellular* substance. And the *organization* and *tone* of the part must be also held in view.

In estimating, then, the vigor of a *cerebral* organ, Phrenologists claim no further allowance or latitude, than is freely granted in computing the strength of other organs. And to that they are entitled.

To be truly vigorous, a muscle must be well *organized* and *vitalized*. And one of a *moderate* size, thus endowed with *tone* and *tensity*, is known to be much more powerful than a *large* one, without such endowments. In common language, a "*well knit*" muscle is always vigorous. Respecting a gland the same is true. Nor is it less so, nor ought it to be *thought* less so, in relation to a *cerebral organ*. To be, in a high degree, efficient, it also must receive from a perfect organization, and a copious supply of arterial blood, the requisite amount of tone and tensity. Under this view of the subject, which the liberal and enlightened will recognize as correct, Phrenology stands in perfect security. It is a rock in the current of time, which the sweep of the waves can neither remove by force, nor wear away by friction.

A principal cause of the superiority of the male over the female intellect in real strength, is the superior size of the male brain. But not alone the superior size of the *entire* brain. The greater *proportional* developement of the organs of *reflection*, in the brain of the male, gives to his intellect a further advantage. It is also probable that the male brain, like the male muscles, although less delicate, and, therefore, perhaps, less fitted for facility, refinement and grace of action, is stronger in its fibre, and firmer in its texture, than the female brain. This, however, is not stated as a *fact*, but offered as an *opinion*, founded on *analogy*.

That the tone or intensity of the brain has great influence in modifying the intellect, appears from a variety of well authenticated facts.

In many persons, a moderate excitement of the brain by wine or opium, adds greatly to the strength and brilliancy of the intellect.

I have known several distinguished orators, who rarely ventured to appear before an audience, until thus excited. Nor can any one shine in public address, until either by such artificial means, or by its own exertion, his brain is so far excited, as to become a *center of fluxion* of an *inordinate* quantity of blood. But the only effect of this excess of blood, is to augment the tone or intensity of the brain. Hence the usual assertion, that a speaker must be "*warmed* by his subject" before he can be great. And hence a certain amount of passion augments very much the force, and vehemence, and eloquence of the orator, by increasing the current of blood to the brain, and thus heightening the intensity of that organ. It is on this ground, that no speaker can be truly eloquent, unless he become *impassioned*.

I know a public speaker who is feeble in debate, until he produces high excitement in his system, by great violence of gesticulation. He becomes then eloquent and powerful. His friends have often remonstrated against the vehemence and ungraceful character of his action, of which he is himself perfectly sensible. But he asserts that he cannot speak to any purpose without it. Its primary effect is, to act as an auxiliary in stirring up the blood, and increasing the flux of it to the brain, and thus augmenting the tone of that organ.

In idiots, the same thing is true of inflammatory *cephalic* or *brain* fever. During the continuance of such fever, the intellect is surprisingly improved. On its subsidence all the weakness of idiocy returns. This is not an *extraordinary* but a common occurrence.

In individuals of sound minds, cerebral inflammation, resulting from mechanical injuries, has often added greatly to the permanent vigour of the intellect.

In confirmation of this, many authentic instances might be cited. A very striking one occurred, a few years ago, in Lexington, in the person of a respectable mechanic. An inflammatory affection of the brain resulting from a mechanical injury, augmented greatly his intellectual powers.

A similar one took place in one of the sons the late Dr. Priestley. A fracture of the skull, produced by a fall from a two-story window, improved not a little, the character of his intellect. For a knowledge of this fact I am indebted to the Doctor himself.

On the *immaterial mind*, these accidents could produce no effect. They only heighten the intensity of the brain, by improving its organization.

Is it possible, during the lives of individuals, to distinguish, with any kind of accuracy, their cerebral developements?

Ans. Yes.

Of the cause of the form and size of the head.

Whether does the cranium give form to the brain, or the brain to the cranium?

Ans. The brain to the cranium unquestionably.

In the growth of the *foetus* the brain is formed *first*, and the cranium *afterwards* thrown around it for its protection from injury. Being formed, then, for the use of the brain, it is in all respects subservient to it, and must necessarily assume its figure, else it would compress and injure it instead of affording it security. In the growth of the body, a *less important* always makes room for the enlargement of a *more important* part. It is the dictate of common sense that this ought to be case, and *nature conforms to it*.

As the brain expands, therefore, the cranium also increases in capacity, always adapting itself to the dimensions of the contained viscus.

This is certainly true of the *internal table* of the cranium, which, at every protuberance of the brain, exhibits a corresponding cavity, or protusion in an outward direction.

But, the external table of the cranium is, in all parts, equidistant from the internal. At every protuberance of the brain, then, it must exhibit a corresponding protuberance.

Such is certainly the general rule. And of general rules only are we privileged to speak. When we embrace these, we do as much as imperfect man can do. To all general rules exceptions exist. But they are, in the present case, exceptions only.

In forming the frontal sinuses, the two tables of the skull recede from each other, to different distances in different cases; but in a very great majority of cases, this recession is productive of no fallacy; because a protuberance produced merely by an osseous irregularity can be easily distinguished from one arising from an ex-

überance of brain. Besides, there are, at furthest, not more than two or three organs respecting which wrong impressions can possibly be made, by the frontal sinusses.

Another point, in which we find occasionally an irregularity in the thickness of the skull, is the occipital spine. But neither in extent nor importance is it more than a point, and can never deceive the experienced Phrenologist. In all other parts of the cranium the uniformity of its thickness is sufficient for all practical purposes.

Like the other soft part of their bodies, the brains of old men are known to dwindle. But they do not dwindle alike in all parts. Certain portions of them loose their size, while others do not.

But that no absolute vacuity may exist within the cranium, whenever the brain shrinks, the internal table follows it, and thus augments, in that part, the thickness of the skull, by the augmented distance between it and the external, the latter always retaining its place. Hence in the skulls of old men, the two tables are not, in all parts, equidistant from each other. But in the skulls of the young, and of those in the prime of life, the case is otherwise. In old men, therefore, the Phrenologist can only tell what the cerebral developement has been, not what it is. But that is sufficient for the verification of the science.

To real physiologists there is nothing either new or extraordinary in the fact, that, while the brain is growing, the cranium gives way to it. The brain is a soft and the cranium a hard part.

But when a hard and a soft part come into collision, it is known that the former always recedes, in the process of *growth*, whether *healthy* or *diseased*.

Under the pressure of an aneurism, or an abscess, or any other tumour, the ribs bend. So do other bones of the body.

The arteries form for themselves sulci in the bones with which they lie in contact.

In hydrocephalus internus, the cranium enlarges for the accommodation of the increasing waters.

These phenomena are perfectly explicable on well known physiological principles.

Where there is no brain, as in acephalic monsters, there is no cranium. A cranium formed without a brain has never yet been seen. Such a production would be useless.

Is the brain of idiots diminutive? So is the cranium. Is the former defective in any particular part? The latter corresponds with it.

From these facts it is sufficiently obvious, that the form and size of the brain regulates the form and size of the cranium. This is as certain and obvious, as that the body of the tree gives form to the bark that covers it, the foot to the shoe that was made for it, or the muscles of the leg to the skin that envelopes them. Hence, any *extraordinary* developments of the former, must necessarily be manifested by protuberances of the latter. Those who deny this, and attempt to disprove it, manifest the weakness and fallacy, not of the science, but of their inquiries and views in relation to it. A protuberance of the cranium accompanies a protuberance of the brain, as certainly and necessarily as any other effect follows the operation of its cause. Thus is there in nature a foundation for craniology.

SECTION VI.

Phrenologists divide the faculties of the mind into *Feelings* and *Intellect*.

The feelings they subdivide into *propensities* and *sentiments*.

The Intellect into *knowing faculties* and *reflecting faculties*.

They denominate *primitive faculties* those which are characterized as follows.

1. Which exists in one kind of animals, and not in another; as *music, constructiveness, destructiveness*.
2. Which exist, in different degrees in the two sexes of the same species; as *music, amativeness, combativeness*.
3. Which are not in proportion to the other faculties in the same individual; as *painting, music, number, poetry*.
4. Which do not manifest themselves coetaneously with the others, i. e. which appear at an earlier or later period in life than the other faculties; as *amativeness, number, and the reflecting faculties*.
5. Which may *act or rest singly*, the other faculties being in a *different state*.
6. Which descend from parents to their offspring.
7. Which may be singly in a healthy or diseased condition, the others being in a different one.

All faculties thus characterized are *primitive and innate*.

Their functions or modes of manifesting themselves are learnt by observation.

The illustration and confirmation of these remarks will appear hereafter.

We are told by individuals who wish to bring the science into disrepute, that Phrenology may be *true*, and Craniology *false*.

This is a mistake. Phrenology may be better understood than Craniology; but they are indissolubly united, and must stand or fall together. Phrenology treats of that which is the *cause*, Craniology of that which is the *inevitable effect*. As well may you, in any other instance as this, predicate *truth* of the *cause* and *fallacy* of the *effect*.

When the subject is properly understood, a very different opinion of it is entertained.

If it be true that the brain is an aggregate of different organs, that each of these organs is tributary to the performance of a specific intellectual function, that some of them acquire a more luxuriant growth in one individual, some in another, and different ones in the same individual, and that they act with a degree of vigour and efficiency proportioned to their size.—If these things be true, (and they are some of the leading positions of Phrenology) then is it also true, that different crania will present figures differing according to the cerebral developements which they cover, and that it is possible to acquire a knowledge of the intellects of *some* individuals, by a *skillful* inspection of the exterior of their heads.

It will here be perceived that I have qualified my expression.

I say the intellects of "*some* individuals" may be ascertained by a "*skillful* inspection," not of *every* individual by a crude and *superficial* one.

"Most women," says the satirist, "have no character at all." He might have said that most *individuals*, whether men or women, have no real, well marked character, by which they are distinguished from the mass of mankind. Why then should the *heads* of most be particularly marked? In reality they are *not* so; or the marks are so slight that they can with difficulty be perceived; and by this is the truth of our science confirmed.

Where the intellect is *common*, equal or very nearly so, in one thing to what it is in another, but distinguished in nothing, (and such is the case with the intellects of a majority of the human race) the craniological marks are exceedingly faint; so faint, indeed, that, like faded letters, no one can decipher them without great difficulty.

And that such must be the case, is one of the plainest dictates of reason—no strong manifestation of intellect, no prominent development of head—an ordinary intellect, an ordinary head. On the principles of Phrenology, common sense announces that these phenomena must be united. The cause being wanting, the effect cannot present itself. But has the individual a *real character*? Is he distinguished by any strong intellectual manifestations? Is he eminent as a poet, a painter, a logician, a mathematician, an astronomer, a linguist, a philanthropist, or an architect? If so, then is he also distinguished by craniological developements. Then is there something striking in the appearance of his head—something that designates him as a man of intellect. If to this rule exceptions be found, they are *but* exceptions, and weigh nothing in the scale of solid objections.

As Craniology is founded exclusively on observation, let the pupils of it begin by directing their attention to the heads of persons of real character. Their discoveries here, by convincing them of the truth of the science, will encourage them to proceed. As they become more disciplined in the art of observation, let them descend to an inspection of heads less strongly marked. By steadily pursuing this course, they will acquire, in time, a facility and an accuracy in deciphering heads, at which they will themselves be not a little surprised.

But should they pursue the opposite course, they will become discouraged. An inability to read at first *common* heads, in which the characters are exceedingly feeble, will lead them to question the truth of the science, and they will abandon it in disappointment, if not in disgust.

An early inspection of the heads of idiots, and a faithful comparison of them with the heads of men of high intellect, will also be found to be exceedingly useful to students of Craniology. To the heads of persons marked by extremes, whether of virtue or vice, talent or weakness, attention cannot be too highly recommended. The developements of individuals of this description, constitute, in behalf of the science, evidence that cannot be resisted. Much benefit may be also derived from a careful inspection of the heads of lunatics. No one, of observation, can visit a mad-house, without being struck with the peculiarities of the crania of some of those who are its unfortunate occupants.

Considered as mere capacities to act, the faculties are *innate*. Their functions are those capacities manifested in action. Every faculty is necessarily innate or constitutional; *because none can be added by education or art*. The hypothesis of the creation of faculties by human means, is preposterous. As well may you meditate the *creation of an eye or a heart*. Yet a belief in this constitutes one of the dreams of metaphysicks.

In the present state of the science, the primitive faculties are numbered at thirty-four. Of these, five belong exclusively to man, distinguishing him radically from the inferior animals. The others belong in common to animated nature, man possessing the most elevated and excellent of them in the highest degree.

In the opinion of the most disciplined and practical phrenologists, by far the greater part of these faculties and the seats of their appropriate organs are *certain*, i. e. satisfactorily ascertained. A few of them are *probable*, and a few only *conjectural*. When considered in detail, they shall be thus distinguished.

PRIMITIVE FACULTIES.

PROPENSITIES.

1. Amativeness,
2. Philoprogenitiveness,
3. Concentrativeness,
4. Adhesiveness,
5. Combaticiveness,
6. Destructiveness,
7. Constructiveness,
8. Covetiveness,
9. Secretiveness,

SENTIMENTS.

10. Self-Esteem.
11. Love of Approbation,
12. Cautiousness,
13. Benevolence,
14. Veneration,
15. Hope,
16. Ideality,
17. Conscientiousness,
18. Firmness.

KNOWING FACULTIES.

19. Individuality,
20. Form,
21. Space,
22. Resistance,
23. Colour,
24. Locality,
25. Order,
26. Duration,
27. Number,
28. Tune,
29. Language.

REFLECTING FACULTIES.

30. Comparison,
31. Causality,
32. Wit,
33. Imitation,
34. Wonder.

} These five are
proper to man.

When we deliberately reflect on what the human intellect, on the most accurate and rigid examination, appears to be, and what it actually *ought to be*, to be suited to the present condition of man, this enumeration of its primitive faculties seems to present, in part, at least, a natural and faithful picture of it. I say, *in part*, because although one objection preferred against Phrenology is, that it multiplies unnaturally and in great excess, the intellectual faculties, there is much more reason to believe, that its catalogue *falls short* of the actual number.

Every faculty which is truly *individual*, and *distinct from every other*, is of necessity *primitive*. This would seem to be the case with, at least, *four* propensities, not included in our Phrenological enumeration. These are a *propensity to subsistence*, embracing food and drink, a *love of existence*, abstracted from the mode and means of preserving it, a *love of liberty*, and a *love of power*.

To me, these appear to be individual and primitive feelings, *each* distinct from the *other*, and from *all* others belonging to the intellect. Each of them, moreover, points to a distinct and important end. Without them man would seem to be imperfect, and wanting in adaptation to his terrestrial condition.

That these feelings belong to man, will not be denied. They are as natural to him as *physical love*, or the *love of offspring*. They must either, therefore, be themselves *primitive faculties*, or *functions* of other faculties. And I confess myself unable to assign them, as functions, to any of the faculties recognized in Phrenology. As well, in my opinion, may the other faculties be amalgamated with each other, as these with any of them.

Let me invite the votaries of Phrenology to examine faithfully, each one the condition of his own intellect, and deliberately decide, whether the four feelings we are considering are not specifics. Whether they are not at once radically and essentially distinct from *each other*, and from *all other feelings*? That under this process of self examination, the decision will be, that the feelings are characterized by specific differences, I cannot doubt.

Nor is this all. They not only differ essentially in their nature, but aim at different ends, and lead to the effectuation of different purposes. This, by analysis, might be easily demonstrated.

Will it be alleged that the *love of power* is *ambition*: and that *ambition* belongs to the sentiment of the *love of approbation*? I reply, that a desire to please our fellow men, in order to gain their ap-

plause, and a desire to govern them, and employ them as instruments of our gratification, are feelings essentially distinct from each other.

The love of power, then, cannot be regarded as a function of the love of approbation. Nor is it a modification of *self-esteem*. It must, therefore, be a primitive feeling. To love power and to love self, are different affections, or self examination avails me nothing. If I am not mistaken, a man may be so engrossed in self, as to feel a deep indifference to the control of others. He may even deem them unworthy of control. But that to which I would chiefly direct the attention of Phrenologists, is the entire difference between the two feelings, a love of self, and a love of power. Combativeness and Adhesiveness are not more dissimilar.

By a similar process of reasoning, the same may be proved in relation to the three other feelings.

Admitting them to be primitive, these four propensities are necessarily the growth of an equal number of cerebral organs. But the place where those organs are situated, I pretend not to designate. They, no doubt, constitute portions of the basis of the brain, because the inferior animals also possess them. But these portions may be in such situations as not to manifest themselves by cranial developments.

These hints are offered to Phrenologists, not as established truths; but as conjectures which appear plausible, and which have not been lightly or hastily formed, but are derived, at least, from some degree of attention to the subject.

In the consideration of the *faculties* to which I shall now proceed, it is my intention to endeavor briefly to show, that each of them, which is represented as *certain*, constitutes, and in the present condition of man, ought to constitute, a component part of the human intellect—and that the division of the faculties recognized by Phrenology is not *imaginary*, and *artificial*, but *sound*, and *natural*, being a correct analysis of our intellectual constitution.

ORDER I. FEELINGS.

Genus I. Propensities.

I. *Amativeness*. Seat. The cerebellum, or lower part of the occiput, between the mastoid portions of the temporal bones. When strongly developed, this organ produces a backward protu-

sion of the os occipitis, giving unusual thickness and volume behind, to the upper part of the neck.

Its function is *sexual love*.

The existence and situation of this organ are abundantly established; and that it is an essential ingredient in the composition of man, it would be superfluous to assert. Deprive him of it, his nature will be revolutioned, his harmonies with his situation subverted, and the human race will become extinct.

It is more strongly developed in males than in females. Accordingly, in the former, the amatory propensity is much stronger than in the latter.

Among men, this propensity is more or less powerful, according to the developement of the appropriate organ, as évinced by the fullness of the lower and back part of the head, and the upper and back part of the neck, where the two unite. Hence, even among our domestic animals, bulls, stallions, rams and boars, most strongly developed in those parts, are chosen as the most vigorous and successful propagators of their race.

Wounds and injuries received on the region of this organ often produce impotency. Instances of this kind among soldiers wounded in battle, are very frequent. In all such cases, where an examination after death has been made, the cerebellum has been greatly diminished in size. The castration of domestic animals after puberty, diminishes also the bulk of the cerebellum. The extraction of one testicle has been found to reduce the size of only one half of that cerebral mass.

A blister on the occiput produces priapism more frequently than when applied on any other place.

The cerebellum is not developed until puberty, at which time the amatory propensity is first manifested. If earlier developed, in any case, the propensity appears earlier.

Animals that have no cerebellum, nor any cerebral mass as a substitute, have no sexual propensities, and, therefore, *never copulate*.

All that have such cerebral masses, do copulate.

A precocious developement of the cerebellum, is always accompanied by precocious sexual desires.

Before puberty the proportion of the cerebellum to the cerebrum is as one to thirteen, afterwards, as one to six or seven.

2. *Philoprogenitiveness*. Seat. The occiput immediately above amativeness.

Its function is *love of offspring*. This organ is more strongly developed in women than in men, and in female animals generally than in males, as appears very striking from the figures of their skulls. Let an examination be made of the heads of dogs, horses, cows, sheep, deer, and other domestic and wild animals, and it will be found that this organ is universally better developed in the females than the males. In relation to the feathered race the same thing is true. Hence, in the former, the love of offspring is much stronger than in the latter.

Among women, the strength of the propensity is found to be in proportion to the development of the organ.

It appeared, on examination, that of *twenty nine* females who had been guilty of infanticide, the development of the organ of philoprogenitiveness was defective in *twenty seven*. Their love of offspring, therefore, being feeble, the temptation to commit infanticide gained the more easily an ascendancy over them.

This organ and its function are considered certain. In the composition of the human intellect, it forms an essential and invaluable ingredient. Without it, the deficiency in domestic duty and character would be great, revolting, and ruinous. No family could be reared or educated, and mankind would become barbarized, reduced in number, and ultimately extinct. One of the purest and most fertile fountains of pleasure, moreover, would be dried up. For the love of offspring, especially the *mother's* love, confers, perhaps, at once, on parent and child, a greater amount of innocent and vivid delight, than can be derived from any other terrestrial source.

Yet this propensity has in it no mixture of morality, but is a mere *animal* instinct, as powerful in the vicious as in the virtuous.

It is altogether distinct from *benevolence*, being as strong in the most selfish, as in the most philanthropic. Its natural language is soft, assuasive, sympathetic, and peculiarly attractive to children, who immediately give their affections to those in whom it is energetic.

3. *Concentrativeness*. Seat. Just above philoprogenitiveness, near the upper angle of the occipital bone. This, like the two preceding, is a single organ. Or rather, like them, it is a double organ appearing single, on account of the portions of the two hemispheres of the brain which compose it, being placed in contact with each other.

This organ was once called *Inhabitiveness*, because it was observed to be large in persons and inferior animals, strongly attached to particular places.

From further and more accurate observation, the views of Phrenologists in relation to it are changed. Its function is now believed to be, to maintain in simultaneous and joint activity two or more of the intellectual powers, so that they may be concentrated on the same object. Hence its present name.

That in the composition of the human intellect, a faculty of this description is not only useful but necessary, will not be denied by any one who has deliberately inquired into the subject. For if the intellectual powers be not concentrated and made to act in concert, nothing great can ever be achieved by them. And this *power of concentration is specific*. If when exerting it, we carefully examine our feelings, we shall, I think, be convinced that this is true—convinced, that it is different from all our other powers, and therefore *unique*.

By observation, the most unerring guide to physical truth, the existence of this faculty is further corroborated.

We find some persons who are not indolent, constitutionally and powerfully prone to sedentary habits, and annoyed and distressed by any thing that tends to distract their attention, and scatter their powers. Others again impatient of quietude, and unable to settle themselves in any steady pursuit, plunge into active employment, as if urged along by an impetuous instinct, and seek for means to divide and diversify their attention, and carry it completely out of themselves. Such persons enjoy themselves only under variety and bustle. In the former of these characters the organ of concentrativeness is large, in the latter small.

In other persons, again, we find a peculiar power to concentrate with ease all their faculties on a given object of pursuit, without suffering the least annoyance from the intrusion of ideas or emotions not connected with the point under consideration. Such individuals do justice to themselves, and attain the highest intellectual standing, to which their native capacities entitle them.

Another class of individuals, whose powers of intellect are highly respectable, find it impossible to unite those powers so as to make them act with intensity and effect on any subject. By their uninvited and unwelcome intrusion, foreign or accessory ideas are perpetually dissevering the chain of their thoughts, and thus not only

tender their mental productions disjointed, but mark them by some views irrelevant and incongruous, and withhold from them others which they ought to contain.

In the former persons again, the organ is large, and small in the latter.

Shall I be told that this power to concentrate is the result of habit? I acknowledge that, in this matter, discipline and habit do much. But I utterly deny that they can create the difference which often exists between individuals whose intellectual powers are in other respects nearly equal. Besides, long before any habits are formed by them, children differ in their powers of concentration.

Concentrativeness brings into concert not alone the intellectual faculties, but the feelings also. To say the least of it, its existence is *probable*.

4. *Adhesiveness*. This is a double organ. Seat. The two organs are situated on each side of concentrativeness, nearly on a level with it, and immediately adjoining it. They lie, of course, partly under the occipital and partly under the parietal bones.

Their function is *attachment generally*. The attachment of friendship, attachment to domestic animals, and even to inanimate objects—to the dog that has been faithful, to the horse that has borne us through danger, to the ship that has wafted us from a foreign to our native shore, to the sword that has defended us in battle, and even to the tree that has protected us with its shade, and soothed us with the whispering of the breeze through its branches. This propensity is often manifested in excess on account of the loss of friends, and in attachment to country, in the shape of *Nortalgia*. 5

This is certainly a *native* propensity, and is much stronger in some persons, even from infancy, than in others. It generally forms, where it exists in great strength, a component part of an amiable disposition. It is stronger in women than in men. So, as a general rule, are all the more valuable propensities and sentiments.

To speak of the importance and necessity of *adhesiveness*, as a component part of the human intellect, might seem superfluous. Without it, man would be equally feeble, unhappy, and degraded.

It is the parent of the social compact, and, therefore, of human power, the fountain whence flow some of our choicest enjoyments, and the source of many of our noblest actions. Erase *adhesive-*

ness from the human intellect, and you in the same act extinguish all the delights and comforts of home. For, without friendship, home is but a name.

5. *Combativeness*. A double organ. Seat. On each side of the head, adjoining No. 4, (the two last organs) running thence in a downward and forward direction, and lying chiefly above and behind the mastoid process.

The function of this organ is *a love of resistance and combat*.

It produces active courage, and excites to energetic opposition to every thing that is considered wrong. Without it the human character would be pusillanimous, tame, and submissive.

The propensity is natural and innate, and is much stronger in some individuals than in others—stronger in men than in women, and so is the development.

When balanced and regulated by the higher faculties, it takes the character and name of *bravery*. When not thus regulated it shows itself in *quarrelsomeness*, and a propensity to attack.

It forms a strong feature in the heads of real heroes, as is strikingly illustrated in a fine cast which I possess of the head of Sir Robert Bruce, the hero and patriot of Scotland.

Gall found it prominent in the heads of the bravest of the French officers, and in those of all boys who were naturally fond of battle.

An unusual development of it aids in giving the peculiar form to the head of the bull-dog.

This organ and its situation are considered certain.

The utilities of this propensity are manifold, and its necessity, as a component part of the human intellect, perfectly obvious.

To opposition of every description it gives spirit, boldness, and effect—opposition to error, to vice, to oppression and to tyranny.

To the great *reformer*, whether in the church, or the state, in science or letters, it is essential. In the checkered state of things which this earth exhibits, where there is so much of wrong and violence to oppose, man would be but a cypher without it. With it, he is magnanimous, great and efficient.

6. *Destructiveness*. A double organ. Seat. On each side of the head, immediately in front of No. 5, partly covered by the ear.

When strongly developed, it lengthens the diameter of the head from ear to ear, rendering those parts unusually projecting.

Its function is a *love of destroying*. When not properly balanced and regulated by the superior faculties, it leads to murder.

The propensity to destroy is natural, and is manifested in some individuals in a degree so flagrant, as to constitute a passion, and, under high excitement of the organ, to amount even to madness.

In the Museum of the medical department of Transylvania University there are several excellent casts of the heads of murderers, in which the development of this organ is striking.

I possess the cranium of an individual who was executed for the ninth murder which he had committed from *an instinctive love of blood*—as a real amateur in his horrid vocation! In this skull the development under consideration is very unusually prominent.

This organ and its place in the brain are considered *certain*.

In the composition of the human intellect this propensity is essential—equally so with that of combativeness. For if there is much on earth to *oppose*, there is not a little which it is necessary to *destroy*.

In the progress of civilization, man is compelled, in self-defence, to exterminate entire races of ferocious, predatory, and noxious animals. He is often, obliged, moreover, not only to oppose, but to destroy his enemy, in private combat, and in the field of battle. He must, moreover, kill animals before he feasts on them.

But man must destroy *morally*, as well as physically. In vindicating truth and promoting improvement generally, he must, as far as possible, annihilate error, vice, folly and prejudice, and every thing that opposes him in his laudable career. Hence, to the satirist, who hunts down crime, and “shoots folly as it flies,” this faculty is as necessary as it is to the sportsman, who shoots at game.

If combativeness gives to character boldness and magnanimity, destructiveness bestows on it peculiar keenness, a tendency to biting sarcasm, and a poignant spirit, which, by undue indulgence, becomes vindictive.

Combativeness opposes, overcomes, and *forgives*. But destructiveness, when victorious, *tramples on and exterminates*.

To give to man the highest possible energy of which he is capable, both are necessary.

In their nature, therefore, they are both useful. It is in their excess only that they lead to vice. They are, moreover, *specific*, each being *itself*, and different from every other. Attempt, in imagination, to *make a man*, and you must unite, in the compound,

more or less of these two elements, or the effort is abortive. Without them, your being will not exhibit an entire resemblance to humanity.

7. *Constructiveness*. A double organ. Seat. On each side of the head, immediately over and adjoining the front part of No. 6, and just behind and rather above the external angle of the eye. When strongly developed it produces unusual breadth of head from temple to temple.

Its function is a *love of building* or *constructing generally*.

The range of this function is very wide, as it embraces drawing, modelling, engraving, operative surgery, and every other occupation that requires the dexterous employment of mechanical instruments.

The organ is peculiarly prominent in all great architects, engineers, and mechanics. It is well developed in all quadrupeds that *build*, such as the beaver, the field mouse, and others. The same is true of birds remarkable for the curious and elegant structure of their nests.

Rabbits and *hares*, much alike in other respects, differ widely in this. In the *former*, the organ of constructiveness is well developed, and they build. In the *latter*, it is very feebly developed, and they do not build.

Our distinguished countryman, Mr. Perkins, the ablest mechanic of the age, is, in a high degree, remarkable for that peculiar form of head which the full development of this organ effects.

The faculty is natural, and, therefore, innate, and the organ and its situation considered *certain*.

This faculty gives the *propensity*, but not the *power* to construct. The process of construction must be directed by the *knowing* and *reflecting* faculties. Causality, in particular, must be necessarily concerned in it. These faculties receive from constructiveness their excitement, and direction. But thus excited and directed, they draw on their own resources, and work with their own means. Neither constructiveness nor any other propensity or sentiment has a knowledge or control of means, as connected with an end to be attained. The sentiment or propensity gives the disposition or bias, leaving to the knowing and reflecting faculties to carry on the work.

The usefulness and necessity of constructiveness, as a component part of the human intellect, are too obvious to require exposition.

or proof. But for its agency, man would be without comfort, and earth without the uses and ornaments of art. Its *specific* nature must be palpable to every one, who will examine his own feelings.

8. *Covetiveness*; by some called *Acquisitiveness*. A double organ. Seat. On each side of the head, immediately behind No. 7, and nearly on a level with it.

Its function is a *love of acquisition generally*, whether of money or other articles. If not restrained and properly regulated by the higher faculties, it leads to great selfishness and even theft. When duly controlled and directed, it is converted into a praiseworthy love of possession. Combined with self-esteem, it gives to the miser his ruling passion. To produce its greatest effect, it must act in concert with strong secretiveness. Situated and conditioned as he is, it is a necessary element in the composition of man. Without it, the human intellect would be deficient in aptitude. Optimism calls for its existence.

This propensity is a natural one. Many individuals exhibit it from infancy in a pre-eminent degree. They have a passion to *acquire*, and make their own, every thing that happens to fall within their reach. They even steal things that are of no use to them, and either return them or give them away. Instances of this kind, in persons otherwise highly respectable, have fallen under my own observation, and many such, perfectly authenticated, appear on record.

A chaplain in the Prussian army, in all other respects a very worthy man, was remarkable for the propensity of covetiveness. He stole pocket-handkerchiefs, penknives, books, ladies' stockings, and indeed every thing portable in the nature of property. To steal little things was in him a passion.

The late Professor Rush, of Philadelphia, was in the habit of mentioning, in his public lectures, the case of a respectable woman, perfectly well known to him, in whom a state of high excitement of this propensity, was a uniform concomitant of pregnancy. When in that condition she was in the practice of stealing from her neighbours whom she visited, tea-spoons, thimbles, pairs of scissors, and other small articles which she could easily conceal.

About twenty five years ago, a gentleman of wealth, education, and connexions of great respectability, was compelled to leave Philadelphia, on account of a similar practice. He remained about thirty miles from the city, in perfect obscurity, and separated from his family which he had disgraced, until his death. From his child-

hood, he had been a purloiner of little matters, of which he never stood in need. In him, therefore, the propensity to pilfer was a constitutional instinct.

This organ and its situation are considered *certain*.

9. *Secretiveness*. A double organ. Seat. On each side of the head, immediately behind No. 8, and above the posterior portion of No. 6.

Its function is *a love of secrecy*.

This propensity is gratified in two ways. By *simple concealment* of views entertained and measures pursued, and by a *misrepresentation* of them. When not properly controlled and regulated by the higher faculties, it leads to *management, intrigue, and falsehood*. In relation to conduct, it is the source of *art, hypocrisy, and cunning*. When directed by an enlightened intellect, and restrained within its proper limits by the moral powers, it augments not a little the efficiency of character. In courts and cabinets it is a powerful engine. On many occasions, it is, at once, the diplomatist's sword and buckler.

In the composition of the intellect of the real dramatist it is an essential ingredient. For while he represents the *character of another*, the actor must necessarily conceal his own.

In the constitution of human nature, the faculty of *secretiveness* is indispensable. In every person, but more especially in those who actively mingle in the business of life, states of the mind are hourly occurring which it is requisite to conceal, at least for the present, until the reflective faculties shall have decided on the propriety or impropriety of making them known. This is true in our conduct even towards *our friends*.

In relation to his enemies, man should be always vigilant to conceal from them his views, and discover theirs. And secretiveness aids him in both purposes.

In war, stratagem and deception towards an enemy are not merely allowable; they are component parts of the most efficient and praiseworthy military conduct. In the capture and destruction, moreover, of wild beasts, and other noxious and dangerous animals, they are necessary and important. The aborigines of America possess this faculty in great strength.

In its nature, then, secretiveness is innocent and useful. It is only the *abuse* of it that constitutes vice.

The fox and several animals of the cat kind, are remarkable for it. In some of the human race, it is almost their only power.

The organ of this faculty and its situation are considered *certain*.

Genus 2. Sentiments.

10. *Self Esteem.* A single organ. Seat. Under the sagittal suture, immediately above No. 3,—that spot where the hair seems to separate, falling in several directions, and which, in common language, is called the *crown*.

Its function is a *high opinion of self*, or the *sentiment of pride*.

This sentiment when in excess, becomes haughtiness and disdain, and leads in speaking and writing to a too frequent use of the *first person*. When duly regulated and restrained, it is of great value in practical life. It is the true source of dignity of deportment, without which neither respectability nor influence can be long retained.

It begets in an individual a high esteem for such other faculties as he possesses in great strength.

Is he *benevolent*? he is proud of his benevolence; and does much good in the practice of it.

Is he highly gifted, as a musician or a painter? his esteem attaches to them, and he endeavours to excell in them.

Are the reflective or poetic faculties his predominant powers? It is his pride to cultivate them to the utmost degree, and to acquire consideration by means of them.

Has he strong covetiveness? his pride is to accumulate wealth, and he is exceedingly *selfish*, in the most disagreeable meaning of the term.

Strong self-esteem and veneration united, make a proud theologian.

Without a competent amount of this faculty, the character of man would be degraded and grovelling. It is essential, therefore, as a component part of the human intellect.

As a people, the English possess it in a much higher degree than the French.

From the situation of the organ, the degree of its development may be easily observed. Phrenological pupils, therefore, should direct their attention to it. It is *certain*.

11. *Love of approbation.* A double organ. Seat. On each side of No. 10, immediately adjoining it, and nearly on a level with it.

The function of this organ is fully expressed in its name, *love of approbation or applause*.

This sentiment is useful and honourable, or otherwise, according as it is modified by the higher faculties.

If it be directed to objects of importance, it becomes a lofty and noble ambition, and leads to corresponding effort and achievement.

But if its objects be low and trivial, it degenerates into vanity, and leads to frivolity.

Women have more of the sentiment than men, and, conformably to this, the cerebral development is in them more prominent.

Without the sentiment of the love of approbation, the human intellect would be defective. It would want one of the strongest incentives to useful, elevated, and virtuous action. It would want, moreover, that disposition and wish to please and to oblige, which, in the intercourse of life, contribute very largely to comfort and convenience, not to say happiness.

When properly directed, this sentiment excites to action all the higher faculties of the intellect, the moral no less than the reflective. Its object is, to exalt the possessor to such a pitch of excellence, in acquisition and achievement, as may insure its own gratification, by fame and applause. It stimulates alike the chieftan and philosopher, the poet, the orator, the painter, and the sculptor; and every one who is conscious of lofty endowments. Even the intrepid traveller, in the midst of the desert, and the ardent philanthropist, in his career of beneficence, feel its workings, and recognize its influence.

In the activity and energy of this faculty, the French greatly surpass the English, as a people. Hence the chief source of their superior politeness and desire to please.

In the composition of bashfulness, this sentiment constitutes a principal ingredient. It was a superabundant amount of it that made Cicero tremble, as often as he rose to address the Roman people, even in the meridian of his eloquence, popularity and greatness.

When not properly directed, it often leads to promises meant to be broken, and to professions not intended to be fulfilled. Considered in the abstract, therefore, it has no essential connection with morality.

This organ and its place are *certain*.

12. *Cautiousness.* A double organ. Seat. On each side, adjoining No. 11, in front of it, and somewhat below it.

The function of this is the sentiment of circumspection, or impulse to take care

Although opposite to the propensity of combativeness, or courage, it is not inconsistent with it.

In the same individual both organs may be fully developed, because he may be at once cautious in the avoidance of danger, and firm and courageous in the midst of it, when it has occurred. Caution is not the mere absence of courage. A person may be without either courage or caution—*rash* and yet a *coward*. This is thoughtlessness.

Regulated and sustained by the other faculties, this sentiment becomes prudence. But if not thus modified, it degenerates into irresolution and instability, doubt and demur. In children, the organ is developed more than in proportion to those of the other moral faculties. This is a very useful and beneficent provision, as, on account of it, cautiousness serves them, on the score of self preservation, as a substitute for the reflecting faculties.

Children in whom the organ is very full, are unusualy cautious, or rather timid. They may be generally left to take care of themselves, with more security, than those in whom the organ is small, can be confided to the care of guardians.

In animals remarkable for timidity and caution, this organ is strongly developed. This is the case with the stag, the roe, the chamois goat, and all those that are in the habit, when feeding, of placing centinels to guard against surprise. In certain species of birds, it is more fully developed in the *females* than the *males*. Hence the *latter* are observed by sportsmen to be much more easily approached and shot or caught, than the *former*.

The value of this sentiment, as a component part of the human intellect, no one will deny. Without it, man would be a monument of rashness, imprudence, and misfortune. In discovering danger, reason, in many instances, would be too slow. But cautiousness feels it in anticipation, and gives instinctively the warning to avoid it. It operates as promptly, as does the instinct of the feathered race, on the approach of the hawk, the kite, or the eagle.

This organ and its situation are *certain*.

13. *Benevolence*. A single organ. Seat. The upper and central part of the frontal bone, in range with the sagittal suture. That suture continued would pass through its centre.

Its function is a sentiment of *kindness, connected with a desire to do good*, without any reference either to reward, to the approbation of spectators, or the gratitude of the persons benefitted. The sentiment is of spontaneous growth, and the reward of each beneficent act arises from the pleasure attending the performance of it. Not to perform it would be painful. It "follows virtue even for virtue's sake."

The faculty is innate, being manifested by many from their early childhood.

This sentiment gives the impulse to do good. To produce the best effect, that impulse must be directed by the intellectual faculties.

In its effects on the inferior animals, this faculty is rather passive than active. It is manifested in them by a mildness and tractability of temper, more than by any other feature of their deportment. In the characters of dogs and horses this truth is strikingly illustrated. Of these two races of animals, those individuals whose foreheads, over the organ, are broad, elevated, and well arched, have always mild and pacific dispositions, while those whose foreheads are narrow and flat, in that region, are surly and ill-natured. To dealers in horses and trainers of dogs, this fact has long been familiar.

On its importance and necessity, as a component part of the human intellect, it would be superfluous to dwell. Endowed, as he is, with combativeness and destructiveness, man, without it, would be in the hourly perpetration of aggression and cruelty. Sufficiently dismal in its mildest and most ameliorated form, war, in that case, would be unrelenting butchery. For benevolence is the source of compassion and mercy.

Without the softening influence of this faculty, man would be a confirmed moral no less than a *physical* destroyer. He would be as ruthless an assailant of *character* as of *person*. For benevolence is the parent of charity and forbearance, as respects the faults and failings of our race. Deprive us of it, and no education will be able to prevent us from invading the character and feelings of others.

To fit him, then, for his present situation, no sentiment is more essential than that of benevolence.

The organ and its situation are *certain*.

The five following organs and sentiments are proper to man, and constitute the real lines of demarcation between him and the inferior animals. Accordingly, these cerebral portions which constitute the organs, and which form the upper part of the brain, are entirely wanting in the brute creation. Remove these portions from the human brain, and you assimilate it, not a little, to the brains of some of the inferior animals. Under such circumstances, could the individual survive, his intellect would be brutalized.

14. *Veneration.* A single organ. Seat. Directly behind and immediately adjoining No. 13. The sagittal suture passes through its centre.

The function of this organ is a sentiment of *veneration towards superior beings*, elders, parents, God. Considered in its relationship towards God, it is more especially denominated piety, and produces adoration. But not being a *knowing* faculty, it indicates nothing as to the nature or perfections of God. It merely points towards a God, such as the intellectual faculties, aided by revelation or otherwise, portray. Hence it may act as vigorously under the impressions of a false as a true religion—under mahometanism as under christianity.

When fully developed, this organ produces on the top of the head always a fullness, and often somewhat of a ridge, which makes the hair, if long, separate along the course of it, and fall gracefully on each side. Hence the head of Christ is always thus delineated. Female heads are thus characterized; and women are more remarkable for piety than men.

The full developement of this organ produces early baldness. Hence the heads of saints and pious men, are usually represented with that accompaniment.

Those who have been observant of the circumstance assert, that, of any given number of men of equal age in a place of public worship, those who are bald, and have the organ I am considering well developed, other things being alike, are most devout.

From personal observation, I am persuaded that this representation is true. The expression of the countenances of bald-headed men is very generally in accord with the *sentiment of veneration*, unless where their native feelings have been perverted by a bad education. The insult of the children to one of the most pious and distinguished of the prophets, "go up thou bald head," is a fact corroborative of the foregoing statement.

This sentiment is the source of that profound veneration, which many persons feel, some in a degree much higher than others, for every thing that is ancient—ancient opinions, manuscripts, and buildings; and, I regret to add, ancient errors, prejudices, and superstitions.

To the same sentiment must we look for those emotions of reverence and awe, with which we approach the ruins of temples and palaces, the graves of our ancestors, and the places generally where the ashes of the great and the virtuous repose. Nor can we derive from any other source, that potent impulse, which, through such toils and privations, sufferings and dangers, leads to Jerusalem and to Mecca, the pious pilgrims of the cross and the crescent.

A positive propensity to profanity and profligacy, is not the necessary consequence of a deficiency of veneration. But where such deficiency exists, the general barrier against the pernicious excesses of the lower faculties, is certainly weakened. A less potent temptation, therefore, will allure to vice.

Both the existence and strength of this sentiment are proved by the fact, that all individuals and nations *venerate* and *worship* a God of some kind, while their reasoning powers, are incapable of directing them to a suitable object. Hence the practice of the worship of idols, and inferior animals.

One of the most important considerations connected with this sentiment is, that it proves religion to be founded in the nature of man. And if it were not thus founded, *it could never be implanted*. Religion, then, would be a *trick* and a *name*.

Had man no moral faculty, he could not be a moral being; nor could he be accounted criminal in not becoming so; because he did *not receive from the hand of nature a suitable constitution*. Nor, for the same reason, would he be culpable for not being religious, had nature failed to bestow on him the organ of Veneration, which might be not inaptly denominated the organ of Religion. A leading excellency of Phrenology over all other schemes of mental philosophy is, that it represents man as fitted by nature for religion; whereas they do not. It renders him, therefore, inexcusable if he be not religious; they do not.

Another consideration highly recommendatory of Phrenology is, that it confirms the maxim, which the truly pious both feel and practise, that "religion is a *sentiment*" lively, glowing, and perpetual, which interweaves itself with the motives and actions, and influences the en-

tire tenor of life; not an abstract belief of a system of doctrines, which have no better effect than to engender among their adherents animosity and strife. A religion of *sentiment* is one of mildness, benevolence, and charity, and breathes of *Heaven*; but a mere doctrinal religion is the very essence of harshness and intolerance—It has “no relish of salvation in it,” but might be much more aptly said to derive its attributes from an *opposite quarter*.

From these considerations, it will not be denied, that to the proper constitution of human nature, this sentiment is essential. Without it, man would have been imperfect, and comparatively degraded—disqualified certainly for the station he holds.

This organ and its place are *certain*.

15. *Hope*. A double organ. Seat. Immediately adjoining No. 14 on each side.

The term expresses the function. It is a tendency, without any solid ground of conviction, to believe in the possibility of what the other faculties desire. The sentiment is the sweetener and sustainer of life. It is, in a particular manner, the castle builder's home—he dwells in hope—it is his heaven, and gives him every good—his consolation under disappointment—his panacea for every evil.—It is the cynosure, to which his soul perpetually points.

In all who possess the organ well developed, there is a buoyancy of spirit, and a general prevalence of bright and encouraging ideas, and delightful emotions.

Such characters never dwell on gloomy prospects, but usually fancy things better than they are.

This sentiment, unless directed and restrained by the intellectual faculties, becomes credulity.

It is, in some respects, the counterpoise of cautiousness, the one being the source of the chilling and disheartening clouds, the other of the cheering sunshine of life.

In the present checkered condition of man, where good and evil are every where intermingled, and where many depressing and disheartening occurrences take place, *hope* is essential, as a component part of the human intellect. It not only contributes, in a high degree, to individual and general happiness, but often sustains and encourages exertion, to the ultimate effectuation of useful and great purposes, which, without it, would have been entirely lost to the world.

Nor is this all. By constantly carrying us forward into *futurity*, it constitutes, in favor of a belief in the immortality of the soul, the strongest argument which the constitution of the human intellect furnishes. To that effect, *hope* is truly the Divinity that stirs within us. It is altogether improbable that man is tantalized by nature, with an *innate, constitutional and virtuous longing*, which is never to be gratified. *A native taste for immortality, is an argument in favor of immortality.*

But, like the other sentiments, *hope in excess*, has its evils. It often makes men deceive themselves with views that can never be realized, and others with promises that cannot be fulfilled.

The organ and its place are *certain*.

16. *Ideality*. A double organ. Seat. On each side of the head, immediately above Nos. 7 and 8.

Its function is to give exquisiteness to feeling, sentiment, conception—to all the exercises of the other faculties.

It is the organ of poetry, giving to every object and every prospect superadded charms and ideal perfections. It may be called the organ of inspiration. It is the source of the "*beau ideal*" and prompts to exaggeration, and high embellishment. While the knowing and reflecting faculties recognize things as they are, it pants for something more exquisitely lovely, perfect and admirable; and to render them so "in fancy's eye," supplies itself the delectable qualities in which they are deficient. It is in a state of high excitement, in the lover, as relates to the beauty and perfections of his mistress.

Into the prose compositions and even the conversation of those who possess it in full developement, it infuses the sentimental glow, the picturesque delineation, and all the elastic spirit of poetry.

Under the full influence of it Shakespear wrote the following lines:

"The fair Publicola, the moon of Rome!

"Chaste as the icicle that's curdled by the frost

"From purest snow, and hangs on Dian's temple."

And Moore drew, while similarly inspired, his inimitable picture of the Snow-spirit

"The down on his wing is as bright as the pearl

"Thy lips for their cabinet stole,

"And it falls on the green earth as melting, my girl,

"As a murmur of thine on the soul."

With a still deeper and more rapt intensity did Byron feel its influence, when he portrayed so surpassingly the frail, but divinely beautifully Haidee.

“Round her she made an atmosphere of life,
 “The very air seemed lighter from her eyes,
 “They were so soft and beautiful, and rise
 “With all we can imagine of the skies,
 “And pure as Psyche ere she grew a wife—
 “Too pure even for the purest human ties;
 “Her overpowering presence made you feel
 “It would not be idolatry to kneel!”

This organ is the fountain of enthusiasm not merely to the poet, but to the philosopher, the orator, the painter, the sculptor, the mechanician, the philanthropist, and even to the generous and high minded warrior. It confers a relish for poetry on those who do not write, and gives refinement to the taste of those who judge. It communicates to eloquence its splendour and its soul, and to conversation its highest charms and brilliancy.

Ideality being a prime ingredient of enthusiasm, which is essential to the accomplishing of great achievements; and being also tributary to taste and refinement, human nature would be defective without it.

This organ and its situation are *certain*.

Wonder. A double organ. Seat. Between 16 and 33. This was once denominated by Spurzheim the sentiment of the marvellous. It is now by the same author called Marvellousness.

It renders those who possess it in a high degree, exceedingly fond of news, which is the more acceptable to them in proportion as it is more singular and extravagant.

Individuals of this description are unusually prone to the expression of surprise and astonishment in common conversation. The impression made on them by tales of wonder, such as those in the Arabian Nights Entertainment, the writings of Mrs. Ratcliff, and other works of romance, is inordinably deep and delectable. In those persons, the part of the brain here designated is always found to be largely developed. The same individuals, moreover, are observed to be remarkable for that peculiar movement of the eyes which is expressive of surprise.

In persons, on the other hand, in whom the part of the brain in question is small, we find a moderation and sobriety of feeling, directly the reverse of that just described. Such individuals are not

easily moved by a sentiment of surprise; nor do they take much delight in "narratives of the wonderful." They have no disposition to mount into the region of supernatural fiction; but are most at home, amidst the routine of every day occurrences.

This sentiment, in its greatest strength, and under high excitement, leads to a belief in supernatural agencies. Hence the difficulty which some persons experience in discriminating accurately between the possible and the impossible.

The late Dr. Brown, of Edinburgh, admits that wonder is a *primitive* emotion. It must therefore, have a *specific* organ.

The wonderful is a source of *pleasure*; and, by stimulating to inquiry, contributes to the advancement of knowledge. Hence its fitness and usefulness, as a component part of the human intellect.

The organ is only *probable*.

17. *Conscientiousness*. A double organ. Seat. Immediately behind and adjoining No. 15.

The function of this organ is to give a sentiment of unspotted justice and pure practical morality. It commands the other faculties to the performance of their duty, and sanctions by its approbation the duty when performed. It is the organ of remorse which follows guilt.

Its strength is not in proportion to the strength of the other faculties. In men of feeble intellect, it is sometimes very powerful. Such men act correctly without being able to give any other good reason for their conduct, except that it is most agreeable to them. "They do their duty for "conscience sake."

Conscientiousness might be denominated a sense of morality. It is an instinctive feeling of right and wrong, antecedently to the decision of the reflecting faculties. It acts with the promptitude and celerity of an external sense. It is as really gratified with what is morally right, and offended at what is wrong, as the sense of vision is gratified with pleasant, and offended by unpleasant, sights. Hence it often leads to correct conduct in cases of emergency, where it is necessary to act without taking time for cool deliberation.

Individuals who are *conscientiously* moral, are *warmly, feelingly, and uniformly* so—in secret as well as in public. But those whose conduct is moral, *as the result of calculation*, are comparatively cold in their moral temperament, and much more liable to be swayed by circumstances.

The importance and necessity of this sentiment, are palpable to every one. Without it, man would be not merely *defective* in his constitution. He would be a revolting monument of depravity and crime. Its radical and specific difference from all other feelings, is equally obvious.

Conscientiousness is an internal faculty, and may be considered *certain*.

18. *Firmness*. A single organ. Seat. Between and adjoining No. 14 before, No. 10 behind, and No. 17 on each side.

Its function is to give firmness, constancy, and perseverance. When powerfully developed, and not properly regulated by other faculties, it produces obstinacy.

It is the source of *fortitude*, as contradistinguished from *active courage*.

Without itself acquiring any knowledge, it gives stability to the direction of the predominant knowing faculties to that effect.

Does the faculty of language predominate? Firmness begets perseverance in the study of language.

Does the faculty of mathematics predominate? The individual is steady in mathematical pursuits.

The same thing is true of all the other intellectual faculties.

This sentiment modifies the entire deportment of the individual. It renders the gait, manner, and even the tone of the voice steady, emphatical, and full of energy. It constitutes an indispensable part in the attribute of command.

Firmness, then, is the anchor of the intellect, without which it would have no stability; but would be incessantly tossed on the fluctuating tide of feeling and circumstance. Without it, therefore, nothing great can ever be effected. Hence, in the composition of the human intellect, it is an essential ingredient.

From their infancy, many individuals manifest it in a high degree. The organ is *certain*.

ORDER II. INTELLECTUAL FACULTIES.

Genus I. Knowing Faculties.

The intellectual faculties are all situated in the forehead. Being numerous and much crowded, some of them occupy so small a space, that it is almost impossible to designate accurately their seat in words. For a correct knowledge of their situation, reference must be had to a well mapped cranium or cast.

The functions of these faculties are, generally, to take cognizance of the existence and qualities of external objects. Forming, as they do, ideas, they are somewhat the same with the Perceptive Powers of the school of metaphysicks. Their functions, when healthy, are productive of *pleasurable sensations*; the faculty of *Tune* predominating, in this respect, over the others. But even *Tune* is surpassed, in the pleasure it bestows, by the emotions produced by the faculties which have been already considered. In general, the more elevated the character of any function is, the less vivid is the emotion attending the active state of it.

19. *Individuality*. A single organ divided into two portions, *upper* and *lower*. The *former* situated in the centre of the forehead, midway between the hairy scalp and the root of the nose. The *latter*, a little lower, and immediately beneath the other.

Its function is to give the faculty of practical observation, and the capacity to acquire knowledge in detached parcels, but not to put it well together.

The possessor of it is an agreeable, often an instructive companion. He is pregnant in matter for conversation, in which he is often accounted brilliant; but he is a mere detailer of facts and anecdotes, which he rarely attempts to classify or arrange. He is a man of information, rather than a philosopher.

Individuals possessing this faculty in a high degree, are prompt in conception, and have a happy facility in apprehending and pursuing details. Hence they have clear views of distinct propositions, and great readiness in the minutiae of business; but are not very systematical in the transaction of it. In case their reflecting organs are but moderately developed, they are, moreover, prone to the adoption of new theories, and to embrace the opinions of others in relation to matters of general knowledge and abstract reasoning. They accommodate themselves readily to new customs and manners, and are more inclined to *follow* examples than to *set* them.

Although this faculty gives a strong desire, and a concomitant ability, to become acquainted with facts and things, and is, therefore, of great importance in the acquisition of knowledge, it has no influence in directing to the pursuit of any *one* kind of knowledge in preference to *another*; nor does it take into account the uses or ends to which knowledge may be applied.

When united to the other requisite faculties, it is, in a high degree, useful to the lawyer, the orator, and the physician, in supplying them abundantly with practical and illustrative materials. By means of this faculty, individuals become *learned*, but not *scientific*. For the *latter* purpose, the *reflective* faculties are requisite.

As it is this faculty alone that gives us the command of distinct facts and individual propositions, its importance, as a constituent part of the human intellect, must be obvious. Without it there could be no generalization, because facts must be collected before they can be generalized and classed. Although not a scientific *faculty*, it is essential to science. It is, moreover, perfectly distinct from all other faculties, and is, therefore, specific.

Individuals possessing this organ well developed, have a prominence in the part of the forehead designated, and pay great attention to every thing around them.

In inferior animals it is the organ of domestication and docility. Its existence and place are *certain*.

20. *Form*. A single organ. Seat. Immediately under the root of the nose. Its full development gives breadth between the eyes.

Its function is to give a facility of distinguishing form and figure.

Without having better eyes, some persons recognize by their figures, men, horses, ships, and indeed all visible objects, much better than others. That this is true, every one of observation must be abundantly sensible.

To the power of nicely distinguishing and critically judging of *form* and *figure*, this faculty, when possessed in a high degree, adds an exquisite sensibility in the enjoyment of their *beauties*. It is important to the mineralogist, the sculptor, the portrait-painter, the modeller, and to every one attached to the imitative arts. Those in whom it is strong, delight to gaze on fine statues, fine paintings, and fine figures generally.

To say that it is essential to adapt man to his situation on earth, might be deemed superfluous; because without it he could not distinguish one figure from another.

The faculty, then, is specific and *innate*. The organ is *certain*.

21. *Space*. A double organ. Seat. Above and on each side of the root of the nose.

Its function is a power to judge readily of size and distance, without reference to form.

This faculty aids in judging of perspective. Military men who possess it in a high degree, judge with great facility and accuracy of the space that will be filled by a given number of soldiers when formed in line. Those deficient in it, cannot thus judge.

It is considered *conjectural*

22. *Resistance*. The situation of this organ is not perfectly determined. It is believed to exist, because the idea or conception of resistance is peculiar, and must, therefore, be attributed to a specific organ. The quality, moreover, of resistance in bodies, is specifically different from all others.

It is considered probable that this organ is immediately adjacent to that of form. Respecting this point, time and future observation must better determine.

Inasmuch as the quality of resistance in matter is radically different from those of size and form, and indeed from all other qualities, aptitude demands that there should be an intellectual faculty to correspond to it, and to take cognizance of it. But there is no want of aptitude in creation. The qualities of terrestrial matter and the powers of the human intellect, are in harmony with each other.

The organ, therefore, is *probable*.

23. *Colour*. A double organ. Seat. Near the centre of each eyebrow, so that a full development of it gives to the brow sometimes a beautiful arch, at other times an angular direction upwards and laterally, or a projection forward, about the centre.

Its function is a faculty to distinguish, enjoy, and mix colours.

Some individuals can neither enjoy nor distinguish colours. In them the eyebrow is generally straight, and flat in the middle.

Women delight in colours more than men, and their eyebrows are, accordingly, more generally and beautifully arched.

It has been long known and acknowledged that the power to distinguish and judge of colours, is not in proportion to the acuteness of vision. Many individuals who see perfectly well, and judge with accuracy of size, form, and distance, can with difficulty discriminate between strong colours, and have no perception of delicate colours and mixtures of colours at all. Many of the inferior animals, moreover, whose vision is very acute, do not appear to have any perception or knowledge of colours.

Individuals in whom this faculty is strong, are charmed with the beauty of flowers. They love to linger in the garden and the

green-house, and gaze with delight on the flow-enameled meadow and lawn. Spring is to them a season of enchantment, on account of the gay and beautiful colours, with which it decorates the forests and the fields.

A large endowment of this faculty is essential to painters, enamellers, dyers, and to all others who work in colours. An entire destitution of it would unfit man for his high station on earth. Colour is a specific property of matter, and calls for a corresponding specific faculty in the human intellect.

The Chinese, as a nation, delight in colours; and they are particularly distinguished by well arched brows.

This organ and its seat are *certain*.

24. *Locality*. A double organ. Seat. Immediately above and adjoining No. 21.

Its function is to perceive, judge of, remember and enjoy localities.

It produces a fondness for travelling, and an attachment to the study of Topography, Geography and Astronomy.

It aids peculiarly the landscape painter, and the describer of rural scenery.

It assists also the traveller in finding his way to places he has visited, and gives to him an accurate and vivid remembrance of them.

In the mask of Newton and Columbus the development of this organ is very prominent. The same thing is true of the heads of M. Volney, the distinguished traveller, the Baron Humboldt, and Sir Walter Scott, the ablest describer of rural scenery now living—perhaps the ablest that has ever lived.

Daniel Boone, who was perpetually in motion from one place to another; and who was the most celebrated hunter and woodsman of the age, possessed it in a degree of development so bold and prominent, that it deformed his face.

P. C. Esq. of Baltimore, is no less remarkable for the great development of this organ; and his facility in acquiring and retaining the knowledge of localities, exceeds that of any other individual I have ever known.

In Mr. Goodacre, lecturer on astronomy, the organ is large. Besides his devotion to the science he teaches, that gentleman is remarkable for his knowledge and recollection of places.

The inferior animals possess this faculty in great perfection. Hence the great facility and certainty with which they find their way from one place to another. Remove one of these animals from the place of its residence, and it will, with perfect accuracy, retrace its way to the same spot.

The disposition of many of them to migrate, at a particular season, is the result of this faculty.

The organ is, at the time, in a state of high excitement, precisely as the amatory organ is intensely excited during the *season of love*. When animals are in their migratory mood, the organ under consideration is found to be preternaturally injected with blood.

This faculty is specific, and essential to the terrestrial condition of man. Deprive him of it, and you render him at once inefficient and useless. Endowed with it, his practical efficiencies are great, and his harmony with nature around him is maintained.

This organ and its seat are *certain*.

25. *Order*. A double organ. Seat. Adjoining No. 23, between it and the external angle of the eye.

The function of this organ is a perception and a love of order, without any regard to classical arrangement. Nor is the susceptibility to be delighted with order, and distressed by disorder, in proportion to the strength of any of the other faculties. Sometimes even idiots have been remarkable for this susceptibility. Such is the force of this faculty in some individuals, that it renders them martyrs to the love of order. The appearance of confusion distresses them. Women are much more remarkable for the faculty than men; and, accordingly, the organ in them is more fully developed. The development aids in *arching* the eyebrow. But the female brow is much more uniformly arched than the male.

This faculty is *innate*, and, therefore, specific and important. Deprive man of it, and you detract at once from his usefulness and his pleasures. You close one avenue to delight, and dry up a source of valuable knowledge.

In the works of nature, there is much of the beauty of order. Congruity, therefore, requires that man should be so endowed as to admire and enjoy it, and avail himself of order in his own arrangements, for his convenience and advantage.

Those who possess the organ in a well developed and vigorous state, cannot bear to see any thing out of its place. They are neat

and precise in the arrangement of their wardrobe, their library, and their household furniture. But the arrangement they delight in has nothing of science in it

This organ and its seat are considered *certain*.

26. *Duration*. A double organ. Seat. Immediately above and adjoining No. 23.

Function. A lively and accurate perception of abstract duration, and of the lapse of time between one event and another.

Many individuals have a fine ear for musical tones, but no perception or judgement as to musical time

Others, again, are more remarkable for their knowledge of time than of tone and also for their remembrance of the lapse of time between events, that are not connected by any other tie, as well as of the day or point of time at which any event has occurred. Distinguished examples of these peculiarities are known to myself.

A well known citizen of Philadelphia, recently dead, was celebrated for his perception and recollection of the lapse of time. Respecting the date of events he was a perfect chronicle.

In bets with gentlemen of his acquaintance, as to the day of the week, month, and year, on which they had been married, he won many suppers, together with dozens and bottles of wine. Although but a child during our revolutionary war, and no reader of history, he could cite with promptness and accuracy, the precise date of every distinguished event of that memorable conflict. What was still more extraordinary, he often won from ladies, pairs of gloves, and other fancy articles, in wagers respecting the day and hour of the birth of their children.

He was an elegant dancer, walked the street with a measured military step, although he had never borne arms, and appeared as if beating time in all his movements. Nor was he at all remarkable for any other intellectual faculty.

To the reading and writing of poetry, and the enjoyment of its rhythm, this faculty is indispensable. It is innate, specific, and useful. Without it, the human intellect would be wanting in aptitude.

This organ and its seat are *probable*.

27. *Number*. A double organ. Seat. Immediately over the external angle of the eye, and adjoining No. 25. It is small and sometimes difficult to detect.

The function of this organ is a *power of calculation*.

The development of it sometimes elevates the eyebrow and sometimes depresses it, according as its situation is a little higher or a little lower. It is generally best indicated by the breadth between the external angle of the eyelids, and the commencement of the temple. When very powerful, the whole temple between the eye and the ear is prominent and full.

In Zera Colburne, the celebrated American calculator, the development of this organ was so prominent as to amount almost to deformity. In Bidder, the young English calculator, it is also uncommonly bold.

A mask of Sir Isaac Newton, which I possess, is very strongly marked by it. So, in some degree, are the brow and temple of every mathematician. Yet it alone is not sufficient to qualify its possessor for the highest sphere of mathematics. For that purpose it must be united to strong reflecting faculties and full ideality.

This faculty is *specific*, its function being entirely different from that of every other faculty. The process of *numerical calculation* is totally unlike every other which the intellect performs. Of its necessity, importance, and aptitude to man's situation on earth, it would be superfluous to speak. Without it the business of life could never go on.

There is reason to believe that it is possessed, in a low degree, by some of the inferior animals.

This organ and its situation are *certain*.

28. *Tune*. A double organ. Seat. Immediately above No 27. A strong development of it gives fulness to the lateral parts, above the external ends of the eyebrows.

The function of this organ is a love and enjoyment of music.

An ear or a taste for music does not depend on acuteness of hearing. Many of the inferior animals that hear better than man, have no sense of either melody or harmony.

Many men whose sense of hearing is healthy and acute, cannot distinguish one tune from another, nor scarcely the most exquisite music from common noise, while others, whose hearing is greatly impaired, are, notwithstanding, able to enjoy music.

The sense or faculty of music, then, is certainly primitive and internal, and is no more identified with the ear or organ of simple hearing, than it is which the eye.

The organ, when strongly developed, gives breadth to the face, by extending the lateral parts of the forehead. Hence high powers of music are rarely connected with a thin, narrow face.

The masks of Handel, Haydn, Gluck, Mozart, and other distinguished musicians, are characterized by full developements of this organ.

Although this faculty alone gives a perception of melody, and inclines individuals to the cultivation of music, to constitute a *genius for that science*, it must be united to several others. The chief of these are Time, Ideality, Secretiveness and Imitation.

The heads of certain singing birds are also marked by it with peculiar strength. When, as is usual, the male alone of any species of the feathered race sings, the female being tuneless, the former only has the organ of tune.

The faculty of tune, being different from every other, is specific. It is moreover essential in the constitution of the human intellect. Without it, man would be much less perfectly adapted to his condition than he is.

Both the organ and its seat are *certain*.

29. *Language.* A double organ. Seat. Immediately under the eyes, rendering those organs, when fully developed, unusually prominent, and giving them, sometimes, a downward direction, so as to produce a fold in the under eyelid.

Should the eyes be small, their prominence, of course, is less obvious. But a large eye placed over a well developed organ of language is necessarily projecting.

The function of this organ is a facility in acquiring the knowledge of language.

Great linguists have always eyes prominent if large, and full, at least, if small. They never possess sunken eyes.

This faculty, when powerful and active, not only bestows on its possessor a great facility in learning languages, but gives him a peculiar fluency in the use of words. Whether engaged in conversation or public address, his language flows with great copiousness.

To both the orator and the author the faculty in full development is of the utmost importance. Without it, no one can either write or speak with ease or high effect. To the poet, in particular, whose language must be peculiarly select, it is essential. For, however poetical his ideas may be, if not poetically expressed, they will be stiff and ungraceful.

Strong Language and Ideality, with moderate or weak Reflective powers, will render expression turgid and bombastic.

Strong and active knowing and reflecting faculties, with weak Language, give rise to stammering and hesitancy in relation to words. By persons thus endowed, the same word is apt to be repeated.

This faculty is specific and therefore primitive. It is so essential to the terrestrial condition of man, that if deprived of it, his power and efficiency would be almost annihilated.

This organ and its seat are *certain*.

Real functions of Individuality, as distinct from those of the other knowing faculties.

Inasmuch as the other knowing faculties take cognizance of the individual properties of objects, Form, of their figures, Colour, of their hues, and Size, of their dimensions, objections have been thence drawn against the necessity of an organ of *Individuality*, and therefore against its existence. If, say the objectors, other organs *individualize*, that of *Individuality* is superfluous.

To these objections, the answer is obvious and satisfactory.

A tree exhibits *form*, *size*, and *colour*; and these three properties are perceived individually and exclusively by the three faculties corresponding to them in name. But still the aggregate or compound idea of a tree is not thus formed by the intellect. Form alone does not compose this idea; neither does size alone; nor colour alone. But the three united do. And this union is precisely what *Individuality* effects. It combines and individualizes the three properties, and thus forms the abstract idea of a tree, as a single thing, without any actual recognition of the properties that compose it. In thinking of a tree *abstractedly*, we do not admit the conception that it has either a given and definite colour, size, or figure. We do not conceive of it as green, large, and lofty, with few branches, nor as yellow, small, and low, with many branches. We think of it as an individual object, called a tree. The elements of the abstract compound idea are taken by *Individuality* from the other three knowing faculties, and thus united in an *intellectual creation*.

In the same way might I analyse the idea of the being called man. Its elements also are *form*, *size*, and *colour*. But by neither of them singly is man composed. Taking, therefore, the three, and uniting them properly, *Individuality* forms the idea.

Strictly speaking, then, Individuality is not a *knowing*—certainly; it is not a *knowledge-acquiring* faculty. For its supply of the elements which it uses, it does not look to external objects. This function it leaves to the other truly knowing, or knowledge-gathering faculties, while it collects from them the fruits of their labours, and so combines and modifies them, as to suit precisely the purposes of the intellect. As respects the acquisition of knowledge, it is a plagiarist; but an original in relation to its mode of using it.

In function, then, as well as in situation, it holds a middle rank, and seems to form a connecting link, between the knowing and the reflecting faculties. Although it does not etiologically combine and arrange, for the purposes of induction; it does abstract and combine, with a view to individualize in idea, things or qualities which in nature are disunited and different.

The process by which the idea of man is formed has been already stated. Let the faculty of Number give the idea of plurality, and that of Order, the idea of rank. By combining those three elements, *man*, *plurality* or *many*, and *rank*, the faculty of Individuality, forms the abstract and compound idea of an army. In thinking of the army thus formed, the separate elements that compose it are forgotten. The mind dwells only on the aggregate.

From this view of the subject, it appears, that *Individuality*, receiving from the real knowing faculties the elements of its knowledge, combines them into aggregate or compound ideas, and hands them over for further use to the *reflecting* faculties.

Its specific nature, then, and great importance are alike obvious. It is essential to *intellection*, in the strict and technical meaning of the term. Without it, the higher functions of the intellect could not be performed. It begins the business of abstraction and generalization, which the reflecting faculties complete.

Genius 2. Reflecting Faculties.

The intellectual faculties which we have hitherto considered, recognize only *objects* and their *separate qualities*. Those to the consideration of which we now proceed, are concerned in forming ideas of *relation*. They *truly analyze, combine, and infer*. Their functions constitute what we denominate *reason* and *reflection*.

30. *Comparison*. A single organ. Seat. Immediately above and adjoining No. 19, about the termination of the hairy scalp.

Its function is the power and love of comparison.

In order to illustrate and convince, in conversation or public speaking, many persons, instead of close reasoning and severe analysis, have recourse to comparisons, similies, and analogies, and show themselves exceedingly prolific in them. Such individuals are prone to the use of antithesis and allegory. They indulge much in the figurative language generally, and are fond of fable.

This faculty compares not only external things, but the sensations and ideas of the other faculties. Each knowing faculty can compare and contrast its *own ideas*. *Tune* compares one musical tone with another. *Form*, one figure with another, and *Colour* can compare and contrast the rays of light. But comparison does the same with the ideas of all the knowing faculties, and with the relations of things. It compares, moreover, the sensations with each other, and even sensations with ideas.

The organ and its seat are *certain*. A strong development of it gives a fullness to the upper and central part of the forehead. Many of the Asiatic nations are remarkable for this development. Hence their fondness for allegory, antithesis, fable, and all kinds of figurative writing. The late professor Rush had the organ of comparison very large. His writings show that he had the faculty in a corresponding degree. This faculty is *specific* in its nature and functions. On the usefulness of it, it were superfluous to dwell. Were it not a component part of the human intellect, man would be comparatively ignorant and inefficient. Without it, there could be no generalization, no classification, and therefore no philosophy. Knowledge would consist exclusively of individualities. In this state of things, man would be almost as unimprovable as the inferior animals.

By some of the most enlightened Phrenologists of Europe the question is now discussed, whether this be really the organ of *Comparison*, perceiving differences as well as resemblances; or the organ of *Analogy*, as it was first termed by Gall, taking cognizance of resemblances only.

Without even taking part, much less pretending to decide, in this controversy, we shall simply observe, that the same intellect is, by no means, in all cases, equally prompt and expert in the perception of *analogies* and *differences*. On the contrary, many writers and speakers who are exceedingly rich and splendid in analogy, are, in no small degree, wanting in their powers of discrimination. Hence

plausibility, at least, attaches to the belief, that the organ of analogy is not, at the same time, the organ of distinction.

31. *Causality*. A double organ. Seat. On each side of, on a level with, and immediately adjoining, No. 30.

Its function is a talent for logical reasoning and inductive philosophy—a love of etiology, very generally of metaphysics.

Individuality amasses facts, comparison judges of their identity, analogy or difference, and causality inquires into their causes. The three faculties combined make up the real philosophical character. They are the superior faculties of the intellect.

Causality is the faculty that gives real profundity to the intellect. It inquires into, and recognizes that secret tie, which connects events and phenomena as cause and effect. Nor does it merely look to the past for the cause of the present. It also calculates from the present what will occur in future. Deriving its lights therefore, from observation and experience, and relying on the steadiness of nature in her course, it approaches, in its function, the spirit of prophecy.

An individual possessing this faculty in a degree of great activity and strength, feels an irresistible desire to inquire into the cause of every thing around him. Each phenomenon of nature he refers to a cause. That cause, when discovered, he refers to another cause; and that again to another, until he ascends, at length, to a First or Supreme Cause, the Source of all existence. It is by this faculty, then, that man is enabled to “look through nature up to nature’s God.”

The same individual directs his attention to the condition and changes in civil society, and marks its progress in wealth, power, and refinement. Each step of improvement or decline, he endeavours to refer to its proper cause, and thus becomes a political economist, from the impulse and the workings of his faculty of causality.

The actions of man he also attempts to trace to their causes, and becomes a votary of *intellectual philosophy*.

When this faculty predominates greatly over the knowing faculties, it is apt to lead to *philosophical visions*. This constitutes its excess and abuse.

When, by its activity, it induces its possessor to step ahead of his associates, in his inquiries into causes, those who lag behind him, from weakness or indolence, seldom fail to revenge themselves on him, by attaching to his labours the term “speculation.”

Men in whom this faculty is weak, can never either form principles in science themselves, nor clearly comprehend them, when established by others.

Counsellors and high cabinet officers ought to be richly endowed with causality. To mere executive officers a much more moderate endowment of it may be sufficient.

Widely different as it is from all others, this faculty is specific. Its importance and aptitude to man's situation on earth, will not be questioned. Without it nothing great or signal could be achieved. It is the source of all the most distinguished improvements, whether in civil, professional, or practical life.

The organ and its situation are *certain*.

32. *Wit*. A double organ. Seat. On a line with 31, adjoining it externally, directly above the line that separates No. 23 from No. 25. When strongly developed it gives breadth to the upper part of the forehead.

The function of this organ is a quick perception of such analogies of resemblance as, by their novelty and unexpectedness, excite surprise and agreeable emotions. Or it might be represented as a quick perception and vivid sense of the ludicrous.

Phrenologists have not yet entirely decided the question, whether wit is a *sentiment* or a *reflecting faculty*.

Spurzheim is inclined to regard it as a *sentiment*. He believes that it gives the sense of the *ludicrous*, in the same way as Ideality gives a sense of the *beautiful*.

In either case, the faculty is *specific*, and highly *useful*. It contributes to the aptitudes of man to his situation.

In the masks of Sterne, Shakespeare, Voltaire, Cervantes, and Chaucer, the development of this organ is peculiarly striking. Its existence and situation are *certain*.

33. *Imitation*. A double organ. Seat. On a line with No. 13, and adjoining it on each side externally.

The function of this organ is a love of imitation, and, particularly when aided by secretiveness, confers on its possessor a peculiar and very striking aptitude to practise it.

Persons in whom it is strongly developed imitate with great facility and accuracy, both in manner and form, whatever they see done by others. They have often the same facility in imitating the works of nature. In conversation they are remarkable for "suiting the action to the word." They often imitate *instinc-*

tively and unintentionally, both in air, language and mode of pronunciation, those with whom they but casually converse; and assume involuntarily and even *unconsciously*, the manners, habits and general deportment of their associates. It is under the large development of this organ, that man is truly "an imitative animal."

Hence persons largely endowed with it are qualified to become mimics, actors, painters, and sculptors.

This organ and its seat are *certain*.

That this faculty is both specific and useful, and therefore adapted to the condition of man will not be denied.

In monkeys and baboons, the organ is well developed. So is it in the American mocking bird.

On a careful examination of the foregoing view of the cerebral organs, it will be discovered, as one of the beauties of Phrenology, and, at the same time, as somewhat favorable to its truth, that all those which belong to the same family are uniformly situated in the same region. The *three* kinds of organs form, by their residences, an equal number of family-circles.

As already intimated, the organs of the *animal propensities* form the *basis* of the brain; the *moral sentiments*, the coronal, or upper portion of it; and the *true intellectual faculties*, the *frontal portion*.

As subdivisions, or minor families, *amativeness*, *philoprogenitiveness*, and *adhesiveness*, all organs of modified attachment, lie in contact with each other.

So do *combativeness*, *destructiveness*, and *secretiveness*, which act in aid of each other.

Benevolence, *veneration*, and *conscientiousness*, are as nearly allied in situation as in character, while *hope* and *firmness* join to sustain them.

Of the knowing organs, *form*, *size*, and *weight*, which are nearly allied, constitute one little coterie; while *order*, *tune*, and *number*, which are also congeners, constitute another.

Of the reflecting faculties, *comparison*, *causality*, and *wit*, encircle the upper part of the forehead, like a bandeau of brilliants, while *ideality* stands contiguous, to heighten their lustre.

As an evidence that the brain was not *artificially* and *arbitrarily* mapped out, in this manner, but that *nature* is the author of the arrangement, it is worthy of remark, that the organs were all discovered by *observation*, at different, and many of them at dis-

tant periods, and their situations marked at the time of discovery, without any reference to anterior discoveries. Nature herself gave them their positions, and the authors of Phrenology discovered and recorded the fact. Nor was the family-likeness of those situated in contact recognized, until long after the discovery of their positions.

SECTION VII.

From the matter contained in the preceding sections, it appears that Phrenology is nothing but an account of the general structure and form of the *brain*, and the physiology of the *intellect*; a view of the parts that compose the *former*, and an exposition of the functions of the *latter*.

It will be perceived that by the term *intellect*, I mean neither the brain alone nor the mind alone, but the aggregate resulting from the union of the two. Nor, in the strict use of language, does it appear to me admissible to annex to the term any other interpretation.

The mind is not the intellect, because it cannot *alone* act *intellectually*; the brain is not the intellect, because *it* cannot *alone* act *intellectually*; but the two united *are* the intellect, because *when* united they do *thus* act.

Thoroughly to understand *Phrenology*, which is but another name for *mental philosophy*, it is essentially necessary to have a knowledge of the *anatomy of the brain*, at least, and of *physiology generally*. He who has no acquaintance with the capabilities and functions of living organized matter, when it is *alone*, is disqualified to understand and appreciate them when it is united with mind.

A leading cause of the slow progress of mental philosophy, compared with the march of other sciences, is, that it has been cultivated generally by those who had no knowledge of anatomy or physiology. Had Locke and his followers been versed in those two branches, their metaphysical doctrines would have been much more intelligible and correct than they are. They would have been derived from man in his *compound character*, and not so exclusively from his *spiritual part*. To be brought to the perfection of which it is susceptible, mental philosophy must be studied by those who are thoroughly acquainted with the nature and general philosophy of living matter. As long as its cultivation shall be con-

considered the province of the *mere moralist*, it will continue defective and debased by error. As well might we attempt the study of optics without a knowledge of the laws of light or of the structure of the eye as that of intellectual philosophy, without a knowledge of the anatomy and physiology of the brain.

Unable to cope with its advocates in *honest argument*, the enemies of Phrenology have disingenuously endeavored to awaken against it the prejudices of the conscientious, and the uninformed, by attacking it on the ground of its *immoral* tendencies. Not recollecting that no doctrine can be proved to be in its end *immoral*, which cannot be also proved to be in its nature *untrue*, and that to attempt the *latter* object through the medium of the *former*, is like passing sentence of death before conviction of guilt, or like the *unmanly* practice of ceasing to *reason* and beginning to *rail*—not recollecting these things, the cavillers at this science have pronounced it favourable to a belief in *Materialism*, *Fatalism*, and the *legitimacy of crime*.

That, in relation to materialism, these charges are equally illiberal and unfounded, conclusively appears from the following considerations.

By materialism, as applied to man, is meant either the denying of the existence of his *spiritual*, and the attributing to his *material* part the entire business of intellection, or the representing of the *latter* as *predominant* in the process over the *former*.

But both of these propositions I have already rejected, which completely exculpates my doctrines from the charge.

I have stated expressly, that, *alone*, matter is incapable of intellectual operations, and that when acting intellectually in union with mind, it is the *inferior* power. In every instance I have given mind the *ascendency*, because I believe that such is its rank in the scale of creation.

But, say my opponents, however pure may be the intentions, and however correct the professions of its advocates, the *tendency* of Phrenology is to materialism. And why? Simply because it states the fact, that in intellectual operations, it is *necessary for matter to co-operate with mind*.

And does not every system of metaphysics, from Aristotle to Brown, *do the same*? Let facts decide.

Sensation and voluntary motion are operations as *truly intellectual*, as the study of astronomy, mathematics, or painting. To be as definite as possible:

Seeing, hearing, tasting, smelling, feeling, moving our limbs, and talking, are processes of intellect. And does not matter *necessarily* co-operate in their performances? Will any one contend that they can be affected *without matter*?

Can the mind see without a material organ called an eye, can it hear without an ear, taste without a tongue, smell without a nose, or feel without organs appropriate to that function? or can it move either the limbs or the organs of speech without nerves and muscles?

A reply in the *negative* will be rendered by every one.

In what, then, consists the difference between the metaphysician and myself? He acknowledges that the mind cannot see or talk without a *material organ*. I assert that it cannot study mathematics or reason without one. I contend that without a suitable *cerebral apparatus*, man cannot acquire a knowledge of either music, painting, or language; he admits that without an appropriate *muscular arrangement*, voluntary motion would be impossible, and that without the instrumentality of gustatory and olfactory nerves, the mind can neither taste nor smell. He is, therefore, as much of a materialist as I am.

He declares that, without the aid of matter, the mind can perform the *higher and more difficult* operations of the intellect, but not the *lower and more easy*. I contend that it can perform *neither*; but, that if it must claim *material aid* in doing that which is easy, it cannot dispense with it in doing that which is difficult.

Injure the brain, and what are denominated the *internal functions* or states of the mind are as seriously affected as those that are *external*. A severe blow on the head, or a fracture of the skull, will extinguish imagination, memory and judgment, as certainly as vision; and sometimes even more so. Under such lésions the *external functions* of the intellect remain at times, while the *internal* are destroyed or radically impaired.

When we are exerting forcibly the internal faculties of the mind, especially the reflecting faculties, in the process of reasoning, we have a perfect consciousness that the brain is *in exercise*; often a more intense degree of exercise than that which accompanies the employment of the external faculties. The severe study of logic or mathematics fatigues the brain, and produces headache sooner and more certainly than the exercise of the eyes on external objects, or the employment of the ears in listening to sounds.

In the progress of age, as the brain decays, the internal faculties fail as early and certainly as the external. The *meridian vigour* of imagination and memory does not outlive that of vision. The former powers begin to grow less active and efficient, as early as the latter begins to grow dim. And the external functions of hearing, tasting, smelling, and feeling, often remain in considerable perfection, after most of the internal have yielded to time.

The more elevated and refined of the intellectual functions fail first, *because they are the most elevated and refined*. The reason is obvious. The cerebral parts which aid in their performance being the most delicate and exquisite in their organization, experience first the ravages of age, *in consequence of their delicacy*.

We hear materialism strongly denounced as a dangerous heresy in science. But whence arises its danger? I answer, if at all, from its *falsehood*, and nothing else. It is *falsehood alone* that renders or can render *any doctrine* dangerous; and *every doctrine* that is false, is dangerous in *some respect*. It is *truth alone* that gives to science innocency and utility; and whatever is true may be safely received and acted on as a rule of practice. These positions are to be regarded as axioms.

But what is their bearing in relation to pure *spiritual metaphysics*?—that scheme of mental philosophy which takes from *matter* what justly belongs to it, and gives it to *mind*? Here is *false doctrine*, and I repeat, that wherever falsehood exists, *there* is danger. Materialism, then, is not the *only doctrine* that is dangerous. *False spiritualism* is as certainly dangerous as it is, and to the same extent.

The only scheme of mental philosophy free alike from false doctrines and dangerous tendencies, is that which assigns respectively to mind and matter their due proportion of influence in the business of intellection. And this is done by Phrenology alone, which considers man as compounded of matter and spirit, each acting its appropriate part in every intellectual function he performs.

In admitting the truth of the preceding statement, (and they will not venture to deny it,) metaphysicians are as much materialists as phrenologists are. The former acknowledge that matter co-operates, and *must* co-operate with mind in intellectual operations, and the latter do no more.

The reason why the internal functions of the intellect are supposed to be of a higher and more *spiritual* character than the external, is easily perceived. They are more concealed, the mechanism on which they depend not being so much a matter of observation. From this consideration a degree of apparent mystery hangs around them. But we well know that every thing thus circumstanced is usually raised in imagination above its true standard, while things that are familiar are depressed below it. Yet in reality, there is no more mystery in the process of *reasoning* or of *imagining*, than in the process of *vision* or of hearing. The one is as easily understood as the other.

Let them exchange situations, so that the internal may be seen and the external concealed, and the functions that are now considered exclusively spiritual will be no longer so; while those that are acknowledged to be in part material, will be completely *spiritualized*. Such is the propensity of the human mind to enhance the importance of things that are *not* known, to the unjust disparagement of things that *are*. It is thus that we often give to individuals whom we have never seen, a fictitious greatness, while we detract from the real standing of those with whom we have been long familiar.

But of all the charges preferred against Phrenology, that of MATERIALISM is, for reasons other than those that have just been assigned, one of the most fallacious, futile, and impotent. It is itself erected on a postulate not only *hypothetical*, but incontestably *false*. It implies, in its very nature, a *virtual*, equal in strength to a *positive* declaration, that those who employ it have a correct knowledge of the *substance* that composes the *spirit of man*. For if they are destitute of that knowledge, on what ground can they be justified in rejecting and calumniating a doctrine, if it even were to assert the materiality of the spirit. The very charge of *materialism*, then, attaches, at once, to those who prefer it, the two-fold fault of *presumption* and *falsehood*—Presumption, in making an unfounded pretension to knowledge beyond the powers of man to attain; and *falsehood*, in alleging that they *perfectly well know*, that the human mind is *not material*; whereas, in fact, they know nothing about it.

Is any one prepared to say, that he has penetrated so profoundly into the secrets of nature, and mastered so completely her principles, and laws, as to be able to declare *positively*, either that matter

is or is not a *thinking* substance? Has he so thoroughly familiarized himself with matter of every description, as to hazard the assertion, that he is perfectly acquainted with *all its attributes*? I say, matter of every description? For no one has ever alleged that *common* matter is capable of thought. The grossest materialist has never contended, that the matter of muscle, bone, gland, or tendon, is a thinking substance. All agree, that if matter be the thinking principle, it must be that kind possessed of the most refined, ethereal, and elevated character. Not that which we receive by *eating and drinking*, but in some other way.

Is there, in the nature of matter, any thing that imperatively forbids the Deity to constitute it the agent of thought? The bold-est *spiritualist* will not venture to assert that there is. Or if he does thus venture, he will pass, in doing it, the boundary of his knowledge. Nor will his rashness and arrogance terminate here. He will presumptuously attempt, by impotent laws of his own imagining, to limit the operations of *omnipotence itself*.

Within the period of the last half century, many kinds of matter, before unknown, possessed of properties *entirely new*, have been brought to light by the labours of the chemists. Nor is any one privileged to say, that there does not still lie concealed in the bosom of nature, a species of matter, more highly endowed, which God, in his wisdom, has elevated to the rank of the principle of thought. The *power* of the Deity is equal to this; and no one has so far fathomed his counsels, or penetrated so deeply into the scheme of creation, as to be authorized to assert that his other attributes forbid it.

Nor, when liberally and justly considered, is there the slightest degree of *grossness* necessarily connected with the doctrine of materialism. However gross material *compounds* may appear, *simple* matter cannot fail to be as *pure as spirit*. The ideas of simplicity and purity are so indissolubly associated, that they cannot be separated even in imagination. That which is simple must be pure, *because of its simplicity*. We conceive of matter as gross and impure, only because we have examined it chiefly in a compound condition.

But who will venture to predicate grossness or impurity of electricity, galvanism, or the glittering sunbeam? For ought we *know*, or have reason to *suspect*, those forms of matter are as pure and refined as the *essence of spirit*.

There is nothing coarse, therefore, or degrading to us—nothing calculated to debase us in our own estimation, in the idea, that our minds, in common with our bodies, may consist of matter.

Thus, were he so inclined, might the *materialist* reason; nor would it be in the power of the *spiritualist* to subvert his arguments. So little do we know of the nature of matter, or the nature of spirit. In attempting to grasp and handle subjects so subtle, we find them intangible; and, like themselves, our notions respecting them, prove lighter than vapour.

But whether it be true or false, the doctrine of the materiality of the mind can ultimately do no mischief. It cannot alter the wise arrangements that God has established, and pronounced “very good.”

If the doctrine be false, it will be overthrown by the potency of truth, and will bring disgrace on its advocates. For, in the progress of knowledge, the time will come when all error shall be dissipated, and truth become as lucid and diffusive as light. Take from the human intellect the shackles that have been thrown around it, by sundry causes, and truth may then be safely left to combat error, with a confident assurance that it will prove victorious.

If, on the contrary, the doctrine of materialism be true, it is nothing but an interpretation of nature, as God has ordained it, and must, therefore, be not only innocent, but useful. For, in the consummation of things, every truth will find its place, and manifest its usefulness, in the furtherance of happiness.

Whatever may be the fate of materialism, as a doctrine, it can in no way effect the decrees of Heaven, in relation to the nature and destiny of the human soul. If that sublime and never-dying principle be material, the fact itself proves conclusively, that matter is the most suitable substance that the wisdom of Deity could select for its formation. For, that he selected the most suitable that creation afforded, is a position which man is not permitted to question. And if it be not material, then is the doctrine which asserts it to be so, a tissue of error, destined to be certainly and shortly unravelled or destroyed by the finger of truth.

But I am told, that materialism, *if true*, subverts the doctrine of the *immortality of the soul*. I answer, be it so. *If truth* subverts either that or any other doctrine, it ought to be subverted. Truth will never subvert any thing that is not *untrue*. And if the doctrine of immortality be untrue, the sooner it is subverted the better.

But the allegation is a mistake, founded on a very restricted and erroneous view of things. Materialism is not hostile to a belief in the immortality of the soul. It is no less consistent with it than spiritualism.

Matter is, in its nature, as imperishable as spirit; and has no doubt, already existed as long as *created spirit*. Nor has God any where asserted his intention to destroy it. That, in its compound character, material creation will undergo many changes, cannot be doubted. For, it is changing every moment. But that that fair and goodly creation, perfect as the hand of God can make it, will ever be annihilated, cannot be believed, except as the result of gross superstition.

Will any one urge, as an objection to this, the great *conflagration* predicted in Scripture? I reply, that that catastrophe is not represented as certainly embracing the entire creation; nor is it at all a settled point, even among divines, that the prediction is not to be received as metaphorical. But be these topics decided as they may, *conflagration* and *annihilation* are very different processes. Fire changes the form and combination of compound matter; but it cannot annihilate that which is simple. Caloric is itself believed to be matter, and has, therefore, no power to annihilate other matter. It no more destroys the matter which it burns, than that matter destroys it. They act on each other *mutually*, both sustaining a change of condition, and there the process ends.

Besides, for what purpose would God destroy the universe he has organized? and what good would be attained as the issue? Is it that he has improved in his capacity, by time and experience; that he is an abler artist now than he was originally; and can therefore construct a universe more perfect, or amend that already constructed, by passing it through the fire. No one will be guilty of such irreverence towards the Most High, as an affirmative answer to these questions would imply. The universe, as already organized and endowed, is exquisitely adapted to the purposes of Deity, and he will not, with the caprice and mutability of man, unsettle it, to form another for his mere amusement. Such proceeding would be unworthy of a God.

On the score of *immortality*, then, matter is perfectly suitable for the formation of mind. It is utterly imperishable, unless annihilated by an act of omnipotence. And to that act, if directed against it, *created spirit also must yield*.

It will not be denied that God possesses the power to constitute matter a thinking principle. Nor have we any ground to allege that the exercise of such power was inconsistent with any of his other attributes.

It is further alleged, that if man consist of nothing but matter, he cannot be a *moral* or an *accountable* being.

Here, again, the foes of Phrenology argue from their ignorance. Can they prove by a chain of fair reasoning, or have they any direct revelation to that effect, that materiality is incompatible with morality and accountability? or can they show any necessary connection between spirituality and those two attributes of being? Must a being, because it is spiritual, be necessarily a moral agent; and, of the same necessity, not be a moral agent, because it is material?

To these several questions truth returns a negative reply. There is no ground to assert, that to form a being both moral and accountable, God was constrained to employ any other kind of substance but matter. He who ventures to maintain the contrary, arrogantly usurps creative power and wisdom, and assumes to himself the presumptuous pretension to be the "God of God."

Of all discussions in which man can engage, those that relate to *substance* and *essence*, are among the most useless and nugatory. Dating their existence as far back as history extends, they have continued to the present time, without having achieved any thing either profitable or satisfactory. They amount to mere *metaphysical puzzles*, in which, as in other riddles and conundrums, men show their ingenuity, rather than their judgment.

Nor is any one of these discussions more visionary and unprofitable, than that which respects the substance of the mind. The absolute folly of engaging in such an inquiry, may be made to appear from various considerations.

Even admitting mental substance to be an object of rational research, there are but two channels through which a knowledge of it could possibly reach us. These are *consciousness* and *observation*.

But consciousness tells us only that there exists, in union with our grosser part, an active principle, capable of a number of specific functions. Of the substance of that principle, it gives no information. Nor, if it did, would such information be, in the slightest degree useful to us. For, from a knowledge of the substance of the mind, we could not infer a single attribute of it. Of the knowledge

of all substance the same thing is true. We can infer from it nothing of power or endowment. Had we no other source of information respecting *them*, our ignorance of them would be, at once, complete and hopeless.

But of the substance of the mind, *observation* teaches no more than *consciousness*. The mind is not a subject of observation, because, be its essence what it may, it lies beyond the reach of our senses. And observation is nothing more than the employment of our senses, as avenues for the admission of knowledge from without.

But it is the knowledge of *material* substances only that is thus attained. We have no senses to take cognizance of such as are immaterial. Admitting the mind to be immaterial, then, we can know nothing of it, in our present condition, except the feelings we experience, and the phenomena it exhibits when engaged in action.

With its substance, as already observed, it is impossible for us to become acquainted. Nor could the most intimate acquaintance with it, did we even possess it, throw a ray of light on the subject of either its immortality or accountability. Of these attributes we must derive our knowledge from other sources.

These sources are two, *Revelation* and the *constitution and endowment of the intellect*.

Of these, the former is the most direct and clear. No one doubts the authenticity of its teaching. It is, therefore, emphatically declared of it, that it has brought "life and immortality to light". Of the final accountability of man, its declarations are equally express.

Nor is the evidence to the same effect, derived from the constitution and endowment of the human intellect, equivocal or obscure. The indications of a future state of existence, and of man's responsibility in it, given by the faculties of *veneration*, *hope*, *conscientiousness*, *ideality*, and *causality*, can be neither misunderstood nor resisted.

Veneration points immediately to a God to be adored; hope carries us beyond the bounds of present existence; conscientiousness proclaims that we are responsible for our actions; ideality implants in us a longing for something more beautiful and excellent than we now enjoy; and the reflecting faculties, acting on these internal sentiments, and on impressions derived from creation without, draw inferences corroborative of the *immortality* and *accountability* of man. Nor, in forming these conclusions, do the faculties here specified

take the least concern in the hypothesis, whether the soul of man is material or immaterial

All that is requisite to attach to us the responsibilities of morality and religion—to render us worshipers here, and subjects of reward and punishment hereafter, are *knowledge, immortality and accountability*. And, as already stated, these are not necessarily attributes of immaterial beings. We have no solid ground to believe, that they may not also belong to beings that are material.

It is much to be lamented, that sound christianity should be represented by its votaries as in any measure dependent on or identified with, our notions of the *substance* of the human soul— notions, with which it assuredly has no connection; and respecting which many of the most pious christians and enlightened divines have differed very widely.

Suffer christianity to rest on its own basis, supported by the evidence that truly appertains to it, and it will stand secure in its own strength. Identify it with mere *hypotheses* of any kind, whether they relate to matter or spirit, and you render it also *hypothetical* and will certainly injure it.

Like individuals, institutions and ordinances are best known and most strongly characterized by the “company they keep” Associate religion with liberality of inquiry, and the liberal and enlightened will be its devoted friends. Inculcate and administer it in such a way as to render it hostile to freedom of thought and universality of research, and it must depend for its support on the *uninformed* and the *bigoted*. The highly gifted and extensively informed will desert it. For no one, who is truly enlightened, will be induced to believe, that that religion which would fetter the intellect, and narrow the soul, is either true or useful.

The *truths* of religion every good and enlightened man will embrace, and bow to them in reverence. But its errors his conscience will compel him to oppose, because they are pernicious in proportion to the infinite importance of the subject.

Fatalism is the reverse of moral liberty. It is that doctrine which teaches that man does of *necessity* whatever he does in obedience to his *natural* propensities; and that hence he is not *criminal*, because he is not *free*.

But Phrenology is as compatible with free agency as any other scheme of mental philosophy.

It teaches that man derives his propensities from nature; and that in some individuals those propensities are much more powerful, and, of course, more difficult to govern than in others.

That these positions are true, must be acknowledged by the metaphysician as well as by the phrenologist, because they are the result of universal observation, and are susceptible of positive proof.

The propensities must be the product either of nature or of education, there being no other source to which they can be referred. But they appear even strong in childhood, before the influence of education has been felt. *Nature*, therefore, and not *habit*, is certainly their parent. They are anterior to habit, and stand related to it much more as cause than as effect.

In children of the same family, possessing the same degree of health, and educated in precisely the same way, the propensities are often exceedingly different. In one they are all mild, easily controlled, and lead only to praise-worthy conduct. In another they are all turbulent, and ungovernable, and minister to vice. In a third, they exhibit a mixed condition, some of them being moderate, others violent, some prompting to virtuous, and others to vicious actions.

That this is a correct picture of human nature, both the *phrenologist* and the *metaphysician* will readily acknowledge. But they differ as to the ground or cause of it. The former attributes the propensities to the instrumentality of *matter*, the latter attaches them exclusively to mind. Both acknowledge them to be derived from nature, mind and matter being equally her gift.

In reference to the doctrine of *Fatalism*, where is the difference between these two views of things? Must not propensities radiated in mind impel to their appropriate actions as inevitably as if they were radiated in matter?—Unquestionably they must; and, if any difference can exist, even more so; for there is good reason to believe, that education has much more influence in changing permanently compound matter, which is constantly undergoing changes, than un-compounded spirit, which appears to be wholly insusceptible of change, according to the usual interpretation of that term. To produce any change in a simple indivisible substance, is to revolutionize its very existence; in which event it is *no longer the same being*. Really to change spirit would be relatively to annihilate it.

When analysed and correctly understood, phrenology presents a system of intellectual checks and balances, much more favourable to moral liberty, than any other scheme of mental philosophy.

As already stated somewhat in detail, it divides the faculties of the intellect into three orders or grades, the propensities, the sentiments and the intellectual faculties properly so called, assigning to the higher the control of the lower. The sentiments control the propensities, while, by the aid of the will, the intellectual faculties enlighten, direct, and govern the whole. To be more specific on this subject:

The three grades of faculties are alike essential to the nature of man, and contribute each its specific part, to render him perfect. Of the intellectual faculties neither virtue nor vice is predicable; most of the sentiments incline to virtue; and the propensities become vicious *only by excess*.

Suppose an individual to have the organ of *covetiveness* strongly developed. Uncontrolled by any other development, this would lead to dishonesty and theft. But the organs of *conscientiousness* and *benevolence* check the propensity, and the intellectual organs indicate the degrading and perilous nature of the crime. This latter circumstance calls into countervailing action the organs of the love of approbation, and self esteem, while the will, exerting its influence in behalf of virtue, subdues completely the propensity to vice.

The same thing is true as to the machinery brought into operation for the purpose of vanquishing any other vicious propensity.

Let it be that of destructiveness, which, uncontrolled, would lead to murder. It also is vanquished by conscientiousness, benevolence, love of approbation, self-esteem, the intellectual faculties, and the will.

Secretiveness uncontrolled, prompts to falsehood, hypocrisy, and intrigue. But, balanced and governed by the higher faculties, it bestows great facilities and readiness in the honorable management of intricate affairs, and renders the possessors of it exceedingly fertile in efficient and upright means to attain their purposes.

Cautiousness uncontrolled, is timidity and cowardice. But modified by combativeness, firmness, self-esteem, love of approbation, and the reflective faculties, it becomes prudence and deliberation, united to high minded and chivalrous valour.

Veneration left to itself, is blind superstition. But enlightened and regulated by the other faculties, it becomes rational piety.

Thus might I show, by a general analysis, that any single propensity or sentiment, uninfluenced by the others, would lead to mischief; while the functions of all the faculties united in due proportion constitute the harmony and perfection of the intellect.

By this system of countervailing influences, even the faculty of numbers, of painting, or of music, may be rendered less dominant than its development indicates.

From this analytical view of the subject, I appeal to every unprejudiced reader, whether Phrenology does not present a system of checks and balances much more favourable to moral liberty, than any other scheme of mental philosophy. Indeed, it is in Phrenology alone that any real balance of the intellect is exhibited. To assail such a system with the charge of fatalism, is an evidence of ignorance, or dishonesty of purpose.

But it is fatalism alone that can give *legitimacy to crime*, and arraign nature as the author of guilt. Inasmuch, then, as phrenology is proved not to be favourable to fatalism, neither is it so to the legitimating of crime. On this topic, therefore, but little need be said.

A strong *propensity* to commit a crime, by no means implies a *necessity* to commit it. In every case where *insanity* does not exist, the higher faculties *can* govern the lower, provided they are properly called into action. If they be not thus called, the fault is not in *nature*, but in the individual who misemploys her gifts. The will is the paramount power of the mind, and *can* at all times controul the others.

Suppose an individual, sound in intellect, is about to commit a crime to which he is propelled by the strongest propensity. Let it be a violation of female honour. A witness unexpectedly makes his appearance. The ruffian abandons his purpose and flies. But the mere appearance of a third person does not here confer on the culprit any new intellectual faculty. It only induces him to employ those which he before possessed. In this instance the offender knows that he is committing a crime, and, at the same time, feels that he is *perfectly free*. His sudden and voluntary abandonment of his object is proof of both. His organs of *cautiousness* and *reflection*, excited into powerful action, by the appearance of the

witness, remove, on the principle of revulsion, the superabundant excitement of his amatory organ, and his victim escapes.

When we take into view the effect which education may be made to produce in weakening propensities, and in strengthening the moral sentiments and the intellectual faculties, so as to render them predominant in the intellect, we are forced to acknowledge, that, in the constitution of man, nature, according to the principles of Phrenology, has done every thing necessary and practicable, to constitute moral freedom, and to give to virtue an ascendancy over vice. If man, then, misemploys and abuses the dispensations of heaven, the fault is his own, and he must abide the consequence. Hence the future accountability of moral agents is perfectly compatible with the doctrines of Phrenology. That science, therefore, has no tendency to the legitimating of crime.

Independently of all other considerations, the very fact, that man possesses the faculty of *conscientiousness*, which is tantamount to a *primitive sense of morality*, constitutes him a *moral agent*. But it is by Phrenology alone that that faculty is practically recognized, and its existence proved. By no other scheme, therefore, of mental philosophy, is man's free and moral agency so completely established. By none is his accountability so clearly demonstrated.

From the preceding considerations, I trust it appears, that, as far as relates to morality and religion, Phrenology is as free from fault as any other scheme of intellectual philosophy. Let honest minds, then, lay aside their scruples, and inquire whether the science be true. As long as they entertain suspicions of its moral correctness, their examination of it will be partial and unfair.

SECTION VIII.

Having finished the consideration of the fundamental propositions in Phrenology, which it is the object of this publication to expound and support, I shall conclude with a section of miscellaneous matter.

Metaphysicians and phrenologists differ widely in their views respecting the nature, number, and names of the intellectual faculties. What the former denominate *faculties*, the latter consider as only *functions* of faculties, or their modes of operating.

Perception, memory, imagination, judgment, abstraction, attention, association, and indeed all the *faculties* so denominated by Locke and his followers, are nothing, in the phrenological school, but so many functions, or modes of operation of one or more of the primitive faculties.

The functions just designated belong to the *knowing* and *reflecting* faculties, which alone *form ideas, recognize relations*, and are subject to the *will*. I ought rather to say, that their decision *constitutes the will*. The mere *feeling* faculties *have no will*. In more common language, they are *not subject to the will*.

Hence we cannot, at pleasure, by *an effort of volition*, call into a state of *excitement, or active exercise*, the faculty of *benevolence, combativeness, destructiveness, adhesiveness, amativeness*, nor any of the other *propensities or sentiments*. They can be excited only by a condition of inordinate activity and vigour of their respective organs, by a *direct* presentation of their appropriate objects, or by an *indirect* presentation of them through the medium of the *intellectual faculties*.

But, in this respect, the *knowing* and *reflecting* faculties are governed by different laws. They also may be active from a state of inordinate excitement of their organs. In this case, the ideas which it is their function to perform, present themselves *involuntarily*. The *mechanician*, then, not only *without* an exertion, but sometimes *in despite* of it, *builds houses, or constructs machines in his thoughts*; the *musician*, without actually hearing it, feels the influence, and enjoys not a little of the delights of music; the *arithmetician* and the *mathematician* calculate instinctively, and by an impulse not easily resisted; the man of *FORM* is compulsively fertile in the conception of figures; he who is highly gifted with *causality*, *reasons involuntarily*, as if by inspiration; and the individual whose organ of comparison is predominant, thinks in allegory, and constructs fables in his dreams.

These faculties are also excited to action by suitable objects presented from without. Melodious tones excite the organ of *TUNE*; ciphers and diagrams, the organ of *NUMBER*; statues, drawings, and figures generally, the organ of *FORM*; and colours generally, but especially strong and elegant ones, the organ of *COLOUR*.

The *KNOWING* and *reflecting* faculties are also excited by an act of volition. Every individual has a power to call them into action when he pleases. Every one can, when he thinks proper, engage

in the study of languages, of mathematics, of painting, or of music. These faculties, when in action, minister to the gratification of those that only feel.

These three modes of excitement of the *knowing* and *reflecting* faculties, constitute, in the schools of metaphysics, what are there denominated three distinct *faculties*; but which, in reality, as already mentioned, are only three different *functions*. These are, *perception*, *memory*, and *imagination*.

When the knowing faculties are excited by the presentment of an object or source of impression from without, *perception* is the intellectual function performed. This is the lowest degree of excitement, and belongs to all the *knowing* faculties.

When melodious sounds are afloat, *music* is perceived; when a lawn enameled with flowers is presented, *colour* is perceived; when statues or other figures are presented, *form* is perceived; and when a number of objects under good arrangement is presented, *order* is perceived. Hence *perception* is not a *faculty*, but a *function* of many faculties.

Memory is another *function* of the *knowing* and *reflecting* faculties. It implies their *second* degree of activity. It consists in exciting those faculties by an *act of the will*, and thus calling up ideas previously formed. When an idea is remembered, the organ to which it belongs, is acting in precisely the same way as it was when it originally formed that idea.

Thus *Tune* remembers music, *Number*, mathematical calculations, *Language*, artificial articulated sounds, *Comparison*, the similarity or dissimilarity, identity or difference of objects, and *Causality*, the connection between cause and effect.

Strictly speaking, *memory* includes the notion of time elapsed. It would seem, then, that the faculty of *Time* must here co-operate with the faculty which originally perceived, and which now recalls the past event.

When individuality recalls facts or events, unconnected with the notion of time, the process is *conception*. Add time, and it is *memory*. Ideas are often renewed by the excitement, accidental or voluntary, of associated organs. Of this law *sympathy* is the foundation.

Inasmuch, then, as all the knowing and reflecting faculties remember, memory is only a *mode of action* of those faculties.

The *third* degree of activity of these faculties is *conception* or *imagination*. This also is a *function* or *mode of operation*, not a

faculty itself. Like *perception* and *memory*, it is common to all the knowing and reflecting faculties.

It consists in great activity, from *internal excitement*, whether that arises from the influence of the Will, or from the *native* liveliness and energy of the organs.

Here, again, in recalling ideas previously formed, the organs act precisely as they did, only more intensely, when the ideas were originally engendered. The conception of ideas is at once unusually rapid and brilliant.

It is in this process that *phantoms* and *visions* are formed. To produce them nothing is necessary but to give permanency, through disease of the organs, to very vivid conceptions of absent external objects.

From a state of excessive activity, in consequence of *accumulated vitality*, let the organ of Individuality maintain, for a long time and constantly, a vivid conception of a dead or an absent friend, or even of a *supernatural being*; and that conception will assume, at length, the *character of reality*. The individual indulging it will fancy his friend, or the supernatural being, *present*, and will probably engage in familiar conversation with them. It is thus we are to explain the supposed mystery of the Demon of Socrates, and Tasso's conviction of his daily intercourse, at about the same hour, with a *celestial visitant*, with whom he held the most eloquent discourse. In these cases the organ of *Wonder* must have been actively concerned. And if the engraved portraits we have of them be correct, both Tasso and Socrates had that organ in great fulness.

Instances of what is called *second sight*, and supposed apparitions, are to be explained on the same principle.

With this state of the *intellectual* faculties is connected the existence and philosophy of dreams. During *perfect sleep*, *all the faculties* are in a state of quiescence. In that condition of the brain, no ideas are formed.

Properly and philosophically speaking, *Judgment* is a *function* of the *reflecting* faculties. It is the result of the combined operation of *comparison* and *causality*. On no ground can it be considered itself a faculty.

In a certain point of view, however, the *knowing* faculties may be said to *judge*. When the faculty of *colour* is agreeably or disagreeably affected by colours presented to the eye, it may be con-

sidered as *judging* of them. When the faculty of *order* is offended or gratified by the arrangement of objects, it judges of that arrangement. And Tune may be asserted to judge of tones, when it is pleased or displeas'd with them.

But in the true and critical acceptation of the term, judgment consists in a perception of relation and aptitude, and the connexion between the means and the end.

A harmonious and well balanced combination of all the organs and their faculties, constitutes *practical judgment*, or *common sense*—In this well arranged confederacy, the *propensities* and *sentiments* must concordantly unite. If they be irregular and in conflict with each other, they will necessarily embarrass the higher faculties. The excess of Benevolence, Veneration, Hope, or Conscientiousness, will as certainly bias the judgment, and take from its soundness, as will a predominancy of any of the animal propensities.

Hence many individuals splendidly gifted with perception, memory, and imagination, are defective in judgment. In such persons, the *knowing* predominate over the *reflecting* faculties.

Abstraction is a function of the reflecting faculties, aided in their operation by *concentrativeness* and *firmness*. It consists in a ready and correct perception of certain general qualities, that belong in common to objects of the same family, by means of which they are arranged in classes. It bears a near resemblance to *generalization*, a process to which no one is competent, who is not well gifted with the reflecting faculties.

Attention is not, as some metaphysicians assert, a *faculty* of the intellect. Nor can it, in strictness, be denominated a *function*. It consists in an undivided and severe application of the *knowing* and *reflecting* faculties to suitable subjects.

Is a faculty wanting? The utmost effort of the will cannot command attention to the objects of that faculty.

Is a faculty possessed in an inordinate degree? The will is scarcely able to *prevent* attention to the objects that appertain to it. In some instances, no authority or difficulty has been able to prevent it. The possessor has triumphed over every obstacle to indulge himself in his favorite pursuit.

In every case, attention is easy and pleasant, in direct proportion to the fitness of the faculty applied, to the subject of attention.

Is the faculty of Tune strong and active? Attention to music is easy and delightful.

Is the faculty of Number powerful? The possessor applies his mind to calculation with facility and pleasure.

Is Language predominant? Close application to the attainment of a knowledge of language, is an easy and grateful, rather than a difficult and toilsome employment.

But for an individual to pay close attention to a subject to which his faculties are not well adapted, is no less unpleasant and laborious, than unprofitable. An individual destitute of Tune, finds neither facility, pleasure, nor advantage in the study of music. If destitute of Number, the same is true in relation to mathematics.

Let this truth be generally known, and acted on as a rule of practice, and both teachers and pupils will escape much useless perplexity and labour, to which they are now subjected. It will then be no longer received, as a metaphysical axiom, that, by mere dint of labour, the pupil can acquire any kind of knowledge, whether he has a native talent for it or not. The youthful will then be instructed according to their native endowments, not according to the whims of their parents or guardians, or the follies of their teachers.

Although attention then, is not itself a *faculty*, it is essential to the cultivation and usefulness of all the faculties of which it is predicable.

Association. Much has been said by metaphysicians of the association of *ideas*. Their object is not only to show, that our thoughts follow each other in a certain settled order of succession, but to ascertain the circumstances which determine that order, and serve as causes, in virtue of which one idea introduces another into the mind.

The notion of the metaphysicians, on this subject, would seem to be, that certain ideas have a positive attraction for others, by means of which they call them from their state of latency into active existence, and draw them along in a connected train, in such a manner, that, when, from any cause, the former enter the mind, the latter must necessarily follow them.

To feeble and superficial thinkers, there might appear to be, in this view of intellectual phenomena, something intelligible, at least, if not plausible. But it bears no better the touch of stern analysis, than the frost-work of the morning bears the glow of the meridian sun. A more visionary hypothesis was never constructed. It is perfectly worthy of the darkest period of the Dark ages;

and suited to the closet of the most dreaming metaphysician of that period.

Between nothing *unsubstantial* can affinities exist. Of *substance* alone is *association* predicable. But ideas are not *substantial*. They are mere states of the intellect, produced by impression. In more technical language, they are nothing but the result of cerebral excitement. As well, therefore, may nihilities be said to be associated, or shadows to possess a mutual attraction, as one idea to have an affinity for another.

The *organs* that form ideas are associated; because they are *substances*. Like other organs of the body, they are connected by sympathy, and reciprocally influence each other in their action. Hence, according to circumstances, their states of excitement, forming ideas, are *synchronous*, *alternate*, or *successive*.

The brain, consisting of a multiplicity of organs, is of itself, a system. In the very nature of the case, therefore, the organs must be associated; because *system* necessarily implies *association*. When *ideas*, therefore, *seem* to be associated, it is in virtue of the sympathy, native or acquired, or both, of the *organs* that form them. These organs act synchronously or successively, and, in point of time, the ideas engendered bear to each other the same relation; but not in virtue of their own attraction.

In proof of the sympathy, both native and acquired, of the cerebral organs, many instances might be cited.

During the period of their loves, the males of most tribes of inferior animals, are inordinately irascible, ferocious, and destructive. This arises from the excitement sympathetically communicated from the organ of amativeness to those of combativeness and destructiveness.

During the same period, many males of the feathered race become tuneful. Here, the excitement enkindled in the *amatory* organ, is communicated to that of *Tune*.

While the females of the inferior animals have the care of their young, they also are fierce and dangerous. Here the highly excited organ of philoprogenitiveness extends its condition to those of combativeness and destructiveness. The organ of adhesiveness also participates of amativeness and philoprogenitiveness.

In man himself phenomena not dissimilar occur. Youth are never so bold, intrepid, and manly, as when actuated by love.

The coward himself will fight for his mistress. The *Love of approbation* also excites combativeness.

Indeed love gives a higher tone to the whole intellect. In a particular manner, it rouses or elevates the energies of *Ideality*. Hence the earliest lays of the poet, are oftentimes sonnets in praise of his mistress. Every distinguished poet has not "lisp'd in numbers." But love does not *engender* the poetic talent. It only awakens it from its native slumber.

Combativeness and Destructiveness give keenness, force, and fire to the *knowing* and *reflecting* faculties. They, moreover, influence each other. Two individuals begin a combat without the least desire to kill. But, as the combat goes on, Destructiveness is inflamed, and life is intentionally taken away.

The *knowing* and *reflecting* faculties have also their associations. When, in debate, or any other kind of public address, *causality* is in intense operation, it communicates its excitement to *comparison*, *wit*, *individuality*, and *language*. Nor does its sympathy terminate here. It extends to the feeling organs, and excites, in a particular manner, *concentrativeness* and *ideality*. In debate, *combativeness* is also aroused and in action.

The associations of the cerebral organs, like those of the muscles, are *natural* or *acquired*.

In relation to the muscles, the instances of acquired associations are numerous.

One set of those associations is requisite in *dancing*, a second in *fencing* with the small sword, a third with the broad sword, a fourth in *horsemanship*, and a fifth in *balancing*.

In reference to performing on various musical instruments, similar remarks might be made. One set of muscular movements is requisite for the piano, another for the harp, another for the flute, and another for the violin.

In relation to the various handicraft trades, the same thing is true. Each has its own set of specific associated and acquired movements, without which it cannot be carried on.

Nor is this less the case, with regard to several compound intellectual processes. In the production of poetry, history, logic, geography, and eloquence, the cerebral organs are differently associated. So are they in the different professional pursuits.

Even in the writing of different kinds of poetry, different associations of organs are requisite.

In those who devote themselves to amatory productions, the organ of amateness unites in the association. Is the poet inclined to sing of war? *Combativeness* is one of the associated organs. Is *satire* the kind of writing to which he is prone? The organ of destructiveness makes one of the confederacy. Does he incline to sing of heavenly things? The association includes the organ of veneration,

In every individual the associations will be different, according to the native constitution of his intellect, and the training he has received.

Hence the palpable error of the supposition, that any one individual can tell, by consulting his own consciousness, what, in any situation, or under any given combination of circumstances, would be the train of succession of ideas in the intellect of another.

No two individuals precisely resemble each other in their intellects. Nor, under impressions by the same objects, can the *feelings, ideas, and reflections* of any two be alike.

Place in full view of the rapids and falls of the river Niagara, five individuals, of well characterized intellects. Let one be a poet, another, a painter, the third, a theologian, his organ of veneration largely developed, the fourth, a geologist, and the fifth, a mechanician and an engineer.

During their examination of this stupendous and terrific, yet beautiful spectacle, the sentiments and cogitations of each will be different, according to the different character of his intellect.

While the poet will be wrapt in admiration of the sublimity and grandeur of the landscape before him, he will be meditating its fitness for a scene in romance, or as the subject of a bold descriptive poem.

The painter, inspired with sentiments of admiration not dissimilar, but perhaps less absorbing, will scrutinize the scene, as a subject for the canvass.

The theologian, more sensible than before of his own nothingness, will experience an increase of his sentiment of veneration of the power and grandeur of the AUTHOR of all things, and his soul will be whelmed in the depth of adoration.

The geologist will be tracing, in thought, the changes on the surface of the earth, and their causes, that contributed to the formation of the mighty water-fall, and placed it in the situation it now occupies.

The mechanician, less sublime, but much more practical in his views and conceptions, will be deliberately scanning the positions and bearings of every thing before him, delighted with the pre-eminent aptitudes of the place, as a site for machinery to be moved by water.

Multiply indefinitely the gazing individuals, and each will experience feelings, and indulge in reflections *peculiar to himself*.

Is there in the group a military officer, educated in the field, and devoted to his profession? He will pass alternately, in his feelings and conceptions, from the actual roar of the cataract to the fancied roar of the cannon, in the conflict fought on a neighbouring height, and usually denominated, "*the battle of the falls.*"

So true is it that *present thoughts*, and *remembrances* and associations of the past, are infinitely diversified by the *native constitution*, and the training, of the intellect. And so futile and unavailing are all attempts of any individual, to determine the feelings and reflections of others, by those which he himself experiences. Were he, in imagination, to make his own stature and complexion the standard by which to determine the stature and complexion of the whole human race, the fancy would not be more preposterous.

Association, then, is predicable, not of ideas or feelings, but of the organs that produce them. For its cause, we are to look to that principle of sympathy which binds together every portion of the human body; but some portions of it more closely than others. Extinguish this principle, and all association and concert of action between the different parts of the system will be destroyed.

By means of the same principle of sympathy an association is formed between artificial signs and things. Let the thing be the object called a *tree*, and the sign, the word *tree*.

Let the object be presented to a child of four or five years old, who has not before beheld it, or to an individual who does not understand the English language. By means of Form, Size, and Colour, Individuality makes up an Idea, and the person is told that the object which is the original of the idea is called a tree.

The sound tree, excites the organ of Language, which is specifically calculated to take cognizance of it.

Between Language and Individuality a sympathy exists. Let the person under instruction be told several times, that the object in question is called tree, and that the term tree means the object.

As often afterwards as the word tree shall be pronounced within hearing of the individual thus instructed, and as often as he shall himself remember or think of it, the specific excitement thus produced in the organ of Language will be communicated by sympathy to the organ of Individuality, and the idea previously formed will be recalled.

Is the object an *event* called a *battle*, or a specific *feeling* denominated *love*? Individuality again forms the idea, and Language takes cognizance of the terms when pronounced, or presented by the proper characters in writing or print. Form, as before, the proper associations, and as often as the words are remembered by Language, the idea of the feeling and event will be re-excited in Individuality; and the converse. As often as the idea of the feeling and event is, in any way, recalled by Individuality, the idea of the word will be reproduced by Language.

In the same way is formed the artificial association between every idea and the term that designates it. The process depends essentially on the sympathy between Language, and the organ by which the idea is formed.

Thus are the sympathies and associations of the cerebral organs precisely analogous to those of the other organs of the body. When the stomach acts in a certain way, the heart, the skin, and the liver, sympathize. When the liver acts, the lungs, the head, or the muscles sympathize. When the uterus acts, the stomach and brain sympathize. When the skin acts, the internal parts generally sympathize. And when the brain, as a part of the system, acts powerfully, the range of sympathies with the other parts of the body is almost universal.

In like manner, when one or more portions of the brain act, they extend, by sympathy, their influence to other portions of it. Considered in this point of light, mental phenomena become *intelligible*. Viewed in any other, they are perfect *mysteries*—a powerful argument in favor of Phrenology; for the time has arrived, when *mystery* and *truth* are no longer considered synonymous terms.

Pleasure and *pain*, *joy* and *sorrow*, bear to each other such a relation, that they may be, with propriety, considered under the same head. They consist in sensations and emotions, and may be suitably designated by the more comprehensive term, *affections*. They may arise from the exercise or mode of excitement of every faculty of the intellect.

Are the impression and consequent excitement natural and in harmony with the organ excited? Pleasure or joy is the necessary result. Is the excitement unnatural and out of harmony? It as necessarily engenders pain or sorrow.

Is Adhesiveness the organ in exercise? The arrival of an absent friend excites it *naturally*, and produces joy. On the contrary, the loss of a friend excites it *unnaturally*, or *disagreeably* and gives rise to sorrow.

Is Acquisitiveness the organ? The *acquisition* of wealth, an event in harmony with it, excites it to joy; while the loss of wealth, being out of harmony with it, produces the reverse.

Is the organ of Tune the seat of excitement? Melodious tones awaken in it *pleasurable* sensations; while harsh and discordant ones create in it pain.

Is Order the organ whose feelings are to be expounded? Present to it objects suitably arranged, and the result is pleasure. Set before it a scene of chaotic confusion, and the effect is pain.

To the Love of approbation applause gives pleasure, while public censure inflicts on it pain.

By moral and praiseworthy conduct in ourselves or others, the organ of Conscientiousness is naturally and pleasurably excited. In ourselves, immoral conduct excites it unnaturally, producing remorse; while the same kind of conduct in others, gives rise to disapprobation, which is painful.

As respects all the other organs, the same thing is true. Excite them harmoniously, and you produce pleasure or joy; unharmoniously, and pain or sorrow will necessarily ensue. It is to be understood that excessive excitement is unnatural and out of harmony, and always produces pain; precisely as is the case with excessive excitement in any other part of the body.

PASSION. The most intense degree of activity of any faculty constitutes **PASSION**. The passions are, therefore, as numerous as the faculties.

The activity of combativeness in the highest degree, constitutes anger or a passion for combat; of destructiveness, rage, or a passion to destroy; of acquisitiveness, a passion for wealth; of the Love of approbation, a passion for admiration and applause; of Number, a passion for mathematics; of Constructiveness, a passion for building; and of Causality, a passion for general etiology. This last passion

often manifests itself by an inordinate attachment to metaphysical studies.

All passions, then, spring from nature. None are, or can be factitious. They are but the highest degree of natural desire. Artificial means may pamper and strengthen an existing passion; but they cannot create a new one. Education can no more create a faculty or a passion, than it can create a material substance

Sympathy—between *individuals*. This amalgamation of souls is the result of kindred feelings; which are again the result of a kindred constitution of the intellect. Without such constitution, but more especially in opposition to it, no sympathy between individuals can exist. Similarity of material organization constitutes the only basis of intellectual similarity. But remove intellectual similarity and you extinguish intellectual sympathy.

Between individuals strongly marked by the organ of adhesiveness, sympathy will subsist. They will become attached to each other as if by instinct. The same is true, in relation to *combative-ness* and *destructiveness*. Persons characterized by these faculties will cordially unite in daring schemes of battle and bloodshed.

Are individuals brought together in whom Benevolence or Veneration are predominant organs? They will vividly sympathize in active schemes for the relief of the distressed, or in plans for promoting the worship of the deity.

Are Hope and Ideality their master organs? They will unite in such bright expectancies, golden prospects, and plans of terrestrial grandeur and felicity, as the writer of romance might safely introduce to give interest to his pages.

Persons strongly endowed with *Causality* and *Wit*, seek, from sympathy, the society of the witty and the reasoning. From the same cause *Tune* desires the society of *Tune*, *Number of Number*, *Language of Language*, and *Cautiousness of Cautiousness*. Even *timidity* is soothed and gratified by a *kindred feeling*.

But there are certain similar faculties, which do not sympathize with each other. This is particularly the case with *Self-esteem* and *Love of approbation*. These faculties are much more repulsive than attractive of each other.

The *proud* rarely harmonize with the *proud*, nor the *vain* and *ambitious*, with the *vain* and *ambitious*.

The reason of this is obvious. The proud man is so absorbed in self-estimation, that he is incapable of making any other person

an object of either affection or esteem. Attachment to another he would feel as comparative self degradation. And the vain and ambitious shun the society of the vain and ambitious, lest they should divide with them that admiration and applause, which they are themselves solicitous to engross.

Nor has *Secretiveness* any sympathy with *Secretiveness*, nor *Acquisitiveness* with *Acquisitiveness*, unless when, in different individuals, the latter propensity is gratified by the accumulation of joint wealth, or by a union of measures to effect it; or the former by co operation in a favorite intrigue

Whether *firmness* ever sympathizes with *firmness*, depends on the combination and influence of other faculties. In an insulated capacity it never does. But in individuals co-operating in the same enterprise, it produces what may be denominated sympathetic or adhesive perseverance. The faculty is too inflexible to bend; and too resisting to receive an impression.

The *conscientious* always harmonize with the *conscientious*, in the suppression of vice and the promotion of justice and morality.

Habit This attribute is often resorted to by metaphysicians, as a creator of faculties not conferred by nature. This is a gross and palpable mistake. Habit confers no faculties. It is the result of the exercise of faculties, conferred by nature before they can be exercised. It is a facility of thinking or acting acquired by practice.

Habit, then, may be denominated an improved condition of organs effected by cultivation. But to be cultivated, the organs must previously exist. And the more vigorous they are, the more rapidly can a habit of acting dexterously and powerfully be formed. It is when they are exceedingly vigorous that habit may be said to spring up naturally and unconsciously.

Is the organ of number very largely developed? The individual calculates by instinct; and forms, with great facility, a habit to that effect. Of this Zera Colburne furnished an instance peculiarly striking. Such was the vigour of his faculty of Number, that he acquired, at a very early age, a habit of calculation, so accurate and extensive, that it was a matter of great surprise to every one that witnessed it. And so easy to him was the attainment of this habit, that he was unconscious of the process by which it was effected.

Is tune the predominant organ? The individual possessing it acquires a musical habit with all the facility and promptitude of in-

instinct. Under these circumstances, even the infant intellect sometimes runs into melody, as the aquatic fowl rushes into water the first time it sees it.

Is an individual remarkable for the development of Constructiveness? So strong is his propensity to construct, or in some way configurate, that often at a very early period of life, he acquires, with great facility, a habit of that description. Master Hanks, who now, at the age of fifteen, displays such excellency in cutting likenesses out of paper, began his efforts, in this way, at the age of five.

Does Causality predominate? A habit of reasoning seems to be the involuntary growth of the intellect. The individual thinks only to reason.

Of all other predominant faculties the same may be said.

TASTE and CRITICISM. Good taste, in intellectual productions, resembles common sense, in the transaction of business. It is the result of a well adjusted balance, and harmonious action, of all the faculties. It is a prompt and correct perception of aptitude and elegance.

Is the production poetry? That is the most excellent which ministers most to the gratification of the higher sentiments, and the intellectual faculties, without offending them by incongruity of combination, inaptitude of language, or extravagance of figure.

If Ideality be excessive, it is productive of bombast. If Causality superabounds, the work is marred by metaphysical refinement; if Wit, by conceits, puns, and epigrams.

Is a picture produced? Let it be in harmony with Form, Size, Colour, Individuality, Ideality, the reflecting faculties, and the moral sentiments, and it will stand the test of the judgment of time. Let it offend either of these, and its condemnation is certain.

Is the faculty of Colouring out of harmony, excessive or defective in strength? So will be the lights and shades of the picture.

Do Form, Ideality, and Colouring predominate over the reflecting faculties? The picture will be extravagant both in figure and colour, faulty alike in drawing and keeping. It will be gorgeous and striking, but wanting in dignity and propriety of expression.

Is the production historical or philosophical, and are Language and Ideality the predominant faculties? The style will be verbose and bombastic. Are both these faculties deficient in strength? It will be vapid, stiff and meagre.

Is Comparison the predominant faculty of the intellect? In both writing and conversation, the individual will deal too much in antithesis or analogy, metaphor or allegory. In his attempts to reason, he will have recourse to analogy rather than argument; and his style will be sprightly and pleasant, rather than vigorous.

Is number the master faculty? The style will too much resemble a mathematical process.

Is Individuality? It will superabound in insulated facts, and run too much into minutiae and detail.

Causality? It will be starched with logic.

Nor is the style of a writer, or the productions of an artist free from the influence of the propensities or sentiments.

If Amativeness predominate, the expression and manner are voluptuous if not obscene. Ovid, Sterne, and Moore are examples of this. So is Raphael in many of his paintings. If Adhesiveness prevail, they are tender, soft, and winning. If Concentrativeness, close, pointed, and pithy. If Combativeness, disputative and contentious. If Destructiveness, keen, sarcastic, and severe. If Secretiveness, artful, equivocal and ironical. If Self-esteem, egotistical and boastful. If Firmness, dogmatical, positive, and dictatorial. If Benevolence, mild, conciliatory, and persuasive. Thus, by a law of nature, that is absolute and irrevocable, does the ruling faculty communicate its impress to the intellectual productions, precisely as it influences the general department.

It is on these grounds that Phrenology is so important in its relation to *criticism*, which is nothing but the application of the principles of taste to the productions of the intellect. It is from Phrenology alone, that criticism derives its truth and its value. To be tasteful, and to pass the ordeal of the real critic's judgment, a production, whether literary or of the arts, must, as already stated, be *in harmony* with all the intellectual faculties. The test of this harmony is, its being *agreeable* to the faculties. If it be offensive to any of them, it is out of harmony, *unnatural*, and destined to condemnation. It is understood that the faculties must be *cultivated*, to render them sources of sound criticism.

But unless the critic has an accurate knowledge of the faculties and composition of the intellect, he cannot judge whether a production is related to them *in harmony*, or not. He is disqualified alike to analyse either them or the production which he professes to criticise. But if he be a disciplined Phrenologist, the task is

easy. He then understands the intellect, and is well qualified to judge of the relations.

A few examples will illustrate these views, and establish the positions for which we contend. But before presenting such examples, it is requisite to observe, that although, as already stated, *all* productions stand related to *each* faculty, *certain* productions bear a closer relation to *some* of the faculties, than they do to others.

History stands immediately related to Individuality, as respects its *facts*, to Locality, as to *place*, to Time, as regards *chronology*, to Conscientiousness, in reference to *truth*, to Causality, as far as its *philosophy* is concerned, and to Language and Ideality, as to *style and manner*. Is its composition such as to offend one, several, or all, of these? It is so far out of nature, and faulty, and must, therefore, be condemned. Does it affect them all agreeably; in other words, are its individual facts neither wanting nor redundant in number; is it correct, as to place and dates; are its statements true, and are its style and manner neither too verbose, florid, and extravagant, nor flat, tame, and meagre? If its character be such as to gratify all the faculties just specified, and not to be offensive to any of the others, it is destined to pass into the rank of the classics.

Poetry is, much more immediately than history, related to the *feeling faculties* of the intellect. Yet such must be its harmony with the *knowing* and *reflecting* ones, as not to outrage probability, or do violence to common sense. It must so far keep within the limits of nature, as to draw all its materials from things that exist, and events that *are* or *have been*, believed. For the excellency of its peculiar character, it depends, more particularly, on its perfect harmony with certain faculties.

Is its character tender and amatory? It must harmonize immediately with Amativeness and Adhesiveness.

Is it warlike, but at the same time noble and generous? Its most essential harmony must be with Combativeness, Benevolence, and Conscientiousness. If it abound in scenes not only of *battle*, but of *carnage* and *cruelty*, it must then be in unison with the faculty of *Destructiveness*.

Is it keen, caustic, and satirical? Its more immediate relation is to Destructiveness and Wit.

Is it, in its nature, descriptive? It must conform to Individuality, Locality, Form, Size, and Colour. Is it marked by gaiety, buoyancy, and delightful anticipations? It must conform to Hope.

Is it pastoral? Amativeness, Adhesiveness, Ideality, and Locality, give it character.

Is it a poem pointing to heavenly things? It must be in harmony with Veneration.

Is it a dramatic poem? It has, in its plot, much concern with Secretiveness and Cautiousness. But this is not all. In delineating character, there must be maintained the most scrupulous conformity of manifestation and *deportment* to *development*. Is one of the Dramatis Personæ marked by great strength, brilliancy, and profundity of intellect? His forehead must be broad, elevated, and full. Is another distinguished by great magnanimity, and lofty sentiments of morality and virtue? In the upper and central regions of the head, his development must be large. Is he *particularly* prone to piety and justice? Veneration and Conscientiousness must be *particularly* full. Is a third remarkable for profligacy and vice?—is he irascible, vindictive, intriguing, deceitful, mercenary, selfish, and licentious in his amours? His development of the organs of propensity must predominate. In particular, he must be large in Amativeness, Combativeness, Destructiveness, Covetiveness, Secretiveness, Cautiousness, and Self-esteem. Some of the counterbalancing organs must be small. Is any one remarkable for splendid eloquence? Ideality, Individuality, Comparison, and Language must be fully developed. Is another distinguished by great strength, elevation, and perseverance of character? His *whole head* must be *large*, and Firmness, particularly, in ample development.

But real strength of character depends most immediately on largely developed organs of sentiment and propensity. A *small* head on a man of *general* greatness has never yet been seen—or if so, it was not merely an *anomaly*, but a *prodigy*—altogether contrary to the course of nature.

In every great actor, Imitation and Secretiveness must be full, and every poem must conform to Ideality.

It is scarcely requisite to add, that for an *author* to write a poem possessing the conformities here designated, or for a *critic* to judge of it correctly, when written, *each* must be developed in the organs to which the conformities are required. Had not Milton been large

in Veneration, he could not have written *Paradise Lost*; hence, if reliance is to be placed on busts and engravings, his head, in *form*, resembled, not a little, the head of Jesus Christ; Horace, had he not been large in Wit and Destructiveness, would have failed in his satires; and had not Shakespeare been large in *every organ*, he could not, as he has, have delineated so exquisitely the human character in all its variety.

To novel-writing, romance, and moral fiction generally, the same principles apply as to poetry and the drama. Those forms of composition are valuable or otherwise, according to their conformity to the various faculties to which they stand related.

Works on general philosophy should be in strict harmony with all the *knowing* and *reflecting* faculties. If they be offensive to any of them, they are so far faulty and deserving condemnation.

Eloquence of the *highest order*, is the mighty growth of *all the faculties*, and must, by turns, conform to all. But it is more particularly related to Individuality, Causality, Wit, Ideality, and Language. Comparison enriches it. Firmness imparts to it decision of manner, and Combativeness and Destructiveness render it fervid, keen, and terrible.

Is the production of genius, that is to be examined, a statue? It must be judged of by Form, Size, Individuality, Ideality, and Causality. Is the figure pleasing, the size correct, the attitude, symmetry, and general execution exquisite, and is the whole well calculated to answer the end for which it is intended? If so, the statue is in excellent taste, and cannot fail to prove creditable to the arts. It conforms to all the faculties to which it stands related.

When a sculptor is preparing a statue, what are the faculties that direct him in his operations? I answer, they are the same as those by which the critic judges—Form, Size, Individuality, Causality, and Ideality. And if he is not abundantly endowed with these, he will endeavor in vain to excel in his art.

A palace and a temple, an arch and a column, a bridge, an obelisk, a vase and an urn, are formed and judged of by the same faculties. And, when formed, unless they harmonize with these faculties, they are unnatural and out of taste.

A picture is a more complex object than a statue, because, to *figure* and *size*, it adds *colouring*. Either to execute it, therefore, or to judge of it, the faculty of colour must co-operate with those

already enumerated, as concerned in producing and criticising a statue.

In judging of the figure, size, colour, and *aptitudes* of beings possessed of life, the same intellectual faculties are employed.

The preceding observations on Taste and Criticism, prepare us to give, in a very few words, our views of

GENIUS.

They prepare us, we mean, to *define* Genius; or to say wherein we believe it consists.

Genius, in the true acceptation of the term, has no *necessary* connection with *association*, *habit*, or education. It is *improved* by education, but is not *formed* by it. It greatly facilitates the *formation of habit* and the *establishment of association*, but does not derive from them its own existence. It is as much the *child of nature*, as the form of the body or the colour of the hair. And with equal success may an attempt be made, to give, by art, the exquisite symmetry and elegance of the Apollo to a human figure naturally ricketty and deformed, or the beauty of auburn, or the deep blue and glossy lustre of jet, to the most grizly locks, as to implant genius, by the influence of circumstances, where nature has denied it. All metaphysical discussion to that effect, is mere *scholastic cant*, and has not the slightest foundation in truth. As easily can *matter* be created by *circumstances* as *genius*. Both can be modified and *improved*, but *nothing further*.

Instead of being itself, as many have pronounced it, a *distinct faculty of the intellect*, genius consists in a condition eminently excellent of a part or all of the *knowing* and *reflecting faculties*, fitting them for prompt and powerful action. The highest degree of genius results from this condition being raised to the highest degree of attainable excellency. And the condition itself is the fruit of a corresponding excellency, in the size, organization, and tone of those portions of the brain to which the invigorated faculties belong. Of none but the *idea-forming* faculties is genius predicable. The *propensities* and *sentiments*, therefore, which do not form ideas, instead of aiding in the *constitution* of it, can do nothing more than augment its intensity, by their sympathetic influence. To speak more definitely on the subject:

Local or partial genius, is a power to form, arrange, and combine ideas, *on any given subject*, with great promptitude and vigour. Power thus to command and manage ideas, *on all subjects*, would be *universal genius*. But, as far as observation and records inform us, endowment so exalted as this, has never, perhaps, been bestowed on man. Our illustrations, then, must relate to *partial genius*.

A genius for music is formed by great activity and vigour in the faculties of Tune, Time, Individuality, Secretiveness, and Imitativeness. This combination generates, at once, great power and promptitude of *conception*, accompanied by a corresponding intensity of *expression*.

A genius for drawing and painting consists in vigour and activity in the faculties of Form, Constructiveness, Individuality, Imitation, Secretiveness, and Colour. This combination enables the individual to conceive and express with great facility, force, and effect. It is to be understood, that, in every instance, to give a finish to genius, Ideality, in corresponding strength and excellence, must be united to the other faculties.

A genius for philosophy demands activity and strength in most of the *knowing* faculties, but particularly in *Individuality*, and in the *reflecting* faculties of *Comparison* and *Causality*. This combination will give to philosophical research and discussion, equal promptitude, perspicuity, profundity and strength. But these are the attributes of philosophical genius.

To a genius for philosophy add Wit and Language, and you convert it into a genius for eloquence.

To a genius for eloquence add intense Ideality, Secretiveness, and Imitation and the compound will be a genius for poetry.

A genius for Astronomy consists in great strength and activity of Number, Locality, Individuality, Form, Space, Comparison, and Causality. Add Constructiveness and Weight, and you enhance efficiency, by giving to the possessor a more thorough knowledge and a greater command, of astronomical apparatus.

A genius for mechanics is compounded of Constructiveness, Form, Weight, Number, Individuality, Imitation, Comparison, and Causality. In this combination, Constructiveness gives the propensity to act, while the other faculties constitute the efficiency.

Genius, then, we repeat, instead of being a *faculty* of the intellect, consists in a *felicitous condition* of the faculties that form ideas, enabling them to act with facility and vigour, on their ap-

propriate objects. Education is its foster-mother; but nature alone is its parent. To derive it from *habit*, *association*, or any other influence or result of adventitious circumstances, is to betray an entire ignorance of the composition and philosophy of the human intellect.

Genius is the result of the size, form, organization, and tone of the organ of the intellect.

Give to any one the brain of Socrates, and *intellectually* you make him a Socrates—of Newton, and you make him a Newton—of Milton, and you make him a Milton—and of Napoleon, and a Napoleon will be the result. If this be not true, there is nothing certain in the philosophy of moral and intellectual man.

INSTINCT. This source of action has long been regarded as a problem in the science of animated nature, which metaphysicians have been unable satisfactorily to solve. As evidence of the truth of this, it has, by some, been considered a phenomenon purely *mental*, by others *corporeal*, and by others, again, a compound participating of *both*. Amidst such confusion of conflicting opinions, each engaged in discrediting the others, truth has been hitherto kept out of view.

Nor is it possible that, by *old-school metaphysicks*, where nothing but subtlety and doubt and darkness prevail, this conflict can ever be settled. Peace and tranquility can be restored, and truth be made to predominate, by Phrenology alone; because it alone can vanquish the difficulty by which the strife has been produced.

According to the most approved acceptation of the term, INSTINCT bears an immediate relation to the subsistence, welfare and safety of the individual animal to which it belongs; or to the propagation, nourishment, and preservation of its young. It is a *primitive* and vivid *propensity*, in perfect harmony with the scheme of life of the animal, and constituting, in its operation, a part of that scheme.

The young of mammiferous animals no sooner see the light, than they breathe perfectly, and seek the fount of their proper nourishment, and, from the first effort, extract and swallow that nourishment, like veterans in the art.

Without the slightest instruction or experience, the young of aquatic fowls rush into the water, because the element is *congenial* to them; besides which, they usually find in it their most suitable food.

Birds construct their nests of such materials and form, and in such places, as best secure the comfort and safety of their offspring.

The beaver erects his hut, the rabbit excavates its burrow, and the spider weaves its net, on principles and in forms specifically adapted to their several modes of life. And it is on the same great and beautiful scheme of conformity and adaptation, that, in autumn, one tribe of animals mounts, and migrates to a distant region, and another crawls into a well chosen hybernaculum, and sinks into torpidity until the return of spring.

These actions, having no connexion with either moral feeling or the *reflecting* faculties, are exclusively the offspring of animal instinct. In other words, they are the result of a *propensity* implanted by nature, and which every animal feels, to act in conformity to the exigencies of its system.

They are the fruit, therefore, of that beautiful, harmonious, and magnificent scheme of things, so worthy of the wisdom and beneficence of a God, by which creation, as a whole, and every living inhabitant of it, are made to labour each for its own preservation and welfare. They are so many manifestations of that *vis conservatrix et medicatrix naturæ*, by which even the heavenly bodies, although erratic for a time, are themselves made to correct, by their own laws, their own devious movements; and thus to prevent what astronomers once affected to predict, the ultimate and general consolidation of the material universe, by the tumbling of secondary planets into primary, primary into suns, and suns themselves into some great central orb, towards which they are attracted.

We have said that every living being possesses and manifests a self-preserving instinct.

It is by virtue of this, that, in every situation, and against all opposition, vegetables point and extend towards the light—that, when their seeds are vegetating in the earth, the *plumule* always shoots *upwards* and the *roots* strike *downwards*, and that the latter never fail to run towards that soil which affords them the greatest amount of suitable nutriment—that when a branch of a shrub or tree is twisted, so as to invert its leaves, it uniformly returns to its natural position, even against a strong retaining force—and that if two upright poles, one of them *firmly fixed in the ground*, and the other *swinging and moveable*, be placed near to a climbing vine,

and the vine be artificially wound around the *latter*, it will gradually unwind itself, travel to the *former*, and twine and cling around it.

It was in obedience to this instinct, that, in the summer of 1826, a very singular phenomenon occurred in our own garden.

A Poke plant (*Phytolacca decandria*) springing from a very rich soil under a plumb tree, and finding itself overshadowed by the tree, so as to be deprived of the influence of the sun, shot its branches among those of the tree, and, using them as aids to climb by, assumed, in a considerable degree, the character of a vine, fairly *outtopped the tree*, and basked in the sunbeams above it. As evidence that we attributed the phenomenon to its proper cause, the maximum height of the Poke very rarely exceeds, in its natural condition, from *seven to eight* feet; whereas the plant in question rose beyond *fourteen* feet.

Such are a few of the *phenomena* of instinct. Its *cause* must now for a moment claim our attention.

Although animal *instinct* or *propensity*, for they are the same, is strictly an *intellectual* faculty, it is essentially the result of cerebral organization. *Specific* organization begets, of course, a *specific* instinct. When the feeling or faculty arises from an organ of *propensity*, it is *instinct*: but it is *reason* when the *reflecting faculties* are concerned.

The mere propensity to propagate the race, to watch tenderly over the young, or to construct a habitation, is an instinct: but if there be a *comparison* instituted between two or more kinds of food, and a judgment formed that one kind is more suitable for the young than another; or if a deliberation be held as to the form of the habitation, or the kind of material, stone, wood or clay, of which it is to be constructed, and a preference given to one form or material over all others, it is a process of *reason*.

The instinct of cunning in the fox, is the result of the large development and high excitement of the organ of *Secretiveness*.

The instinct in the tiger to destroy, arises from a similar condition of the organ of *Destructiveness*.

The instinct of the beaver and squirrel to build, arises from the large size and active condition of the organ of *Constructiveness*.

The instinct of the stork, the wild goose, and the swallow, to migrate, at a particular season, is the effect of the organ of *Locality* being, at that season, highly excited.

In like manner, the instinct of the infant to breathe and suck, of the young duck to dash into the water, and indeed every other animal instinct is the issue of a state of predominant excitement of one or more of the cerebral organs.

In the abstract, then, instinct is a primitive faculty, of the class of *feelings*, distinct from the knowing and reflecting faculties, essential to the scheme of life of the animal possessing it, and arising from the predominancy, permanent or temporary, of an appropriate organ.

There is no impropriety, then, in speaking of man as a being possessed of moral instinct.

Hence we say, with sufficient correctness, that an individual is instinctively benevolent, when, from a mere impulse of kind feeling, which he cannot resist, he relieves distress indiscriminately, without the exercise of judgment or reason, as to the merit or demerit of the objects relieved.

Another, who is habitually under the influence of high *Conscientiousness*, but whose knowing and reflecting faculties may be very weak, we pronounce to be a man instinctively just.

A third we declare to be instinctively pious, when *Veneration* appears to be his absorbing sentiment; and we assert that Hope is instinctive in a fourth, when he is never dejected by the heaviest disappointment; or when under the pressure of the most disastrous misfortunes.

We say of one, in whom Number is very large and powerful, that he calculates *instinctively*, as was the case with Zera Colburne; and of another, in whom Tune is a very largely developed and highly excited organ, that he is by instinct a musician.

Whether in man, or the inferior animals, then, instinct is a powerful intellectual tendency to some object or end, connected with the welfare of the individual or his offspring, and growing, as its native soil, out of a cerebral organ constructed for the purpose.

The instincts of vegetables arise, in like manner, out of their organization, and are in harmony with it. But the organization of vegetables is much less complex and varied, than that of animals. Hence their instincts are simpler and less numerous.

In animal nature, then, the organs of propensity are the source of instinct, each organ giving rise to its own specific instinct.

Out of the moral organs in man, grow his moral instincts, each of those organs, when uncontrolled, urging instinctively to a line of action corresponding to its nature.

But when the knowing and reflecting faculties combine to take man from under the influence of his propensities and sentiments, he is no longer governed by instinct but by reason.

Hence, in childhood, instinct rules. In youth, until manhood, instinct and reason contend for the supremacy. In matured life, reason bears sway.

EXPRESSION.

Phrenologically interpreted, this means the *external* manifestation of *internal* feelings, by natural signs.

These signs consist in *gesture*, *attitude*, and *sound*. Under *gesture* is included the action of the countenance.

We have said that it is the feelings only which are expressed by natural language. The knowing and reflecting faculties are expressed artificially.—We mean, that the result of their action is communicated chiefly by artificial language. Natural language cannot be made an adequate representative of them.

Artificial language differs greatly in different nations. But the language of nature is every where the same.

In the expression of their feelings, even the inferior animals bear a very striking resemblance to man. Hence natural language is every where understood, nature herself being the universal teacher of it; whereas, for the understanding of artificial language, special instructors are requisite. And hence the brute creation not only holds mutual converse by means of the language of nature, but many of them have a perfect understanding of the natural expressions of the feelings of man. The dog, the horse, and even the cat, are keenly sensible of human kindness; and the two former, in particular, are, in a high degree, grateful for it. Of other domesticated animals the same thing is true. They have a knowledge moreover, of the language of resentment. The dog, in particular, will crouch, tremble, and implore, in terror and humility, under his master's frown.

There belongs to the human intellect certain groups of *kindred feelings*, the growth of allied or kindred organs, the expression of which is strongly analogous. This is, in a particular manner, the case with *Amativeness*, *Philoprogenitiveness*, and *Adhesiveness*.

Of these feelings the native expression, whether it consists of *gesture* or *sound*, is soft, subdued, delicate, and attractive. Every

thing either loud, harsh, violent, or severe is totally out of harmony with them.

Of physical love, when pure, and free from the admixture of other feelings, the expression is made by the most tender and delicate touches of the hands, the face, or the lips, the softest action of the eyes and countenance, as if they were dissolving into the very essence of liquid sweetness, and by a languid condition of the muscles, generally, which permits the head gently to decline, and throws the whole body into a graceful attitude of voluptuous ease. Into this general expression enters, with peculiar effect, the attitude of the lips, which, in a state unusually soft and dewy, are slightly opened, so as half to exhibit and half conceal the pearls beneath them.

The voice, in the mean time, melts, like the faintest tones of the Eolian harp, into a low, soft, and murmuring whisper, as if the beloved object alone were to hear it, and be lulled into a state of kindred feeling by the soothing accents. A single harsh and discordant note, mingled in the stream of mellifluous sound, would be not only unnatural, but would pierce with a keenness, and inflict a pang, which scarcely the stroke of the stiletto could surpass. Breathing itself, although warm and full, is subdued and soft as the passing zephyr, and seems marked with anxiety, lest even that process might unwelcomely interfere with the visions of the moment.

Although much less silent and somewhat less tender, the expression of Philoprogenitiveness and Adhesiveness, whether we have regard to sound or gesture, is of a kindred character. It is gentle, soft, and winning, calculated to soothe and tranquilize, and produce a condition of the most confiding and delightful repose.

It is especially in consequence of the strong predominancy of the two latter propensities in the female, beyond what prevails in the character of the male, that the former is denominated the softer sex.

The expression of Concentrativeness we shall pass without notice, for two reasons. It is not very striking; and although we have treated it under that class of faculties, we are by no means convinced, that it belongs to the feelings. It seems to us to be under the control of the *will*; or rather to be a faculty possessed of a will. We cannot well resist the belief, that we possess a consciousness, that the faculties are *concentrated* on any subject by a *voluntary exertion*. By some individuals, however, the exertion is made with

much more facility and effect, than by others; because in the former, the organ of it is better developed than in the latter.

Of *Combativeness* and *Firmness* the expression is, in no considerable degree, analogous. In both, the muscular action is tense and strong, although somewhat more swelling, lively, and vigorous in the former; and the attitude is firm erect and graceful. In both, the countenance is fixed and resolute; although in *Combativeness* there is manifested more of active courage, a greater eagerness for battle, and more intensity of feeling. If in a standing position, the feet, in *Combativeness*, are placed further apart, that the individual may sustain the better any approaching assault. The breathing is also fuller and louder; while in *Firmness* every thing is more subdued and tranquil, but equally determined.

In both the voice is full and open, but neither boisterous nor loud; and the tone is firm, decisive, and somewhat stern—more stern, however, in *Combativeness*, than in *Firmness*.

Under the influence of *Combativeness*, the deportment is that of active courage, while, under that of *Firmness*, it partakes more of passive and enduring fortitude. In one case the individual *resists*, in the other he *submits* and *perseveres*, with unshaken resolution.

Of *Destructiveness* the expression is *rage*. Here all the muscular action is intense and violent. The eye-balls glare and seem to protrude from their sockets, the whole countenance is distorted and ferocious, and the attitude is threatening and not always graceful. The hands, perhaps, grasp a weapon of destruction, the arms are tossed aloft and made to vibrate in the air, or to descend with violence, as if inflicting blows on an adversary, foam often issues from the mouth, and the teeth gnash and champ, as if in the act of biting and tearing.

The breathing is full, frequent, and strong, and the voice harsh, piercing and loud. Under the highest pitch of excitement of this organ, the voice, at times, rises to a yell, and at other times, becomes deeply guttural, hoarse, and suffocated.

Of all inferior animals, whose predominant faculty is that of *Destructiveness*, the voice is harsh, piercing and terrific. This is particularly the case with the tiger, the hyena, the wolf, the lion, and the eagle. No bird of prey is melodious. Harsh and loud music, moreover, such as bold airs played on warlike instruments, immediately rouses some of those animals to rage and fury—an unanswerable evidence of the affinity of sound to the cerebral organs.

Of Secretiveness the expression is strongly characterized. The attitude is bent and contracted, and the movement silent and cautious, as if the individual wished to conceal himself until ready to bound on his prey. The look is sideways and sly, and the approach to an object always *indirect*. But when the object is compassed, it is seized on with a spring. An individual, under the strong workings of Secretiveness, never looks another frankly in the face; yet, by the frequent movement of his head from side to side, and the perpetual rolling of his eyes, he sees every thing. When he ventures to speak, he deals much in interrogatories, and thus attains a knowledge of the sentiments and emotions of others, while he dextrously conceals his own.

Under the inordinate influence of this propensity, the whole deportment is marked with *slyness*, and is the very reverse of manliness and magnanimity. All is silence, sneakingness and concealment

Of this propensity, among the inferior animals, the fox and the cat are striking examples. So is the weasel, and that variety of the dog denominated the Lurcher.

The expression of Self-Esteem is marked with no inconsiderable degree of strength.

The muscles being all in a state of tension, the attitude is erect, the head thrown a little backward, the chin bridled and drawn inward, the cheeks inflated, the lips protruded, the eyebrows drawn upwards, and the eyes wide open, and perhaps slowly moving, in various directions, in scornful glances. The arms are set a-kimbo on the sides, or one or both of the hands placed behind the back, and the step is measured, firm and strutting. The voice is deep-toned and somewhat guttural and mouthing, the words are boastful, and the deportment haughty and disrespectful towards others.—The individual is indeed so absorbed in self, which is his only idol, that he is scarcely sensible of the presence of others. At times this deportment relaxes, and the manners are marked with affected condescension, which, to discerning minds, is more offensive than unqualified rudeness. When in high operation, Self-Esteem is characterised by an entire want of courtesy, and a disregard for the feelings and opinions of the world. It is, in itself, an utter stranger to kindness and sympathy. Yet Benevolence and other valuable and praiseworthy faculties, are often associated with it,

Very different from the preceding is the expression of Love of Ap-
 probation.

Here nothing is fixed or rigid, but every thing is in varying and graceful motion. The attitude inclines a little forward, as if to solicit approbation, but the inclination is so governed as to improve the personal appearance. The individual might be almost supposed to have forgotten himself, in his predominant disposition to please others; and his anxious attention, and all his movements announce his vigilant observance of those who are around him, with a view to ascertain the impression he has made upon them; and the degree of admiration and estimation with which they regard him.

As the man of Self Esteem lives within himself, he, in whom Love of Approbation predominates, would seem to live only in the regard of others.

Under the influence of this sentiment, the countenance wears a smile, and the voice is soft, conciliatory and soothing.

The expression of Love of Approbation is much modified by the influence of other faculties. If it be accompanied by Secretiveness in an adequate degree of strength, there is nothing very exceptionable in it. But where Secretiveness is defective, and Love of Approbation very powerful, the possessor is palpably the idol of his own worship, and the constant subject of his own praise.

Veneration. The expression of this sentiment is also well marked and distinct. Without being very tense or powerful, the action of the muscles is fixed and firm. The body is inclined forward, the countenance is steady and solemn, the eyes are directed upward, and, in the highest tone of expression, the hands and arms are elevated, somewhat in the attitude of supplication.

In the mean time, the individual is either silent, or the tones of his voice are deep, slow, sonorous, and somewhat sepulchral.

Thus might we pass through the whole catalogue of propensities and sentiments, and show that each of them manifests itself by a form of expression peculiar and specific, which an intelligent observer can easily understand.

But what we have already said on the subject is sufficient to show what Phrenologists mean by expression, and, at the same time, to exhibit its practical uses.

If under the temporary influence of any given propensity or sentiment, the individual exhibits a specific mode of expression, or characteristic appearance, the constitutional and constant predom-

inancy of the same faculty will produce, more or less strongly manifested, the same expression habitually fixed. Hence, to the observation of the intelligent, the ruling passion and general temper of individuals is sufficiently disclosed.

Is the voice of an individual habitually soft, low, mild, and melodious? The general deportment will be found to correspond, and the individual to be prone to friendship, and the love of children, and probably also to physical love. The same individual will be also found to be fond of soft and plaintive music.

Is the voice harsh, sharp, and loud; or suffocated and husky? Destructiveness is the predominant faculty, or ruling passion. The individual is attached to martial music, particularly when proceeding from the drum, the fife, the trumpet or the horn.

Veneration, when in a state of predominant activity, gives a peculiar predilection for sacred music and other sounds of deep solemnity. Of individuals under the influence of that sentiment, the organ is the favourite musical instrument.

Ventriloquism. The cause of this very singular and amusing art has never, until lately, been clearly understood. Metaphysics were found incompetent to explain it. But, to the credit of Phrenology, and as an evidence, among many others, of its truth and utility, it has solved this, with many other curious and difficult problems, that relate to the intellect.

Ventriloquism is a *peculiar mode of expression of certain intellectual faculties*. These are Imitation, Secretiveness, Individuality, and Tune.

Without these, no one can, and with them in very strong predominancy, any one, may become a ventriloquist. Had we leisure, it would be easy to show the part that each faculty performs in constituting the art. And it might be further shown, that many more persons could learn it, and become expert in it, than mankind imagine. For it is the result of natural endowments; and not, as many have asserted, *preternatural*. It is nothing but a peculiar mode of mimicry.

We shall only add, that great flexibility of voice heightens very materially the perfection of the art.

In a late work entitled, "A comparative view of the sensorial and nervous systems in man and animals," Professor Warren, of Boston, has stated a few objections to the science of Phrenology, some of which I shall briefly notice.

The professor's attack is made on *points*, but does not extend to *fundamental principles*. The mere outposts of the science his missiles have reached with some apparent effect. The citadel remains not only unshaken, but untouched.

I call the effects of the professor's attack *apparent* rather than *real*, because his inferences do not accord with the facts from which they are drawn. The latter are too limited in number to justify the general nature of the former.

He asserts, p. 87, that the organ of *combativeness* is not well developed in the brain of the "*lion*," or in that of "*large dogs*," which, in common opinion, stand at the head of courageous animals.

But of what are his proofs of this assertion composed? Not, I think, of those substantial materials which alone constitute philosophical evidence.

"The skull," (of the lion and the large dog) says he, "is narrow at that part (where the organ of *combativeness* lies) and the appearance spoken of does not exist *in the bones*. In the *skulls* of two lions in my possession, and various large dogs, the *cranium* is more narrow at this part, than in the skulls of various monkeys."

From the terms of expression employed by the professor, there is reason to believe that his observations have been confined exclusively to the "*skulls*" of the animals in question, and that he has not carefully examined the comparative extent of the cavity of the *cranium* in different parts. He has not, I fear, reflected sufficiently on the comparative strength which one organ may derive from the weakness or want of another that might countervail it. Paralyze one muscle, and its antagonist seems to act with great power, because it acts without control.

If this be the case, his inquiries has been defective, and are by no means sufficient to justify the *sweeping inference* which both he and certain reviewers have ventured to draw from them.

It is signal injustice, and utterly incompatible with the true spirit of research, to place them in competition with the inquiries of Gall and Spurzheim, who, in pursuit of phrenological science, have traversed all Europe, spent more *years* in investigating the subject than professor Warren has *months*, and, in their attempts to throw light on it, dissected and examined a greater number of lions, tigers, and other animals of strongly marked characters, than he has probably ever seen. The practice, which is too common every where, of placing *very limited* in opposition to *extensive in-*

vestigations, is by no means favourable to the advancement of truth.

The mere extent of a portion of the cavity of the cranium of an animal, whose *general intellectual character* the professor does not appear to have taken into view, furnishes no effective means with which to impugn an opinion fortified by so many and such authentic facts as that of the existence and influence of the organ of combativeness.

The professor does not appear to have recollected, that, in carnivorous animals, *almost the whole amount of brain* lying behind the mastoid process, consists *entirely of the organs of combativeness*. Yet such is the fact, according to the established belief of the school of Phrenology.

But in the brain of the monkey the case is different. In it the organs of *philoprogenitiveness* and *adhesiveness* are very large, and lie between the organs of combativeness. By augmenting, therefore, the cerebral mass, they widen, of course, in an equal degree, the cavity of that portion of the cranium.

Admit, then, that that portion of the brain of the lion situated behind the mastoid process is comparatively small; still, being little else than the organs of combativeness alone, it is sufficiently large to give to that animal all the courage it possesses. This courage, moreover, is the greater, on account of the diminutive size of *cautiousness*.

But is it true that the lion is, in the genuine meaning of the expression, a *very courageous animal*?

Singular as the sentiment may appear, I entertain no inconsiderable doubts on the subject. When strongly excited, the lion is infinitely ferocious. But this is no mark of real *courage*. It is rather indicative of a propensity to *destroy*.

Animals greatly inferior to him in strength, the lion destroys as prey. But this again is far from being a mark of courage. When man attacks his inferior, it is considered cowardly.

The lion shows no strong predilection to engage with his equal. The combat with the royal tiger and the elephant, he often declines. And when he does give battle, he uses more of stratagem and address than is compatible with open, magnanimous boldness. He takes, in the contest, every possible advantage.

The lion is certainly less courageous than the dog. Of this I have witnessed myself a striking instance.

In the menagerie of the *Jardin des Plantes* in Paris, a lion and a small dog occupy the same apartment, and possess a strong attachment to each other. When any new or threatening object presents itself, but more especially when any harsh and unusual sound is heard, the lion begins to quail and crouch for protection behind the dog, while the latter seems always prepared to give battle.

I doubt much whether the lion ever fights, like the dog, from a love of combat. He engages his equal only under excitement amounting to rage. This, I repeat, is sanguinary ferocity, not courage.

The animals of the cat-kind are savage and insidious, rather than brave.

To have done justice to his subject, the professor, as I conceive, ought to have proceeded in a way materially different from that he adopted. He, should, at least, have amplified his field of inquiry.

Instead of comparing *one species* of animal with *another*, (the lion with the monkey,) it would have been a much fairer and more philosophical procedure, to have compared with each other, *different individuals* of the *same species*.

Procure, for example, a number of living lions; ascertain, first, their comparative courage, and then the developments of their organs of combativeness. Should a large organ be found connected with defective courage, or a small one with that propensity in a degree of great exuberance, phrenological science will suffer by the discovery. But unless a course somewhat like this be pursued, inferences against the science, however positively they may be made, will fail to enfeeble its claims to the confidence of its advocates.

A comparative inquiry of this description in relation to dogs, is eminently confirmatory of the truths of Phrenology. Of that race of animals, the bull-dog, the mastiff, the Irish greyhound, and the Newfoundland dog, are the most courageous. And in these the organ of combativeness is most fully developed. The common greyhound, the coach-dog, and others with long narrow heads, are defective in courage.

But I beg leave to repeat, that in our attempts to estimate the character of an animal, it is not sufficient that we examine *alone the real size* of its organs. We must take into consideration also their

comparative size. In this way only can we be enabled to ascertain the predominancy of any one of them.

Thus, for example, if any particular organ be but *moderately* developed, a kindred or co operating organ powerfully developed, and those calculated to hold it in check *very feebly* so, the function of the former must be strikingly manifested. Let the organ *moderately* developed be that of *combativeness*, and those *very feebly* developed be *caution* and *benevolence*. In this case the animal may be fiercely inclined to battle, more especially should the organ of destructiveness be strong. Or let the organ of destructiveness be but *moderately* developed, and those calculated to control it very feebly so, the propensity of the animal may be eminently sanguinary.

To do justice to the subject, then, the inquirer, instead of examining the size of a single *organ*, should study the entire intellectual constitution.

Professor Warren, p. 88, would deny the *existence* of the organ of *amativeness*, because it is not *inordinately* large in the monkey and the baboon, whose sexual propensities are *unusually* strong.

Here, again, the professor's investigation is faulty. As in the former instance, he compares *species* with *species*, instead of comparing with each other *different individuals* of the *same species*. I need hardly subjoin that the latter is the only mode of proceeding that can lead to an honest and unequivocal result.

The amatory propensity is influenced by temperament. The temperament most favorable to it, is that of *hot* climates. But the monkey is a native of hot climates. There is no reason to doubt, that by this consideration, the strength of his sexual propensity is augmented. In a candid examination of the subject, circumstances of this nature should be carefully pondered.

That there exists a commanding sympathetic connection between the occipital region and the genital organs, is a fact as well established as any other in physiological science. Did circumstances permit me to enter into detail, arguments could be advanced in proof of this that would be irresistible.

Professor Warren informs us, p. 89, that, "on comparing the skulls of various birds, he has not been able to verify, in a distinct manner, the supposed situation of the *organ of tune*."

This is nothing but negative evidence. On the ground of it the professor is justified in *suspending his own opinion*, as to the exist-

ence and situation of the organ in question, *in the animals he has examined*. But it may be held *doubtful* whether he is yet authorised to dictate, on the subject *generally*, opinions to others.

That the organ of tune *actually exists* in singing birds, and that in some individuals it is much more powerfully developed than it is in others of the same species, is an opinion in which the most enlightened and practical phrenologists of Europe unanimously concur. And their belief is founded not on conjecture, but on deliberate, varied, and extensive observation, and well conducted anatomical research.

“The peculiarities of the female mind,” says the professor, p. 105, “in every nation on the globe, are not accompanied with a visible difference in cerebral organization.”

I am somewhat at a loss as to what is to be here understood by the expression, “cerebral organization.”

The professor cannot mean that the development and figure of the male and female brain are the same. His extensive and accurate knowledge of anatomy must have long since convinced him of the *contrary*, and of the facility with which the one can be distinguished from the other.

The difference between the forms of the male and female head, is uniform and striking. In the former, the strength of development lies in the forehead, the seat of *real intellect*, and, in the latter, in the upper and posterior portions of the head, which are the seat of moral sentiment. In conformity with this, men are more *intellectual*, and women more *sentimental* in their character. Man surpasses in intellectual capacity and strength; woman, in tenderness, purity, veneration, benevolence, and goodness. In all nations this distinction marks the sexes. Hence it is necessarily founded in *nature*. By the influence of human institutions, it could never have been produced and rendered universal.

Professor Warren again alleges, p. 105, that the amount of intellect possessed by individuals is not in proportion to the size of their heads, men with small heads being highly gifted, while those with large ones are defectively so.

That this is sometimes the case is true, as has been already acknowledged, and the reasons for which have been already assigned.

But that the *reverse* is the *general rule*, (*and for general rules only can philosophy contend*), is equally true. Besides, owing to a want

of a due portion of parts, the *whole head may be small*, and yet the real *intellectual organs large*. This will produce the anomaly referred to.

I repeat what was formerly stated, that a given number of men *promiscuously collected*, possessing large heads, will be uniformly found to have more native intellect, than an equal number *assembled in the same way*, possessing small heads. This fact speaks a language that cannot be misunderstood.

A large brain, well organized, well developed in its several parts, and sufficiently vivified and invigorated by a free supply of blood completely arterialized, would seem to constitute the true *material basis* of talent, morality, and energy of character. Indeed, as there is reason to believe that every human *mind* is originally *equal* in soundness and capacity, such a brain may be considered the only requisite foundation of intellectual strength. With a brain of this description, the intellect *must* be strong. To render the possessor of it distinguished, nothing but education and study are required.

That an individual may be substantially and pre-eminently great, his intellect *must* be perfectly balanced.

To enlighten and direct him in his career, his *intellectual faculties* must be of an elevated order, to render him pure and virtuous, and honourable, the sensibility and tone of his moral faculties must be high, and to give him strength of character corresponding with his other qualities, his propensities must be strong.

These three kinds of faculties occupy, as formerly mentioned, three distinct compartments of the brain, which united constitute the whole of that organ. To render all the faculties, then, abundant in strength, and equally so, the entire brain must be fully developed. Under these circumstances, it *must necessarily be large*. Hence every individual pre-eminently enlightened, virtuous, and energetic, will be found to have a large head—at least above the common size.

But to be *partially* great, a large head is not essential. To render the *intellectual faculties* strong, a *well developed forehead* is sufficient. But that alone will not produce a large head, the other portions being moderately developed.

To render the *moral faculties* strong, a full development of the upper part of the head is sufficient. But *that alone* will not pre-

duce a large head, provided the developments elsewhere be moderate.

To render the *propensities* strong, a development of the lower and lateral parts of the head is sufficient. But *that alone* will not produce a large head.

Nor will the development of any *two* compartments of the brain do this. But a full development of the *three* compartments will; and to form a character truly great, such development is essential.

Phrenology possesses over *metaphysics* a great superiority, in being more intelligible in its nature, more beautiful in its arrangement, and much more conformable to the general course and economy of nature.

Let twenty individuals, qualified for the study, without prejudice, and unacquainted with both, devote, with equal industry, six months to the cultivation of each of these schemes of mental philosophy, and at least *nineteen* of the number will give a preference to the former, on account of its superior intelligibility, and the clearness with which it explains the phenomena of the intellect.

It assigns to the mind, as its residence and observatory, the most elevated, dignified, and exquisitely constructed portion of the body.

Here, that immaterial and immortal substance finds organs constructed with perfect wisdom as instruments for the performance of its numerous and diversified operations. It is not compelled to execute, in a loose and slovenly manner, *various* processes with the *same* instrument. Conformably to the provisions in every other department of nature, it is supplied with *specific means* for the attainment of each *specific end*.

But, in his dreams of *spiritualism*, how different is the situation assigned it, and the task imposed on it by the mere metaphysician? Scarcely allotting to it "a local habitation" at all, he compels it to engage in a multitude of different operations, *unaided by any means*, and dependent exclusively on its own resources. In denying it the use of *material* instruments, he compels it to work *without instruments*. Of its own *unity*—its own *indivisible essence*, instrumentality is not predicable. It cannot be, at once, the *spring* and the *instrument* of action. As well might the metaphysician declare the *powder* which explodes in the gun-barrel, to be the *tube* which *directs* and the *missile* that *strikes*. A more glaring absurdity cannot be exhibited than that of affecting to deduce from the same cause

a variety of effects. Yet this the metaphysician confessedly does. In vain does he talk about the different *states* of the mind. For a *simple indivisible* substance to pass from one state to another, is to *change its essence*, and become a *new* and a *different* substance.

A *compound* substance can change its state, and still be the same. A *simple* one cannot. At least, no one can form a distinct idea of such a phenomenon. *To be* and *not to be*, if predicated of the same thing at the same time, would not imply a more flagrant contradiction.

I mean no irreverent comparison in saying, that, in two respects, the history of Phrenology resembles that of the Christian religion.

When our religion was first promulgated, the sentiments, the established forms of worship, the habits, the prejudices, and the *supposed temporal and eternal interests* of the world, were all united in array against it. But, by the purity and efficiency of its inherent truth, it triumphed and spread.

Such has been hitherto the fortune of Phrenology. In despite of every effort that could be made to suppress it, by sophistry, ridicule, and deep denunciation, it has gained proselytes among the faithful and enlightened students of human nature, and is now so rooted that nothing can shake it. The issue will prove that its course is irresistible.

Many who have commenced the study of the Christian religion, the better to qualify themselves to oppose, and overthrow it, have been rendered, by an examination of it, converts to its truth, and supporters of its principles.

The same thing is true in relation to Phrenology. In attendance on *its* service, as well as on that of religion, many "who *came* to mock, *remained* to pray." A professional and literary character of distinction in Edinburgh, who was originally one of its most zealous opposers, is now in the ranks of its ablest advocates. Not to speak lightly or in mockery, but merely to pursue my comparison, he has become the St. Paul of Phrenology. Many such changes in its favour have occurred. I have never either known or heard of an individual faithfully studying it without becoming ultimately convinced of its truth. *Nor has any proselyte to it ever apostatized.* Its opposers are made up of those who, either from prejudice, indolence, or some other cause, *will not honestly and industriously study it*, or from want of capacity or suitable opportunities *cannot.* The hostilities cherished and actively practised against it, spring from

want of knowledge or want of candour. Its real enemies may take their choice.

It is not within the scope of the present publication to enter into a detailed exposition of the various purposes to which Phrenology may be usefully applied. If it be true, it must be useful in a degree proportioned to the importance of the subject to which it relates,—the intellectual character of man.*

It may be sufficient on the present occasion briefly to observe, that the subjects on which it promises to shed most light, and the interests of which it will, therefore, most eminently subserve, are education, criminal legislation and jurisprudence, and the treatment of diseases of the intellect.

To the first and last of these it has already been applied with very flattering success. In an institution for the education of youth, a few miles from Edinburgh, under the patronage of the philanthropic Owens, we are confidently assured by the teachers themselves, that the benefits derived from it have been obvious and great. For an account of the application and uses of it in that excellent seat of learning and industry, the reader is referred to an article in the sixth number of the Journal of Foreign Medical Science.

In its application to the true philosophy, and therefore the correct treatment of intellectual diseases, it promises to be no less pre-eminently useful.

Inasmuch as it is confessedly the *physiology* of the brain, no one, without a knowledge of it, can ever become versed in the *pathology* of that organ. Nor without an acquaintance with the latter subject, can intellectual derangement be sufficiently understood or successfully treated.

Fortunately for man, insanity is no disease of the *mind*, considered in the abstract. If it were, it would be *radically and forever irremediable*; for we have no medicines to reach and affect that substance. A *spiritual* malady is equally beyond our comprehension and our art. In the literal sense of the term, we cannot “minister to a *mind diseased*,” but we may

“Raze out the written troubles of the *brain*,
 “And with some sweet oblivious antidote,
 “Cleanse the stuff’d bosom of that perilous stuff,
 “Which weighs upon the heart.”

*For an exposition of some of the uses of Phrenology, see our concluding Essay.

When *early assailed*, and skillfully and vigorously treated as a disease of *matter*, not of *spirit*, it is found by experience, that insanity is as tractable as other affections. When hereditary, it proves, like all hereditary maladies, exceedingly obstinate. But when accidentally produced, it is as remediable as other chronic complaints.

Let it be faithfully studied, and ably treated on the principles of Phrenology, which demonstrates it to be as much a disease of the brain, as dyspepsia is of the stomach, or peripneumony of the lungs, and it will no longer be regarded as the "*opprobrium medicinae*."

Although it cannot effect the condition of the *mind*, the influence of remediate articles can alter and improve the state of the *brain*. When under the direction of an able physician, that organ is as accessible, through sympathy, to medicinal impressions as the kidneys or the liver.

The pressure of other duties forbids me to enter into further detail. Had I leisure to exhibit, on phrenological principles, the machinery of intellection in full operation, the intelligibility, simplicity, and symmetry of the spectacle, would not only command assent, but excite admiration.

I shall conclude this essay by a few extracts from a pamphlet lately published by Mr. Abernethy, of London, entitled "*Reflections on Gall and Spurzheim's System of Physiognomy and Phrenology*," merely to show the sentiments now entertained by that distinguished medical philosopher. I say "*now entertained*," for Mr. Abernethy was originally hostile to the science. But, like many other individuals of enlightened and liberal minds, he honestly studied it, and became convinced of its truth.

Page 33. "I see no objection," says Mr. Abernethy, "to the classification of the superior intellectual faculties which Gall and Spurzheim have made, into comparison, analysis or causation, and combination; because this arrangement refers to all the elementary powers cognizable in the actions of the human mind; powers which seem exclusively to belong to man. I am even pleased with the station which the organs supposed to be productive of these powers are said to occupy, for we find them arranged in a regular phalanx on the part of the head peculiar to man, the summit of the lofty forehead. As I have said in the lectures addressed to this College, if we find the head more produced in parts peculiar to man, it is reasonable to suppose that he will possess more of intellec-

tual character; and if in those parts common also to brutes, that he will possess more of those propensities in which he participates with the brute creation. We are all naturally physiognomists; and almost every observant person has remarked the amplitude of this part of the head to be indicative of intellectual power. Shakspeare denotes the eye as the herald of the mind, which so quickly proclaims its mandates that he compares it to the winged Mercury, new-lighted on a fair and ample hill, so lofty, that, Olympus-like, it seemed to touch the heavens."

Page 48. "In short, I readily acknowledge my inability to offer any rational objection to Gall and Spurzheim's system of phrenology, as affording a satisfactory explanation of the motives of human action."

Page 55. "Yet that there are natural differences in the character and talents of persons is evident; in infancy, we may observe that some are delighted with receiving and bestowing kindness; while others accept and return caresses with apathy. At a very early period we perceive a child to be resolute, or undecided; fearful or incautious; candid or reserved; liberal or selfish. We also discern various kinds of talents and intellectual powers, before it can be supposed that they have been produced by education. These natural differences of character and talent also manifest themselves under the most inauspicious circumstances; a man may be educated as a robber, and pursue his profession with so much zeal and energy that he may acquire its highest honours; he may be the captain of banditti; yet, if nature has given him just and honorable feelings, he will sometimes violate the regulations of the gang, and commit acts of clemency and propriety which many of his comrades may censure, and call pusillanimous, yet none can wholly disapprove. Do we not also know that great talents have induced self education, and that plough-boys have become eminent as philosophers and poets?"

Page 64. "However I readily concur in the proposition, that the brain of animals ought to be regarded as the organization by which their percipient principle becomes variously affected. First, because in the senses of sight, hearing, and smelling, I see distinct organs for the production of each sensation. Secondly, because the brain is larger and more complicated in proportion as the variety of affections of the percipient principle is increased. Thirdly, because diseases and injuries disturb or annul particular faculties and

affections, without influencing others; and, fourthly, because it seems to me more reasonable to suppose that whatever is perceptive may be variously affected by means of vital actions transmitted through a *diversity of organization*, than to suppose that such variety depends upon *original differences in the nature of the percipient principle.*"

Page 66. "Whilst, then, I most readily concede to what is demanded in this system of organology, that the variety of effects produced may be the result of modifications of vital actions transmitted through diversities of structure, I most strongly protest against the opinion, that the organs themselves are perceptive."

Mr. Abernethy is known to be as sound in principle as he is distinguished for intellect. His approbation of Phrenology is, therefore, doubly important. It furnishes the *evidence of authority*, as weighty as that of any individual of the age, in favor of the truth and the morality of the science. How infinitely it outweighs the disapprobation of the uninformed, the cavils of the sophist, the denunciations of the bigot, and the stale jests and ribaldry of the witting, the intelligent reader will satisfactorily perceive without any comment or argument of mine.

I have already intimated, and now beg leave more distinctly to declare, that from the Scriptures themselves the principles of Phrenology receive unequivocal and positive confirmation.

This science maintains, as one of its fundamental truths, that to qualify the human *mind* either to *act intellectually*, to *enjoy*, or to *suffer*, the union of a *material fabric* is essential.

And do not the Scriptures avowedly inculcate the same doctrine? Let facts reply.

As a man pre-eminent in holiness, the prophet Elijah was destined to experience, at once, as the reward of his fidelity, the beatitudes of heaven. But this he could not do as a disembodied spirit. As such he was not Elijah, but only a part of him. His mind and his body having been necessarily associated in action, must be also necessarily associated in enjoyment. He was therefore translated to heaven entire, to receive his reward in his *compound character*. This fact, being its own interpreter, needs no comment. Of Enoch, the same is true.

With all the details of the resurrection of the *body* of Christ, every christian is necessarily acquainted. The stone which closed

it was removed from the door of his sepulchre, his sepulchral habiliments were lying in different places, but his *body* had escaped.

This *same body*, configured precisely as before his crucifixion, and bearing the wounds inflicted in that process, was afterwards seen alive, and recognized by his disciples and other individuals.

And wherefore was all this? I answer, that Christ, in his *character as man*, composed of a *human soul* and a *human body*, might be duly prepared for the fruition of heaven. As a mere spirit he was not thus prepared.

Read, in chap. xv of his first epistle to the Corinthians, St. Paul's sublime and eloquent descant on the resurrection from the dead. Throughout the whole of that masterly production, the necessity of a *re-union of spirit and matter* is irresistibly enforced. Nor is the reason of this obscure. It is that, *by a restoration of the requisite susceptibility*, which spirit alone does not possess, *a fitness to enjoy and to suffer may be conferred*

If, then, divine revelation declares, either virtually or positively, that a union with *matter* is essential to fit the spirit of man for its *celestial abode*, there can surely be nothing of error or immorality imputed to a science merely because it inculcates the necessity of a similar union to qualify that spirit for its functions *on earth*.

THOUGHTS ON THE TRUTH AND IMPORTANCE OF

PHRENOLOGY.*

BEFORE any branch of knowledge can be satisfactorily unfolded, and efficiently inculcated, its nature and objects must be accurately defined, and correctly understood.

Without this, the views of the student or reader, must be indistinct and indefinite, if not erroneous, and the course pursued by the writer or teacher, unsystematic and irregular. The one will examine, and the other communicate, many things irrelevant to the ends which both have in view.

But if accuracy of definition is essential to the mere *teaching* of a branch of knowledge, it is much more so to discussions and debates respecting its truth. For if the opponents in a debate have discrepant views of the nature and bearing of the subject in controversy, it is not possible that they can come to a satisfactory conclusion in relation to it. Under such circumstances, debate too often degenerates into fruitless logomachy. It is from these considerations, that, on the present occasion, a definition, accompanied by a succinct exposition will be attempted.

The term Phrenology is a compound derivative of two Greek nouns, *Phren*, the mind, and *Logos*, an essay or discourse; and, in its present technical acceptation, may be interpreted, *an exposition of the science of the human mind*, or more correctly of the *human intellect*; mind making only a part of that, which ought, in strictness, to be denominated intellect.

*NOTE—The following pages were written as a separate memoir on Phrenology, to be read and considered in a debating society, and embrace a few of the thoughts that have already appeared, in the foregoing part of this work. But as they also contain many that have not been there expressed, particularly as relates to the application of the science to useful purposes, their publication here is deemed admissible. This explanation was considered necessary, to account for the form and manner of the memoir.

The school founded for the establishment and inculcation of this new science, or rather of this old science, cultivated and taught on new grounds, professes to impart the true knowledge of man, in his *animal, moral, and intellectual* capacities; with the external marks, by which his native character may be discovered. I say his *native* character; for it does not pretend to detect and indicate the different modifications that may be produced in it, by education, example, and the general range of artificial influences, to which he is exposed.

The more certainly, and satisfactorily to effect its purposes, the school analyses the *nature and constitution* of man, in his threefold capacity already specified, exhibits, in a detailed and insulated condition, the several elements that, in these respects, enter into his composition, and unfolds the influence of those elements, as well separately, as in their various combinations, in the formation of general and individual character.

From these observations it will be readily perceived, that the leading object of the school is, the accomplishment of that "*gnosis seautou*" or knowledge of self, which, in the estimation of the wisest of the Grecian sages, constituted the highest desideratum of human attainment, and was often designated by the lofty appellation of "*meiston agathon*," the greatest good. In more familiar language, its chief object, is, to communicate scientifically, the elements of a true knowledge of human nature.

In the effectuation of its general purposes, it is the further intention of the school, to free, as far as may be practicable, intellectual philosophy, from the many-coloured and gorgeous web of vision, and the multitudinous folds and encumbrances of mystery and transcendentalism, which have been heretofore thrown around it, with such infinite labour, to its utter concealment from all but the privileged and initiated few, and to exhibit it in that modest and simple attire, under which it will be distinctly visible and cognizable, and in which alone genuine science should ever appear. And although it is not pretended that these ends so desirable and momentous are yet completely attained, not only does a hope exist, but a confident belief is cherished, that they will be attained; and that already the course is designated, and the means prepared, by which the enterprize will be ultimately achieved.

If such and so important, then, are the nature and the objects of Phrenology; if the means it employs for the accomplishment of its

purposes, consist, as they really do, in a legitimate scheme of inductive philosophy; if, as is actually the case, it has already, in the face of the most formidable opposition and embittered persecution, that the talents and learning and unrelenting hostility of the age could array against it, carried acknowledged conviction of its truth into the heart of the most enlightened communities of Europe; if many of the most competent judges of the time are daily becoming its proselytes, and announcing their hearty adhesion to its principles; if all who faithfully study it become its converts and advocates; if those who are once proselyted never apostatize; if, of those who earnestly devote themselves to the cultivation of it, the clearest thinkers, the sternest inquirers, and the most logical reasoners, are soonest converted and become its most steady and enthusiastic defenders; and if, under the auspices of a small but faithful and resolute band of cultivators and advocates, it has thrown, in about thirty years, on the faculties and functions of the human mind, a greater amount of genuine and enduring light, than they had previously received in near thirty centuries, from the writings and teachings of the entire and almost innumerable hosts of metaphysicians and schoolmen, that the world had produced — If all these considerations are true, as, did time permit, could be proved to be the case, surely a branch of science recommended by so many certainties of its respectability, and so many presumptive evidences of its truth, is worthy of the serious and deliberate attention of the curious and enlightened of every community.

It deserves, most indubitably, to be received and examined as a branch of knowledge highly probable, at least, if not certain, in its principles; and, if opposed at all, opposed by serious and solemn argument, not by angry denunciations, malignant invectives, stale jests, and abortive witticisms. It deserves to be examined rigidly, but respectfully, and on its merits; not rejected *without examination* and *not understood* with affected scorn, and premeditated misrepresentations.

Yet, that for many years, it was thus treated and thus rejected, is a truth at which science has been already shocked, and for which Christendom will hereafter find reason to blush. Never, during the reign of ancient superstition, or the most intolerant period of the bigotry and fanaticism of modern times, was the spirit of philosophy more scandalously outraged. If no martyrdom has occurred

amid the persecutions of Phrenology, it is because the power to perpetrate it has been withheld.

The palpable object of the enemies of this science has been, to beat it down and extinguish it, whether true or false—to condemn and execute it without a hearing, lest it should give currency to some startling and contagious truths—to immolate it, in its infancy, on the altar of *legitimacy*, (as infants have often bled before, at the shrine of Moloch,) as an intruder, dangerous alike to the doctrines of the cloister, and the metaphysics of the schools.

That such was their stern and unrelenting resolution, conclusively appears from their modes of attack. Consult their writings, and the records of the controversy will testify to the fact.

From the commencement of their career, as the authors and teachers of Phrenological science, Gall and Spurzheim were openly denounced and scoffed at, as “charlatans, fools, and vagabond impostors,” or anathematized as hereticks, worthy to be broken on the wheel, or consumed at the stake, for an impious attempt to erect on the ruins of christianity, a system of materialism and daring infidelity.

Their teachings and opinions were treated alternately as the fooleries of the nursery, the extravagancies and incoherencies of the madhouse, or the dark and deliberate impieties of Pandemonium. In no instance were they met and analysed in the spirit of philosophy, and honestly weighed in the balance of reason.

As a specimen of the disingenuous, vacillating, and time-serving character of the attacks that were made on them, their authors were, at one time, arraigned as presumptuous innovators, on account of their *originating new and unheard of doctrines*; and, at another, as empty pretenders, who had attempted to palm on the world, as their own, and of recent origin, doctrines which belonged to other individuals, and an earlier age.

Among the latest diatribes on Phrenology, with which the press has furnished us, is one by Richard Winter Hamilton, in which he rails with bitterness against the science, as a *pretended modern discovery*, while he, in his recondite and fortunate researches, has ascertained it to be the growth of the fifteenth century.

This indecent effusion of prejudice and impertinence, clearly evinces Mr. Hamilton’s entire ignorance, not only of the principles, but of the annals of the doctrines he has undertaken to overthrow.

It proves him to be unacquainted with the very *text-books* of Phrenology.

Had he but *glanced over* the "Physiognomical system of Gall and Spurzheim"—and without a *perfect familiarity* with it, no one should dare to write against the science—he would there have learnt, that its distinguished authors do not claim, as their own, the earliest suggestions that appear on the subject. He would have even found that they avowedly trace them to a much earlier period than he does. They tell us distinctly, that as long ago as the *thirteenth century*, the Arch-Bishop of Ratisbon had so far matured and systematized his views in relation to the science, as to delineate a *figure head*, somewhat as Phrenologists do now, *marking on it the seats of the faculties of the intellect*. It is not true, however, as Mr Hamilton alleges, that the phrenological nomenclature of the present day, is the same that was employed at the period referred to. His assertion to this effect, is indicative of his ignorance, or his disregard of truth.

But why should time be spent in pointing out the various examples of ignorance or perversity, which the enemies of Phrenology have every where exhibited? To enumerate them all, would be to cite *every thing that has been written against it*. For I confidently assert—and, to sustain the assertion, refer without fear to the history of the controversy—that no one acquainted with it has ever yet appeared as a writer in opposition to it. Or if any such has appeared, he has abused, at once, his knowledge and the science, by intentionally misrepresenting the doctrines which compose it. A faithful exposition of those doctrines, none of its enemies have ever had the honesty to exhibit in their writings.

Unable to meet its advocates in honourable combat, and subvert, by argument, the facts and principles on which it is founded, the foes of Phrenology have directed their shafts, previously dipped in the venom of defamation, against what they have denominated its demoralizing tendency. As already stated, they have denounced it as inimical to morality and religion; and instituted against its friends, the charge of infidelity.

To call this expedient simply disingenuous, would be to characterize it too feebly. It is, in discussion, one of the most insidious, foul, and unmanly devices, that chicanery can suggest, or dishonesty sanction. Apart from the depth of its moral turpitude, its mean-

ness renders it unspeakably revolting. It is but the trick of knavery, to secure the applause of ignorance and folly.

To be of evil tendency, a doctrine must be false. And every false doctrine is of evil tendency, to whatever department of science it may belong. On the contrary, the tendency of truth, of every description, is essentially salutary. In morals it leads to virtue, in literature to sound taste, and in physics to something substantially useful.

To prove Phrenology, then, to be hostile to morality or religion, you must first prove it to be false. Establish against it that accusation, and you establish, at the same time, its pernicious influence. Whatever is deceptive, is, in its nature, corrupting, and ought to be rejected on account of its impurity.

But to pronounce a doctrine immoral, before you have proved it unfounded, is to commence opposition to it at the wrong end; a perversion of order, which nothing but ignorance or dishonesty can perpetrate. To call such proceeding *calumnious*, is only to attach to it the epithet it deserves.

Such, then, are the weapons employed, and the modes of using them, by those who have arrayed themselves in opposition to Phrenology.

And for what purposes have such artifices been practised, and such outrages committed?

I answer, not to prevent or suppress *new* errors, but to support and perpetrate *old* ones.

The legitimacy of the cloisters and schools is in danger; and, *per fas et nefas*, a *Holy alliance* must be formed to protect it. In the estimation of the privileged, there are *other divine* rights besides those of kings. The crown and the sceptre are not the only anointed baubles, that awe the million, and give strength to their possessors. The mace and the gown, the wig and the tonsure, are equally sacred, as symbols of authority. While, in the last resort, the "*ultima ratio regum*," is employed to sustain the former; a struggle equally fierce and obstinate is made to maintain the latter, in defiance of all *reason*, virtue and decorum.

Take from Phrenology its tendency to interfere with the pride of opinion, and the profit of place, of those who have long arrogated to themselves the prescriptive right to give laws in relation to mental philosophy, and the envenomed opposition it has hitherto encountered, if it does cease, will lose its bitterness. For, I repeat,

that the war waged against it by the quadruple alliance of the tonsured and the wigged, the maced and the gowned, has been for the protection and maintenance, not of truth, morality, and religion, but of interest, power, and official standing.

Intolerance, and indifference as to sound knowledge, have furnished to many the ground, and influenced them in the mode, of their opposition to Phrenology.

It is much easier to find fault and rail, call names and deal in common-place jokes, than to analyse, examine, compare, and deduce. The former is the employment of Wapping and Billingsgate, and is most successfully practised by the *vulgar*; the latter is the province of the closets and walks of philosophy, and belongs to the *refined*. And it is deeply to be lamented, that among the high and the learned, no less than the illiterate and the low, suitable inhabitants of Billings-gate and Wapping may be abundantly found. In proof of this, we need only turn to the pages of the Edinburgh and Quarterly Reviews, Blackwood's Magazine, the London Literary Gazette, and the ephemeral productions of Rennell, Paulding, and Hamilton, *et aliorum ejusmodi pecoris*.

Never was the christian religion itself more foully traduced by its coarsest and most blasphemous persecutors, than are Phrenology and its advocates, in those productions. Nor was the triumph of truth more signal, in the former case, than it will be, in the latter. If the authors of the slanderous publications referred to, do not, in time to come, call on the hills and mountains to cover *themselves* from the scorn that awaits them, they will, at least, be rejoiced, when the night of oblivion shall have covered *their works*.

But indiscreet and ruinous to their own cause, as has been the mode of attack of a great majority of the enemies of Phrenology, a few of them have manifested, in their opposition, some degree of judgment and address.

Finding it impossible, as already intimated, to make the slightest impression on the evidence on which reposes the fundamental principles of the science, these combatants, like experienced warriors, now direct their assaults against its details. Nor do they neglect the adoption of a single device, that may subserve, even temporarily, the purposes which they meditate. As the culprit irrevocably condemned to the gibbet, sues for a reprieve, to protract the span of his miserable existence, they, in like manner, on every occasion, manifest the most painful solicitude to procrastinate the day of

ultimate overthrow, which they see approaching them, with irresistible footsteps. Hence they no sooner find a supposed defect in some minor tenet or alleged fact, on which the enlightened friends of the science place no reliance, than they proclaim to the world the utter subversion of the entire system. By this stratagem, they discredit, for a time, in the minds of the unthinking, the cause of truth, and check the timid in their inquiries respecting it.

Of this mode of proceeding, the following will serve as an illustrative example.

In a notice, by a journalist, of a caricature attack on Phrenology, by George Cruikshank, the writer observes,

“There are animals that have no heads at all, and, consequently, no *bumps*; yet have these their instincts as powerfully developed, as if they had *skulls covered with organs!* How is this? How do Phrenologists account for all the instinctive natural movements of the acepholous tribes, which have perfect innate propensities, without heads or brains? How is it with the Mollusca?—Seriously speaking, we think these questions not only unanswerable, but a decisive refutation of the whole system.”

Such is the presumptuous “*Quod erat demonstrandum*” conclusion of this conceited and impertinent word-weaver, who, in relation to Phrenology, has shown himself to be as bungling an ignoramus, as ever put forth his un concocted conceptions.

I take no exception to his clumsy use of language, where he speaks of “*skulls covered with organs,*” while Phrenologists find the arrangement to be, *organs covered with skulls.* Any mode of expression, even the most blundering, is good enough for such ar-rant trumpery as his paragraph contains. A very brief analysis will sufficiently unmask his ignorance and folly.

Our journalist alleges, that headless animals manifest instinct. In this he is correct. But we can scarcely think him so *brainless* himself—so lamentably steeped in ignorance, as to believe that any animal on this earth can manifest either instinct, or any other mode of *intellecion, without brain,* in the physiological acceptation of the term. For by the term brain, is now understood *cerebral organization;* or rather, matter of the proper kind *cerebrally organized.* And the condition of creation here is, that wherever there exists the slightest shade of intellection, there must also exist a cerebral mass, and the converse; wherever cerebral matter presents itself, there will some mode of intellection be found.

Because, then, an animal exhibits nothing in the form of a head, or the nature of a skull, does it follow that it has no organ or part possessed of the peculiar character of brain? Or must brain, to be capable of its appropriate functions, be necessarily rounded in figure, and enveloped in bone?

Physiologists are aware, that nature imposes no such necessity. Brain is *generally* surrounded by bone, *as a support and protection*; but not as a *sine qua non* of its powers. It derives from such covering no share of its intellectual capacity. Were it possible to remove from man his entire cranium, without doing violence and injury to the parts contained in it, his intellect would remain unimpaired by the operation.

I repeat, then, that in whatever part of animals it may be found, with whatever substance it may be covered, or whatever shape it may assume, *cerebral matter, properly organized, and possessed of life*, is as necessarily the *instrument of some mode of intellection*, as a muscle is of motion, or a gland of secretion.

Although, as the epithet attached to them imports, the *acephalous* animals of our journalist have no heads, they have uniformly *ganglions*, which are cerebral masses, *as substitutes for brains*. And, in their humble sphere, those ganglions subserve the various purposes of *instinct*, as completely as the more perfect cerebral organ, in man, answers the ends of his more elevated intellect.

All animals respire atmospherical air. But all have not lungs, a trachea, and a thorax, constructed precisely like those of man.

All animals receive, digest, and assimilate food. But all do not perform these important processes with similar organs. On the contrary, the digestive systems of many of them exhibit discrepancies, in form and appearance, much more striking, than those which exist between ganglion and brain.

All animals propagate their species. But all do not do it with the same kind of organs, and in the same way.

In like manner, all animals possessed of true cerebral organization, manifest instinct, or some more elevated mode of intellection. But it does not follow that this organization should be always either moulded into the same form, situated in the same part of the body, or protected by the same kind of covering. Let a genuine cerebral organ, of any description, exist, and it will as certainly manifest instinctive or intellectual functions, as the lungs do the function of respiration, the stomach of digestion, or the glands of secretion.

In relation to man, place his brain in his heel, instead of his head, and make it *triangular* instead of *spherical*, the system of nerves being suitably connected with it, and although the location will be an inconvenient one, it will still be the organ of active intellection. The individual who denies, or seriously doubts this, makes a miserable manifestation of his *own brain*. He shows it to be an organ, if not *dislocated* and *wanting in original construction*, at least, *in bad keeping*, and *lamentably out of tune*.

Away, then, with all such miserable trash, as that which our journalist, through ignorance or knavery, has palmed on his readers! The fraternity of pseudo-philosophers, to which he belongs, are a disgrace to science, and the curse of the times. Let him, or any of his juggling tribe, present to us an animal, whether *acepholous* or *headed*, possessed of instincts, *but destitute entirely of cerebral matter in an organized state*, and we shall consider him worthy of our further notice. In the mean time, contemptuously as we think of him, and confident that he has interfered with what he does not understand, we shall dismiss him, for the present, with the advice of the sage to the meddling cobbler, "I, sutor, ne ultra crepidam."

One of the objections preferred against Phrenology, which possesses more of seeming weight than either of the others, or, perhaps, than all of them united, and on which it is my purpose to offer a few remarks, cannot be noticed with sufficient clearness, unless a brief exposition shall have been given of certain fundamental principles of the science. To such exposition, then, it is requisite I should pass.

I. The science is divided into two branches, *Phrenology proper*, and *Craniology*.

II. The first treats of the connexion of the mind and the brain, and their influence on each other.

III. The second, of the quantity and figure of the brain, as manifested by the size and form of the head.

IV. By a competent knowledge of both branches, united to a course of practical discipline, the Phrenologist is enabled to judge of the native amount and general character of the intellects of individuals, by an inspection and accurate admeasurement of their heads.

It is to the two last of these propositions, that the objection to which I have alluded is preferred.

Unable any longer to resist the force of testimony, adduced by its advocates, in proof of the truths of Phrenology proper, on which, at first, by far the most immeasurable streams of angry invective and rancorous denunciation were emptied, the adversaries of the science now direct their attacks more particularly against Craniology.

Whatever, say they, may be the size, form, or other characteristic, of the brain within, no indication of it can possibly be given, by the exterior of the head. The brain lies hidden under a covering of bone, which, being harder than itself, cannot receive from it either its dimensions or its shape. Craniology, therefore, they add, being but an empty, false, and charlatanical pretension to knowledge, is worthy alone of derision and scorn. It should be classed and rejected with palmistry, Mesmerism, Perkinism, animal magnetism, and other disreputable schemes of imposture.

That those who have no knowledge of animal organization, and who have never attended to, and, therefore, never understood, the natural relations and the comparative standing of the different parts of the human body, should suffer notions like this to take possession of their minds, is, to the reflecting, an event by no means unexpected. Of disputants, who incautiously wander from their proper spheres of knowledge, entanglement in the toils and inthralments of error, is the usual, if not the inevitable, destiny. Nor can a more instructive exemplification of this be adduced, than that which the present occasion affords. But, that anatomists and physiologists, whose immediate concern is with the structure and functions of living matter, and whose duties impose on them the attainment of correct knowledge, on these interesting and important subjects, should be thus deluded, is matter of surprise.

There are two modes, in which the controversy on this topic may be satisfactorily settled; *reasoning on principle*; and *ocular inspection*. The result of both must be received as demonstration.

In relation to the first, it may be pertinently inquired, whether the cranium or the brain is the master-organ? and which of the two is made for the use of the other?

By those who are thoroughly acquainted with the subject, it can scarcely fail to be perceived, that correct answers to these questions are calculated virtually to decide the controversy.

If the brain be the inferior and subservient organ, it is the voice of nature, distinctly expressed, that it must receive its form from the cranium. And if, on the contrary, the cranium be subservient

it is equally certain, that, as respects its internal table, it must derive its form from the brain.

But, in making up his opinion, on this point of inquiry, no physiologist is permitted to pause. As well might a doubt be entertained, whether the shell of the tortoise is made for the body, or the body for the shell; whether the bark is made for the tree, or the tree for the bark that covers it, and which bestows on the other its figure; in matters of art, whether the foot and leg are made for the boot, or the boot for the foot and leg; and, in the course of wearing, which of the two gives shape to the other; or, in forming a mould to make casts of the human head, whether the features give form to the plaster, or the plaster to the features?

That the cranium is made for the use of the brain, appears conclusively from every consideration that bears on the question.

The brain is the more important organ; and it is the ordination of nature, that the inferior shall always subserve the superior.

In point of fact, while the brain is sustained and protected by the cranium, it makes, in no degree, a reciprocation of benefits. The cranium is neither supported by the brain, nor aided by it in its functions.

Add to this, that in the progressive development of the foetus in utero, the brain is formed first, and the cranium superimposed on it, as a necessary covering. In no instance is this rule of creation reversed.

As respects, then, I repeat, the internal table of the skull, it *must* be configurated in conformity to the brain. Were the case otherwise, pressure would derange the intellectual functions, or a vacuum, or some mere expletive substance exist between the brain and the cranium; circumstances which never occur, in a natural and healthy condition of the system.

But if the internal table of the skull receives its shape from the brain, and perfectly conforms to it in configuration and dimensions, so must the external, which is equidistant from it. Or if not, in every part, precisely equidistant, the exceptions are so few and inconsiderable, as not to impair the general rule.

The only exception, of any real moment, that occurs, is that which is constituted by an occasional projection of the external table, in the formation of a frontal sinus unusually large. I call the projection "*occasional*" because it is not in every fiftieth individual that it occurs in a degree sufficient to mislead.

The difficulty, then, arising from this irregularity, is greatly exaggerated, in the representation of it which is given by the enemies of Phrenology. Besides, admitting the objection in the entire latitude and weight that are claimed for it, the embarrassment it creates extends, at furthest, to but one or two organs.

There is yet another consideration, which obviates entirely the force of this objection; or, at least, so far reduces it, as to render it unworthy of serious regard.

Between the extent of the cerebral organs of many individuals, the difference is *an inch*. A difference of from *half to three fourths* of an inch is, by no means, uncommon.

But the difference between the thickness of the skulls of individuals, who are healthy, and either youthful, or in the prime of life, never, perhaps, exceeds the *eighth*, and rarely the *twelfth* of an inch. In old age and certain forms of disease, the case is different. Here the discrepancies in the thickness of the cranium are often very considerable. But, under such circumstances, it is not pretended that craniological rules can ever, with any degree of certainty, be applied. Nor can application be made of any other rules of a natural character, because nature is either subverted, or in a state of decay.

With the exceptions already specified, the difference between the thickness of the different parts of the skull, in the same individual, is scarcely perceptible.

It is obvious, then, that in the difference between the extent and general size of the cerebral organs of different individuals, that between the thickness of their crania is lost. And of still less moment, because productive of much less embarrassment in craniological examinations, are the slight unevennesses that may occasionally occur in the thickness of the cranium of the same individual. Besides, a disciplined Phrenologist finds really no difficulty in distinguishing between a cranial protrusion arising from a knot, or an unusual thickness of bone, and one produced by the luxuriant growth of a cerebral organ. The first is irregular and capricious, in its outline, size, and general character, while, in these respects, the other is much more settled and uniform.

But, when we resort to an analytical inspection of the component parts of the human head, the evidence thence derived, in favour of Craniology, is conclusive. For all practical purposes, we find the equidistance between the external and internal tables of the

skull to be entirely sufficient. Wherever there is a depression in the latter, the former exhibits a corresponding protuberance.

Nor is this all. Between the brain and the internal table the correspondence in figure is equally perfect. When the cranium is removed and a comparison instituted, it is plainly perceived, that for every pit or cavity in the table, there is a protuberance on the brain adapted to fill it. Let the most embittered foe to Phrenology make this experiment, in a spirit of candour, and he will be convinced of the correctness of the statement we have given. On the issue of such a trial, the fate of the science might be confidently staked.

If, then, it is susceptible of demonstration, that things equal to one and the same thing are equal to one another, according to the same theorem and mode of proof, things corresponding in figure with one and the same thing, must also correspond with one another.

But it has been shown, that the brain and the external table of the skull correspond, in figure, with the internal table. They must, therefore, correspond with each other.

It must be received, then, as a demonstrated truth, that the cranium is not only made for the brain, but derives from it both its dimensions and figure. The brain is the block on which the cranium is constructed, precisely as the head of the individual, whose cast is to be taken, serves the artist as a model for the construction of his mould.

When, the *brain*, therefore, is expanding in growth, the cranium expands correspondingly to suit it.

Is the enlargement of the former regular and equable in every part? So is that of the latter. But do certain portions of the brain project, in growth, beyond the others? To make room for them, and keep them free from morbid pressure, the cranium recedes before them, and forms pits or cavities to receive them.

Nor, to the educated physiologist, is there any thing singular in these phenomena. On the contrary, the process, on which they depend, is perfectly familiar to him.

The brain is soft, and the cranium hard. And the physiologist well knows, that such are the laws of living matter, that, in every instance, where, in the process of enlargement, whether healthy or morbid, a hard and a soft part come into collision, the hard part gives way.

Under the pressure of an aneurism, an abscess, or any other tumour, the ribs, the clavicle, and the sternum, bend, or become absorbed. So do other bones of the body.

In the hardest bones, not excepting the os petrosum, with which the arteries lie in contact, they form for themselves sulci, corresponding to their size. Nor are either the coats or the caliber of the arteries affected by the collision.

In rickets, the cranium enlarges preternaturally for the accommodation of the preternaturally increasing brain; and, in hydrocephalus internus, for that of the accumulating waters.

Monsters without a brain have no cranium, because it would be useless. And nature never deals in supererogation. Wherever a cranium is formed, it is in subservience to a brain, and in correspondence with it. To this rule there is no exception, unless under the derangements of accident or disease.

Is the brain of idiots diminutive and misshapen? So is the cranium, and that precisely in the same degree. Is the former in any way defective? In that respect, again the latter corresponds with it.

Is any portion of the cranium depressed, *during youth*, by mechanical violence? The growth of the brain very often replaces it.

Were it requisite I could show, that in very many of the inferior animals, there exists, as in man, a perfect correspondence, in dimension and figure, between the cranium and the brain.

From these facts and considerations, it appears conclusively, that the size and form of the brain determine the size and form of the cranium. Any extraordinary developments, therefore, of the former, must necessarily be indicated by corresponding protuberances or swellings of the latter. Hence, the foundation of Craniology and Phrenology proper, are alike solid. If the latter branch of the science is true, so is the former. They cling to each other, like matter and its properties; and must stand or fall together.

It has been intimated that in individuals far advanced in years, the uniformity of the thickness of the cranium is lost. The cause of this may be easily rendered.

In old age, the brain, like the muscles, and other soft parts of the body, diminishes in size, and loses its firmness. And this diminution is unequal in different portions of it, some organs beginning to decay at an earlier period of life than others.

But, to prevent the production of a vacuum, as the brain decreases in size, the internal table of the skull recedes from the external,

and the quantity of diploe between them is augmented. By this process, which nature wisely institutes for the purpose, the cranium and the brain are maintained in contact.

But, as the brain, as already stated, diminishes in some parts more than in others, the internal table must recede further from the external, *in the same places*, than it does elsewhere; and hence the difference of thickness which it manifests. Where the brain is most diminished, the skull is always thickest.

In this change in the relative quantities of brain, the external table of the skull retains its place. No alteration, therefore, occurs in either the form or size of the head. Hence the Phrenologist can still ascertain what the amount of native talent *has been*; but not what *it is*.

The preternatural thickness, so often discovered in the skulls of lunatics, is explicable only on the same principles.

From the morbid affection, under which they labour, their brains wither and diminish in size, as the muscles do, under chronic rheumatism.

Hence, to prevent the production of a vacuum between the brain and skull, the latter is augmented in thickness, by a recession of the internal from the external table. Here, as in old age, the augmentation maintains the contact.

Added to their increase in thickness, the skulls of lunatics are often preternaturally hard.

On similar grounds, a diminution of brain, and an augmented thickness of cranium are found occasionally in very protracted cases of epilepsy.

To the foes of Phrenology may be presented another view of the subject, which it becomes them very seriously and deliberately to ponder.

Wherever the science is honestly cultivated and correctly understood, the intelligent and ingenuous youth, who, at a future period, are not only to give tone and direction to public opinion, but to be themselves its source, are becoming universally its proselytes and defenders. They are growing up under a belief of its unquestionable verity, with all their early predilections in its favour. As well by education and habit, as by the fashion of the times, they will be confirmed Phrenologists. To them will belong the province to pronounce, and they will do it impartially, on both the

measure of sound knowledge, and the general conduct, as lovers of truth, of those who have been the inveterate revilers of the science. They will settle permanently the rank they are to hold, as controversial writers, sound moralists, and intellectual philosophers. They will judge with firmness of the modes of discussion pursued, as well by the friends, as by the enemies of the science. Nor will they fail to affix the names of cavillers and railers, defamers and sophists, wherever they may find them to be justly deserved. And, should they find that, in any case, a writer engaged in the discussion of a subject, has intentionally misrepresented the sentiments of his antagonist, or availed himself of any other dishonest expedient, with a view to weaken his hold on public opinion, they will irrevocably award the merited reprobation.

This, if dispassionately considered, is a prospect of no slender concern to the Edinburgh and Quarterly Reviewers, the Blackwoods, the Rennells, the Hamiltons, the Pauldings, and the Cruikshanks—or to designate them more briefly and classically, to all the Thersiteses and Zoiluses of the day, who have selected Phrenology, as the theme of their aspersions.

If they prefer to hazard their reputation with posterity, for any present but trivial and shortlived gratification; it does not belong to me to constitute myself either their adviser, to dissuade them from the measure, or a censor to condemn them on account of their choice. Nor shall I affect, on the occasion, to play either the ca-suist or the seer. But, judging simply from the nature of the case, and the signs of the times, I venture to tell them confidently, that, as directors of public opinion, their days are numbered—that their sun is not only descending, but that they are already far in the evening of their lives—and, that their night will be as dark, and dreary, and disgraceful, as their morning and meridian have been boisterous and foul. I speak of them only as respects Phrenology. To their other relations, as literati and general philosophers, I do not, at present, make any allusion. They may there enjoy uninterrupted by me, had I even the power to interrupt them, whatever of reputation and authority the world has conceded to them.

But, as regards Phrenology, I have not yet done with them.

Let them cast their eyes around them, and they will see no strong man rising in his might, and buckling on his armour to war in their behalf. By death, desertion, and defeat, their ranks are growing thin. Those who still loiter on the field of conflict, as in

a struggle of desperation, are not only old, decrepid, and maimed, but have never been suitably armed for the combat. The reason is, that they are utterly unskilled in the warfare they have waged. Nor have they ever so far relaxed from their self-sufficiency, which is in its very nature repulsive of knowledge, nor so far descended from their *affected dignity*, as to labour to acquire the requisite information.

But how different is the condition of the friends of Phrenology! Their numbers are every where rapidly increasing, and their ranks swelling with the vigour of manhood, and the ardour of youth; and each one is perfectly equipt for the conflict. He possesses knowledge in every way calculated to direct him in his movements, and to render him efficient.

To say nothing of such *Savans* as Combe, Blainville, St. Hillaire, Royer, Otto, Chalmers, Welsh, Johnson, Mackenzie, and many others that might be named, each of them greatly superior in standing, as *intellectual philosophers*, to any that now appear in the opposition—to say nothing of these, in all cases where anatomy and physiology are concerned, Abernethy and Home are a host in themselves. *But Phrenology is nothing but the anatomy and physiology of the brain.* And the two distinguished medical philosophers just mentioned, are its proselytes and defenders.

Young men, as they assure us themselves, and further convince us by their modes of discussing it, clearly understand the science of Phrenology. But they frankly declare to us, that the *metaphysicks of the schools* are beyond their comprehension. They are too subtle and ethereal for the grasp of their intellects. An attempt to master them is like a struggle with a ghost—the effort is great and exhausting; yet nothing of substance or reality is felt. When the contest is over, the *disagreeableness* of it only is remembered, like the pressure of the night-mare, on waking from a dream.

Hitherto metaphysicks have been regarded as clouded in *mysteriousness*, which has attached to them much of factitious authority. For it has been too much the custom of the world, to consider things mysterious as sacred in their nature, and entitled to veneration in proportion to their mysteriousness. From this source have originated nearly all the superstitions, and a very abundant portion of the most absurd and pernicious prejudices of the human family. But, of the reign of that delusion, the end is at hand.

The time has been, when mystery had a charm. In the dark ages, its mysteriousness was almost the only attribute of knowledge that did charm. It was certainly prized beyond all others.

But as light has dawned on us, the period of mysticism has gone by. The spell of darkness is broken; and men are beginning to pant after sound and genuine knowledge. Their desire is for something which they can understand, and apply to useful and practical purposes. And once in possession of such a treasure, they will never barter it away for a *pottage-mess of transcendentalism*, or the *flesh pots of metaphysicks*.

Phrenology consists in a scheme of observation and induction, which falls in with the spirit of the present age, and with the natural and true mode of cultivating science. Genuine metaphysicks are compounded of the abstract reveries of ages that are gone by. The one is founded in nature, and admits of proof. The other is the result of the mere visionary refinement of a small class of men, and is built principally on *assumption and conjecture*. Its avowed foundation is *consciousness* or *present feeling*, which, owing to the uniform diversity of human intellects, never is nor can be the same, in any two individuals, placed under similar circumstances. Hence every new metaphysician constructs a new system, corresponding with the peculiarities of his own consciousness; thus making himself the standard by which are to be tested and measured the whole human race. An error more gross and palpable than this, can scarcely be imagined. It constitutes the basis of that utter and irreconcilable discrepancy of doctrine, which marks the various systems of metaphysicks.

Between these two schemes of knowledge the enlightened world will choose; and the choice will comport with the character of the times. And of that character, an exemption from superstition and prejudice, united to a taste for observation, and plain practical common sense, is becoming very rapidly the predominant feature.

From the opposition to metaphysicians and their writings, which I have manifested, and from any severity of remark in relation to them, in which I may have indulged, I wish it to be understood, that I entirely except the late Dr. Brown, of Edinburgh, and his eloquent and excellent lectures. Between the two schools of Metaphysicks and Phrenology, that great teacher occupied the middle or transition ground. Or rather, his near approach to the *latter*, gave to it a much fairer claim to him, than the former could pre-

sent. Indeed the very proximity of his approach, unaided by the means which Phrenologists employ, affords the strongest evidence, that can possibly be adduced, of the power, acuteness, and profundity of his intellect, and of the intensity and success of his devotion to analysis.

From his biographer and friend, the Reverend Mr. Welsb, himself one of the ablest advocates of Phrenology, we learn that Dr. Brown was by no means unfriendly to the principles of that science. On the contrary, he considered them, *a priori* neither unreasonable nor repulsive; and pronounced them, therefore, deserving of serious investigation. He openly defended the science against the charges of materialism and fatalism, in an article in all respects worthy of his pen.

It is unfortunate for Phrenology, that Dr. Brown died before it had fairly taken root in Edinburgh. Had he lived until this time, there is no ground to doubt, that he would have been not only a proselyte to it, but one of its most ardent and powerful defenders. To this belief, his liberality and enlightened curiosity, as a philosopher, and his distinguished ability and success, as an inquirer, alike contribute. The former qualities would have led him to Phrenological researches, and the latter would have conducted him to truth and eminence on the subject.

The present is the most practical age the world has witnessed. It is proverbially the era of observation, experiment, and demonstration. Nor is the cause of this difficult of discovery. It is to be found in the superior intelligence and improvement of the age.

The universal sentiment now is, that human benefit, in some of its modifications, is the only legitimate and desirable end of human knowledge. Unless it contribute to that effect, all knowledge is considered useless. It is even regarded as a nuisance, because the cultivation of it consumes time, which might be otherwise more suitably and profitably employed. Hence mankind will not devote themselves, as they once did, to the attainment of any branch of science, until previously convinced of its practical usefulness. And hence the frequent question, propounded with perfect honesty of intention—"Admitting Phrenology to be true, what are the advantages to be derived from the cultivation of it?" To this interrogatory, the friends of the science might reply as follows

All truth is useful, or the Deity has been guilty of supererogation. If Phrenology be true, it cannot to this general rule present

an exception. To decide on its utility, therefore, settle first the question of its truth.

But admitting it to be true, time and opportunity have not yet permitted us to discover the entire extent and diversified range of its usefulness. The science is in its infancy; and while any branch of knowledge is in that condition, it is not possible to foresee all the sundry purposes to which it may be practically and usefully applied. Much time is requisite for the *discovery* of those purposes, and not a little to make the preparation necessary for their *attainment*. To the truth of this, experience and history conjointly testify.

When magnetism was first discovered, who could have predicted the momentous influence which it has subsequently acquired in the affairs of the world?

When sparks of electricity were first drawn from the Leyden vial, no one could have anticipated the important results to which the discovery has led.

To Galvanism a similar remark may be applied. When the existence of that subtle agent was first ascertained, had any one ventured to predict the important ends it has already achieved, he would have been suspected of lunacy.

When Harvey had established the fact of the circulation of the blood, he did not even dream of the immeasurable advantages which the discovery was calculated to bestow on the world; and which it already has bestowed.

When the invention of printing was of recent origin, no one could have been persuaded that it was destined to enlighten mankind to the extent to which it has already effected it, and to become, as an engine of state, more powerful and formidable than the sceptre or the sword.

Nor, when the force of steam was first perceived, was it possible for the most prolific imagination to conceive of the innumerable useful and important ends, to the attainment of which, by the experience and ingenuity of man, it has been successfully applied.

In like manner, in the present early and immature stage of the science, it would be hazardous and presumptuous, to attempt to predict the countless advantages that mankind are destined to derive from Phrenology. Nor is it reasonable to expect the achievement of such a task. But, without any hazard, a few of those advantages may be readily suggested.

Education, properly conducted, is the great means to ameliorate the general condition of man. It is that alone which can elevate him from savagism to refinement; and translate him from the night of ignorance to the meridian of knowledge. As relates to the exaltation and improvement of human nature, it is the world's *first and greatest*, if not its only hope. In the war that exists between the *flesh* and the *spirit*—between the *animal propensities*, on the one side, and the *moral and intellectual faculties*, on the other, it is it alone that can give victory to the *latter*. And, where the organization of the brain is healthy, that it can do with perfect certainty. Whatever forcibly bears on it, therefore, constitutes an object of *primary* importance.

But, admitting it to be true—and I shall now treat the subject under that supposition—Phrenology will bestow on the process of education, an excellence and an efficiency, far beyond what it has heretofore possessed. It will give to it a perfection, which it can never derive from any other source.

Education, when perfect, consists in the cultivation and improvement, both in strength, correctness, and dexterity of action, of the human intellect, in its several divisions of faculties, *on principles precisely corresponding to its nature*. It also includes the supplying of the intellect with the proper materials on which it is to act, and the directing of it to the best sources, whence other materials of value may be drawn.

But, that the requisite principles may be adopted and judiciously applied, the *nature and constitution* of the intellect must be perfectly understood. And that is specifically what Phrenology teaches; and what, of course, has never been previously taught by any other scheme of intellectual philosophy. On the contrary, all other schemes must have necessarily inculcated false views of the human intellect, and, therefore, misdirected and violated the process of education. For there can be no truth more clear and undeniable, than that wherever the nature of the intellect is misunderstood, the business of education will be inevitably abused. And the reverse. Wherever the former is *correctly* understood, the latter will be conducted with a corresponding degree of perfection.

In the process of education, on which the worth of the human character so essentially depends, the intellect of the pupil is the complex machine, which the preceptor is employed to superintend and regulate; to strengthen such parts of it as may be too weak;

to moderate the strength and restrict the action of those that may be inordinately vigorous; to facilitate and excite the movement of such as may be inactive; to supply it with the requisite elements of knowledge; and thus put it in a condition to act harmoniously, and with the highest degree of usefulness and efficiency of which, from its nature and constitution, it is capable. But that all this may be done, it is indispensable that the entire machinery of the intellect be understood by him, to whose care it is entrusted.

Suppose it to be a machine of any other description—a time-piece—a steam-engine—a water-mill—a cotton-spinning engine—or an orrery, and the supervisor to have no knowledge of its construction or powers. The issue of such a state of things must be obvious to every one.

From some defect in its original construction, the machine requires amendment; or, from accidental derangement, it stands in need of repairs. What is to be done? The superintendant has no light to direct him in his duty.

If he neglect the machine, it will fall to pieces; or, at least, become useless; and if he touch it, he will destroy it with his own hand. In either case, ruin is inevitable.

But to the care of a pretended artist, thus utterly ignorant of the elements of his duty, no one will commit either his watch, an air-pump, or any other kind of valuable machinery. He will entrust it to none but a skilful mechanic, acquainted with the mode of keeping it in order, from a thorough knowledge of it, and competent to the repairs of such accidents as may befall it.

Much less ought we to commit to an ignoramus, or a bungler, that still more curious and invaluable machine, the youthful intellect. Yet to such incompetent supervisors the world *has* committed this machine, from a lamentable want of those that were qualified. For, I repeat, that the schemes of mental philosophy heretofore predominant, have inculcated error, rather than truth, and spread abroad darkness, rather than light, in relation to the nature and constitution of the human intellect. They have been too much directed to the acquisition of a knowledge of the *substance* of the intellect, rather than of its *faculties* and *composition*. It need scarcely be added, that the *former* of these points is *transcendental*, while the latter is *attainable*.

For this evil, which has, at one time, lain like an incubus, on the intellectual faculties, and, at another, deluded and led them astray,

like an *ignis fatuus*, and to which is to be attributed half the calamities that have fallen on man, the competent remedy can be found only in the resources of Phrenology.

By the lights of that science, as already intimated, we attain a knowledge of the *general constitution* of the human intellect, of the laws by which it is governed, of the mode in which it may best be controlled, disciplined, and fitted for any given pursuit, and of its particular condition, at the different periods of life—infancy, youth, manhood, and old age, in different individuals, and in different states of the body arising from other causes.

From the same source we learn, that the intellectual faculties, depending on the irregular growth of specific organs of the brain, are, like other attributes of the system, developed, not *collectively*, but *progressively*, from childhood to manhood. That the *propensities* appear first, the *knowing* faculties next, and, last of all, the *moral* sentiments and the faculties of *reflection*.

This knowledge of the gradual unfolding of the brain and the intellect, teaches us the necessary course of education. For the faculties must be instructed in the order in which they are developed. To attempt a different order would be to *counteract nature*; and, like every other unnatural project, the effort would be abortive.

From the same source we derive a knowledge of the kind of instruction peculiarly adapted to each period of life, and each particular class of faculties. Nor is this all. From the acquaintance thus acquired with the predominant faculties of different individuals, each can be directed to those pursuits, for which he is particularly qualified by nature.

Thus will every pupil move in his proper sphere, and attend to the objects congenial to his age, and to the peculiar capacities with which he is endowed. For, in the course of instruction, the aptitude between capacity and the knowledge inculcated should never be overlooked. And that aptitude can be learnt only through the medium of Phrenology. Every other scheme of intellectual philosophy rejects a belief in the existence of a variety of *primitive and innate* faculties specifically different from each other, and in a discrepancy in their native strength. So true is this, that metaphysicians consider a difference of faculty in different individuals as the offspring of habit. With equal reason might they revert to the doctrines of astrology, and attribute the possession or the want of talent to the influence of the stars.

That it may be clearly understood, this subject must be treated more in detail.

Education, to be efficient, must begin with infancy. The first thing to be done, then, (I allude to *intellectual* education,) is to regulate the propensities, because, as yet, but few of the higher faculties are sufficiently developed.

Here, the true course of procedure is, to make one propensity, as far as may be practicable, act as a check on another, so as to constitute, between the whole, the requisite balance, and prevent those vices which arise from *excess of indulgence*, in any line or description of feeling. The *moderate* indulgence of every *native* feeling is innocent and lawful. It is only the *excess* that constitutes vice.

Into the details of this particular process, it would be too tedious to enter. Nor is it necessary. To the Phrenologist, who is alone concerned in it, it is familiar.

The *knowing* faculties, which take in the elements of knowledge, and become very active early in childhood, are next to be educated. Here, again, the requisite balance of the intellect is to be maintained.

Does the pupil manifest an absorbing devotion to one or two kinds of attainment, to the culpable neglect of all others? The exercise of his master faculties must be moderated, and that of his others correspondingly excited. In more matured life, he is to be indulged in his favourite pursuits; but he will be the better prepared to distinguish himself in them, by having acquired, previously, auxiliary knowledge, in other branches. During this period, the faculty of language, in particular, should be carefully instructed. With the details of this process, the enlightened Phrenologist is perfectly conversant.

Next comes the education of the moral and reflecting faculties, the latter of which, take cognizance of the relations of things, and work up the materials acquired by the knowing ones, into those various intellectual tissues, and make those applications of them, that so greatly elevate man above the inferior animals, and one man above another.

So far as the mere *inculcation of knowledge* is concerned, education will be successful in its issue, in proportion to the clearness with which this course and the grounds of it are understood, and the ability and steadiness with which it is pursued. Education thus

conducted will be in *harmony with nature*, because its course and progress will correspond with the course of development of the human intellect from childhood to manhood.

But to acquit himself well, in the sphere for which he is intended, man must be *moral*, as well as *intellectual*. He must have *virtuous feelings*, as well as *correct thoughts*. To this end his moral faculties also must be carefully educated.

These faculties, depending each on a specific organ, experience a gradual development from childhood. But they do not acquire their full strength, until about the period of the adult condition of the reflecting faculties. When I speak of the growth of *faculty*, it will be understood that I include also, under the expression, the growth of the *organ* to which it appertains. It is on the growth of the organ that the *native* strength of the faculty depends.

Although, as already intimated, the propensities may be so disciplined as to be rendered, in some degree, checks on each other, it is more especially by a judicious education of the moral and reflecting faculties, that a proper intellectual balance is to be established and maintained. Without it, the erection and preservation of a balance of the kind is impossible, as the character of the *uneducated*, in every country, conclusively proves. In a great majority of them the animal propensities are too predominant; while, in the educated, those propensities are brought into subordination to the moral sentiments and reflecting faculties. To render this point sufficiently clear and intelligible, and to demonstrate, at the same time, its practical usefulness, a few illustrative details appear to be requisite.

Does the youth under education manifest, *in excess*, the propensities to *combat* and *destroy*? In opposition to these must be arrayed the *reflecting faculties*, with the moral sentiments of *benevolence*, the *love of approbation*, *conscientiousness*, and *cautiousness*.

This must be acknowledged to be a powerful confederacy; and, when correctly analysed, its united drift will be found to be directly opposed to the excessive indulgence of the specified propensities.

The reflecting faculties will recognize and represent the disastrous effects, on personal reputation and interest, of being habitually engaged in broils and battles. The sentiment of benevolence will dissuade the individual from inflicting pain on his fellow beings, or, in any way, injuring them. Conscientiousness will con-

denn such conduct, as a violation of moral right. Cautiousness will counsel against the hazard of the proceeding; and the love of approbation will forbid the perpetration of any act, that might be productive of the forfeiture of the good opinion of the world. Add to this, that *veneration* may be made to raise her solemn voice against every thing subversive of that order, harmony, and fraternal feeling, which a sacred regard for the Deity and the rites of religion enjoin. By such a coalition, one or two unruly propensities can certainly be restrained.

Is *secretiveness* the predominant propensity, an undue indulgence of which leads to mendacity, hypocrisy, and intrigue? By a confederacy of the same moral sentiments with the reflecting faculties, may all extravagancy and mischief, from that quarter, be effectually repressed.

Is the master propensity *covetiveness*, the abuse of which is *avarice*, *dishonesty*, and *theft*? Oppose to it *reflection*, *conscientiousness*, *veneration*, and *cautiousness*, and you reduce it to its proper standard, and convert it into a legitimate and praiseworthy regard for possession. This confederacy, also, may be strengthened, not a little, by the aid of *benevolence*.

Is the unruly propensity *amativeness*? Erect against its undue indulgence the same barriers, and you convert it into a *regulated passion*, the gratification of which is not only legitimate and innocent, but essential to the continuance of human existence.

Benevolence is one of the most amiable of sentiments. But it also is liable to an excess, which leads to extravagant and unjustifiable deeds of charity, generosity, hospitality, and munificence, to the dissipation of the means of him who indulges in them, the defrauding of those who have just demands on him, and the impoverishment of his family. Oppose to this, reflection, conscientiousness, cautiousness, and covetiveness, and you convert it into one of the most useful and ornamental of human virtues. To this confederacy, if the individual has a family, *adhesiveness* and *philoprogenitiveness* will be powerful auxiliaries. Hence, for ruinous charities, and other extravagant acts of benevolence, marriage is oftentimes an effectual cure.

To check the excess of *self esteem*, which are *pride*, *haughtiness*, and *scorn*, oppose them by the reflective faculties generally, especially *comparison*, united to benevolence, veneration, cautiousness, and the love of approbation, and the equipoise will be preserved.

The sentiment will then be converted into a laudable and necessary degree of self-respect, and will be manifested by dignity of deportment, and a strict avoidance of every thing low, ignominious, and dishonourable.

Is the excess of *cautiousness* likely to run into timidity, dejection, and despondency? Oppose to it *reflection, hope, and courage*, and the evil is remedied.

Is there danger that the excess of *hope* will degenerate into credulity, and visionary schemes of enterprise and castle building? Its counterpoise is to be found in *reflection and cautiousness*.

In establishing and maintaining the requisite balance between the human faculties, it is to be understood, that, in every instance, the influence of the sentiments of *firmness* and *self esteem* is indispensable. Without the aid of those faculties, which are anchors to the intellect, the character of man would be vacillating, degraded, and inefficient.

Thus might I analyse the intellect throughout, and show, that when correctly understood, its constitution exhibits one of the most beautiful and perfect schemes of checks and balances, that nature can form, or imagination conceive. It is out of the elements of this scheme that its power of *self-governance* arises. And, under the influence of a well conducted education, the power is absolute. It is only in the *uneducated*, and in those who are *improperly* educated, that the lower faculties rebel successfully against the higher.

Is any of the faculties inordinate in strength, and is mischief likely to arise from the exercise of it? Excite against it a confederacy of its natural antagonizers, and its disproportioned energies are repressed or counterpoised, and all danger to the possessor of it averted.

It is thus that man can stand erect and firm, when the antagonizing muscles of his frame are duly balanced in strength and action. But give to a portion of them, as in certain forms of tetanus, an ascendancy over the others, and his body is immediately flexed, or falls to the ground.

Shall I be told, that without the knowledge of Phrenology it is the practice of *skillful instructors* of youth, to endeavour to maintain the balance of the intellects of their pupils, by the cultivation and strengthening of countervailing feelings?

I answer, that wherever this has been done, it has been hitherto regarded in the light of an experiment, performed only by a few teachers of superior sagacity. It has not been pursued as a general practice, founded in the nature and constitution of the human intellect, and clearly understood in its principles and bearings.

But, under the influence of Phrenology, it will be universally pursued, with a full knowledge of its mode of operation, and an entire confidence in its beneficial effects. It will make hereafter as uniform a part of the process of education, as instruction in the art of writing, or the science of numbers has heretofore done. No instructor will be employed, who is either incompetent to it, or who neglects it. The advantages, therefore, derived from the very limited and unskilful performance of it, in times past, bear no proportion to those to be derived from the universal and disciplined performance of it, in time to come. Besides, it is Phrenology alone that has brought distinctly to view the several intellectual faculties calculated to counterbalance each other. Before it began to send forth its lights, those faculties and their mutual relations, were concealed by the clouds, or distorted and misrepresented by the mists of metaphysics.

In another respect, the influence of Phrenology or education will be important. By disclosing to the instructor the predominant propensity or sentiment of the pupil, it teaches him on what faculty he can most advantageously act to secure the requisite attention to study.

Is the *love of approbation* predominant? Let the teacher, as the reward of studious habits, bestow his own applause, accompanied by an assurance that the applause and admiration of the world will follow.

Is *self-esteem* the ruling sentiment? Represent to the pupil the dignity of character that learning and science never fail to bestow, the personal respect they secure to their possessor, and the extensive influence they command in society. Add to this, the *certain degradation* that awaits deficiency.

Does *conscientiousness* prevail? Enforce attention to study as a *moral duty*.

Is *covetiveness* strong? Point to learning, science, and profession as the road to wealth.

Is *cautiousness* striking? The apprehension of punishment on account of idleness may be profitably employed, as a motive to industry.

Thus, whatever the master propensity or sentiment is, it may be used to great advantage, as a specific incentive to the exertion and proper application of the *knowing* and *reflecting* faculties.

In relation to most cases of an unbalanced intellect that occur, the preceding representation is certainly true. By a well conducted education the balance can be restored and maintained. The instances of a contrary nature that present themselves, are nothing but exceptions to a general rule.

In idiots, and others bordering on that unhappy condition of intellect, the *moral* and *reflecting* faculties are too feeble to govern the *propensities*, which unfortunately retain their usual vigour; thus forming precisely the intellectual character of certain descriptions of inferior animals.

In other cases, certain propensities are so powerful and ungovernable, as to constitute, when excited, a species of phrenzy, which nothing can control. But these are only occasional aberrations from the true standard of the human intellect.

In the former of these cases, as already intimated, is exhibited the constitution of *idiotism*; the latter presents the constitution of *madness*. In one, the cerebral development is defective in the higher organs; in the other, it is preternaturally exuberant in some of the lower.

In every instance, as already mentioned, free alike from the idiotic and the maniac organization and temperament, the intellectual balance, so often referred to, can be maintained. But where nature is radically defective or wrong in the brain, it is not to be expected, that education and art possess a redeeming power in relation to that organ, any more than in relation to others.

From this view of the constitution and nature of the human intellect, education is an engine that may be pronounced, in its influence on it, almost omnipotent. But it is omnipotent only in the hands of the phrenologist; because he alone has the capacity to wield it. He alone understands the true relation between it and the intricate machinery, on which it is to act. He pursues his measures under the light of day; while others, at best, work only by twilight.

Beginning with his pupil, in infancy, the phrenologist first soothes and moderates the propensities generally, because their native tendency is to excess.

He then instructs the knowing faculties, exercising them, and supplying them with their appropriate nourishment, according to their capacities and gradual development.

Next comes the exercise and instruction of the reflective faculties and moral sentiments, which bestow on the intellect the greatest strength, elevation, and excellence, and the most perfect equipoise, of which it is susceptible.

A most momentous occasion for the application of the principles, and the employment of the invaluable resources of Phrenology, is the period when youth are selecting their professions.

Here, it is the voice of reason and common sense, that the predominance of faculty, constituting a native peculiarity of capacity, ought to determine the occupation to be pursued. Between the recognized capacity of the individual, and the profession he chooses, there ought to exist a specific aptitude. But such aptitude fully and satisfactorily discloses itself only to the practical Phrenologist. And to him it does disclose itself as clearly, as the disciplined artist perceives the fitness between his tools and the materials on which he employs them.

Under these circumstances, a misapplication of talents can but rarely occur. Where the opinion and counsel of a skillful Phrenologist are adopted, it ought never to occur.

We shall then hear no more of a young man's attaching himself to a particular vocation, for which he possesses no qualifications, merely because his parents or guardians "intended him for it." Indication of intellect, and not the wishes of misjudging relatives will then be the principle that will govern in the choice of a permanent pursuit.

The sturdy plowman, or the mechanician by nature, will no longer become a member of a learned profession.

The youth, who might have been an excellent practical physician, will not be converted into a miserable lawyer; nor the reverse.

The thrasher and the wood-chopper, will not receive a divine call to exercise their muscular energies on the pulpit.

Nor will the poltron be appointed to a military command, because he has a longing for a suit of regimentals.

The native painter, sculptor, architect, and accountant, and every other individual possessing a peculiar predominancy of talent, will devote himself to the vocation to which he is most compe-

lent; while the general business of life will be transacted by those, whose intellects being sufficiently strong, and composed of faculties regularly balanced, can be applied with equal facility and effect to a variety of pursuits—who can appear with respectability in sundry walks, but with distinction in none.

The great affairs of state, and other lofty and momentous concerns, will be entrusted to those, whose moral, knowing, and reflecting faculties, are pre-eminently vigorous.

In the employment of Phrenology to determine the professions and vocations which youth ought to select, it will be always found, that, when an individual feels for any pursuit or branch of science, a *ruling passion*, he possesses also a strong capacity for it, and exhibits, at the same time, a *corresponding development*.

Does there exist an enthusiastic fondness for *music, numbers, language* or *drawing*? The capacity and development will conform to the taste. Of other tastes and propensities the same thing is true.

In individuals, again, whose characters are marked by no strong and predominant inclination or talent, there will be no very striking cerebral development. Evenness of intellect will be found to be accompanied by evenness of cranium. Irregularity of intellect with irregularity of cranium.

Such are the effects, which Phrenology will produce on the education of man. Nor will their importance be questioned by the most prejudiced and inexorable enemy of the science. It will not be denied, that they are calculated to contribute much more to the advancement of human felicity, efficiency, and grandeur, than the effects of any other discovery or improvement, with which the world has been favoured.

Hence the declaration of the Reverend Mr. Welsh, the friend and biographer of the late Dr. Brown, and one of the most distinguished members of the church of Scotland, that when Phrenology "is considered in its relation to the other sciences, and in all the variety of its practical bearing, he cannot but consider it as the *most important discovery that was ever made*" And again, that he "feels convinced, that the time is speedily approaching, when, great as Dr. Brown's merits in other respects will always be allowed to be, his greatest merit will be seen to consist in the near approach that he has made to many of the doctrines of Phrenology, without the aids of the instruments that Phrenology presents."

Surely, then, on account of its relation to education alone, that science is worthy of the study and highest regard, not only of every curious and enlightened philosopher, but of every friend to the interests of humanity.

But Phrenology, in its relations, is not confined exclusively to education. It throws its influence on every science, and every pursuit, in which the human intellect is concerned.

In a particular manner, it communicates that knowledge of the compass and capabilities of the human intellect, which cannot be derived from any other source. It teaches the precise relation of the intellectual faculties to the objects of true and reputed science. It discloses the important fact, *what science is true and what only reputed*; and makes a clear distinction between knowledge that is attainable, and that which is transcendental. It will produce, therefore, the beneficial effect of preventing man from engaging, hereafter, in intellectual pursuits that are *beyond his nature*—pursuits after branches of knowledge, which are either unattainable, in the abstract, or attainable only by a class of beings, more highly and felicitously gifted than man.

The consequence of this will be the entire abandonment of the dreams of transcendentalism, and the confinement of the human powers to such enterprises in science as are feasible in their nature, and practically useful in their tendency and effects.

Had the intellect of man been always thus employed, what an immensity of precious time would have been saved to the world, which has been not only *unprofitably* but most *injuriously* thrown away, in the laboratories of alchemists, the workshops of the projectors of perpetual motion, the closets of schoolmen, and the cloisters of ecclesiastics! For it cannot be denied that all projects of attainment, of a transcendental character, grow necessarily out of an ignorance of the extent and capabilities of the human intellect. Remove that ignorance, and such projects will be forever abandoned.

In illustration of this view of the subject, I shall only further observe, that all true knowledge and sound belief are the result of evidence, and of nothing else. Implicit belief belongs only to the unthinking and the feeble minded. But a correct analysis of the human intellect teaches us, not only that we possess no evidence calculated to throw light on such subjects, as those of angelic and demoniacal natures, the presence and agency of supernatural beings generally, and the mode of existence and action of the human

spirit, in a disembodied condition; and several others; but that we have no capacity to acquire such evidence. The inquiry, therefore, respecting topics of this description, is transcendental.

In courts of judicature, both civil and criminal, the influence of Phrenology is destined to be important. Although no criminal will ever be either convicted or acquitted, merely on account of his cerebral developments; yet, according as those developments oppose or coincide with the crimes or trespasses of which he is accused, they will not be disregarded; but will be received and respected as collateral testimony.

A culprit is put on trial under a charge of murder. What are his developments? Are they very bold and prominent, in his animal, and moderate or very small, in his moral and reflective organs? If so, they are calculated to add strength to other circumstances unfavourable to his innocence.

Is the development, on the contrary, the reverse of this—the animal organs small, and the moral and reflective ones very full? That presentation speaks, in behalf of the accused, a favourable language.

No person will be convicted of fraudulent dealing, on the ground of the peculiar formation of his head. But, other circumstances being against him, a very prominent development in the region of *covetiveness and secretiveness*, and a striking defect in those of *conscientiousness and benevolence*, will strengthen the evidence.

Is there reason to suspect the fidelity of a witness? That reason will be corroborated or weakened, by the developments exhibited by him; and the effect of those developments in modifying his deportment. The evidence derived from this source will be *circumstantial*, not *positive*. Education, as already stated, changes very materially the native character. It would be highly important, therefore, always to ascertain the kind of education a suspected witness has received.

Has a culprit been convicted of a crime, and sentenced to confinement in a penitentiary, with the twofold view of punishment and reformation? The prospect of accomplishing the latter will be more or less promising, according to his developments.

If his *moral and reflecting* organs are full, and his *animal* organs, or those of propensity, moderate, or small, there is a probability of his amendment. But, if the fulness be in the *latter*, while the *former* are small, the condition of the convict is nearly hopeless.

In a case like this, much is to be expected, on the score of reformation, from a full development of the organ of conscientiousness.

But the reformation of culprits is not to be effected by *solitary confinement*. This is the *general rule*, to which if exceptions occur, they are *but exceptions*.

On this point of criminal law, Phrenology alone is capable of throwing the necessary light. It alone teaches that improvement in morals can be effected only by the skilful management of *antagonizing faculties*.

The culprit to be reformed is convicted of theft, a crime arising from a state of *inordinate activity* of the faculty of *covetiveness*. To accomplish his reformation, it is necessary to wrest the predominancy from *that* faculty, and transfer it to *conscientiousness, veneration, and the faculties of reflection*. These must be invigorated at the expence of *covetiveness*.

But how is this to be accomplished? The answer is plain. If you wish to strengthen one faculty and debilitate another, *exercise the former, and keep the latter in a state of inaction*. To this principle there is no exception. Do you wish to invigorate your right arm, and enfeeble the left? Let the left remain for a long time *motionless*, while the right is regularly and actively exercised, and your end will be attained.

In like manner, to weaken covetiveness and give strength to its countervailing faculties, exercise the latter, and let the former remain inactive.

But can this be done by *solitary confinement in a penitentiary cell*? It is palpable that it cannot. *There*, for want of suitable excitement, as may be easily and clearly demonstrated, no *reforming* faculty can be competently exercised. But the *ruling* faculty will be most constantly and powerfully exercised, *because it is the ruling faculty*. In the words of the great moral poet,

“Imagination will ply her dangerous art,

“And pour it all upon the peccant part”

Under these circumstances, covetiveness giving direction and tone to any intellectual operations that might be awakened, would be likely to be more invigorated than its antagonizing faculties. Certainly there is no reason to believe that it would be less invigorated; and, therefore, no change in favour of morality would be produced. At the *close* of seven years of solitary confinement,

the culprit would be as prone to theft, as he was at its commencement.

Is the crime of the convict *homicide*, an act to which he was led by the constitutional predominancy of the faculty of *destructiveness*? By a similar chain of reasoning it can be clearly shown, that he cannot be reformed by solitary confinement.

In proof of the correctness of the position here laid down, the following fact speaks a language that cannot be resisted.

For his noble efforts in behalf of liberty, the Marquis de Lafayette was imprisoned three years, by the emperor of Germany, a part of the time in *solitary confinement*.

The love of liberty being his *ruling passion*, we have his own express declaration, that he was perpetually engaged, during the whole term of his imprisonment, in hatching schemes for the liberation of Europe. Hence he left his dungeon, a much more inveterate *Liberal* and *Reformer*, than he was when he entered it. And hence his well known and confirmed opposition to solitary confinement, as a means of reformation.

In fine, a propensity to vice, if reformed at all, must be reformed by education—by salutary discipline, recommended and impressed by precept, or example, or both; and, if requisite, enforced by authority.

An attempt at reformation in any other way, can proceed only from want of experience, and an ignorance of the principles of human nature.

But education is the growth of *society*, not of *solitude*. As well may that process be expected to produce its salutary effects where there are neither senses nor an intellect to be suitably impressed, as where there are no agents suitably to impress, and skillfully to regulate them. *But in solitary confinement, no such agents can ever be found.*

That some individuals not hardened in crime, and whose moral and reflecting faculties are vigorous, may, in solitude, form virtuous resolutions, which they do not afterwards violate, is true. But with habitual and disciplined offenders, whose animal organs greatly preponderate, the case is otherwise. To commit them to solitude, is to *entrust them to themselves*. But they are their own worst teachers, and most dangerous enemies. Their own thoughts and feelings will still further corrupt themselves, precisely as their conversation and example would corrupt others.

On the science and practice of Medical Jurisprudence, Phrenology is destined to confer hereafter incalculable benefits. This it will effect in an essential manner, by the detection of *real*, and the certain exposure of *simulated* madness.

* That individuals are often tried, convicted, and punished, for acts which they commit when under the influence of *intellectual derangement*, and that others escape punishment, under the cover of *pretended* derangement, is unquestionably true. Many such instances are placed on record; and a few have fallen under our own observation. Nor can any thing but the lights which Phrenology is shedding on the disease of madness, eradicate the evil.

The Phrenologist alone can have a correct knowledge of madness, because he alone possesses an accurate acquaintance with the human intellect. He only can analyse the intellect, take a just view of the faculties of which it is composed, and discover whether their functions are sound or diseased. He, therefore, can most judiciously decide—and if skilled in the science he can decide certainly and righteously—whether an individual, in the commission of any gross violation of the laws of his country, has been actuated only by malice or other evil passions, or hurried on by the *phrensied excitement of a diseased cerebral organ*. And when, on the contrary, as is often the case, madness is feigned; as a protection from punishment justly merited, he alone can lift with certainty the assumed veil, and expose the imposture.

Hence, without a competent acquaintance with the science of Phrenology, no one is qualified to be a medical jurist.

It need scarcely be added, that it is in cases of monomania, especially where some of the propensities are deranged, that madness is most likely to be mistaken for criminal purposes. Indeed it is only under the safe guiding lights of Phrenology, that the derangement of the propensities generally has been fairly recognized as a species of madness. Unnatural feeling, such as a powerful impulse to commit murder or theft, or hostility to near connexions and distinguished benefactors, has been usually considered, if a morbid affection at all, rather as a concomitant of mental derangement, than as constituting the disease. Yet it is the form of the complaint most frequently concerned in the commission of crime, and in which the knowledge of the medical jurist is most important. *Propensity* is as real an ingredient of intellect, as *reflection* and *reason*. Its derangement, therefore, is as real madness. Monomania, such as

satyriasis or *religious madness*, is produced by a deranged *propensity* or *sentiment* (*Amativeness* or *Veneration*) overpowering and subverting the *other moral* and the *reflecting faculties*. It is not an effect of a prior derangement of the higher faculties. Hence, reduce the excessive excitement of the organ of *Amativeness* or *Veneration* and the disease is removed. The reflecting organs return at once to their healthy action, and the intellect regains its natural balance.

To general *politics*, and to *legislation*, as a branch of them, Phrenology is destined to prove hereafter, very signally advantageous. It will bestow on them what they have never yet possessed, and what, without its influence, they never could possess, the certainty and usefulness of an exact science.

To prove efficient and attain their legitimate end, politics must conform to the nature of man, in his intellectual and social capacity. But that, in their principles and mode of administration, systems of law may be made to possess such conformity, that nature must be thoroughly understood. To the legislator and governor, knowledge of this description is essential. But it can be attained only by the lights of Phrenology. That this is true, a brief analysis of the subject will prove.

When viewed in its legitimate character and bearing, a system of government is nothing but an auxiliary to a system of education. It is intended, and, if wisely constructed, calculated to supply the defects and remedy the actual evils of education. Were education perfect, or rather, were it capable of rendering man perfect, systems of government and law, would be comparatively useless. Sound reason and correct sentiment would then give the rule of virtuous action.

But as man, from his constitution, is essentially imperfect, and can never, by any course of training, be rendered otherwise, systems of government are necessary to direct and restrain him. And to rule him properly, they must control the lower faculties of his intellect and strengthen and support him in the exercise of the higher.

Those faculties which by their excess run into vice, are chiefly the propensities of *Combativeness*, *Destructiveness*, *Covetiveness*, *Secretiveness* and *Amativeness*. Laws restrictive of them, must be addressed principally, as relates to their penalties, to *Cautiousness*, *Love of Approbation* and *Self-Esteem*. To counterbalance them, by the general amelioration of the intellect, let the laws be

such as to give every possible encouragement to the exercise and cultivation of the moral and reflecting faculties.

But as it is Phrenology alone that discloses the nature and even the existence of these several families of faculties, it is by the advocacy of that alone, that a system of laws in harmony with them can be framed. This position is too self evident to acquire strength from a further discussion of it.

In fact, wherever man, as a rational and social being, governs or is governed to any salutary purpose, or wherever he acts on others, or is acted on himself with useful effect, Phrenology must be hailed as the principal and guiding star to the good that is achieved.

Is the thing to be governed, to be acted on, or to be itself brought to act, an inanimate machine? Must not its nature and principles, the parts which compose it, and their relation to each other, be perfectly understood, before a system of laws calculated for its government can be established? Assuredly they must. And when such a familiar knowledge of it is attained, is there any difficulty in preparing the laws? We know there is not. Nor, when that curious piece of workmanship, the human intellect, shall have been completely unfolded to statesmen and legislators, under the lights of Phrenology, will they find any difficulty in devising a system of laws for its government. But to return from this digression.

Is a friend to be chosen, and are scenes of difficulty and danger approaching? Let the individual selected be fully developed in adhesiveness and combativeness, and in the moral organs generally, particularly in firmness, conscientiousness, benevolence and hope. The organs most opposed to fidelity in friendship, are self-esteem, love of approbation, and covetiveness. A very large development of secretiveness is to be suspected; yet, if properly regulated and directed, might be highly useful. Other things being alike, a bold development of the knowing and reflecting faculties bestows a preference.

In a soldier you want courage, destructiveness, firmness, and love of approbation; and the developments indicative of them are familiar to the Phrenologist.

To these you must add, in the officer, self-esteem, cautiousness, and the moral sentiments generally, with a competent development of the knowing and reflecting faculties; of all which the craniological evidences are perfectly understood.

Do you meet, on a journey, a stranger, who shows a disposition to become a travelling companion? If his animal organs predominate, decline his company. But if his developments preponderate in his moral and reflecting faculties, you may accept him.

In the selection of confidential messengers, and other agents for the transaction of business, Phrenology will render the most essential services. Nor, as heretofore intimated, is it less important in disclosing the capacities of young men to become useful and distinguished, as tradesmen and artists.

In fact there is not a profession or department of life, where man is employed as an intellectual agent, to which Phrenology is not to extend its salutary influence. Is man called on to use his *own* intellect? He will do it with more and better effect, for having a correct and intimate knowledge of it. Is it his province to act on the intellect of *others*? The more thorough his knowledge of it, the more certainly will he accomplish the end he has in view.

In schemes and enterprises, where the more highly gifted employ, as instruments, those that are inferior to them, it is not on their *persons*, but their *intellects* that they act. Hence, in all such cases, those who *know men best*, that is, who are most perfectly acquainted with their *intellectual nature*, are most efficient and successful in their operations.

Is the divine, in his sermons and his pastoral visits, to act on the intellect of his congregation and his flock? To do this with effect, he must have a correct knowledge of the characters of their intellects. He will, then, be enabled to employ, in every case, the arguments and inducements, best calculated for the accomplishment of his purposes. He will address himself to every one in the manner best suited to his intellectual nature; and, therefore, best adapted to make on him a deep and permanent impression. He will reason, remonstrate, encourage or alarm, according as one course or another may best conform to the principles of Phrenology, as applied to the occasion.

Is the ingenious advocate pleading before a jury, in behalf of his client; or the learned counsellor addressing a court, on a point of law? In either case, a knowledge of Phrenology will enable the speaker to employ, with much more effect than he could without it, the various arts and instruments of eloquence.

But of still higher importance is a knowledge of this science to the popular orator, when, on some momentous occasion, he wishes

to impel his audience to immediate, arduous, and distinguished achievement. Suppose it to be a military chieftain addressing his army, preparatory to a perilous and doubtful conflict with an invading foe, whose footsteps are marked with desolation and blood.

Here is an opportunity for appealing to every faculty of the human intellect, and urging, with ardour, every inducement to heroic action.

Not content with inflaming, to the highest pitch, the *combative* and *destructive* faculties of his troops, he excites also their *firmness*, their *ambition*, their *hopes*, and their *fears*—their *fears*, I mean, of the consequences of defeat. By reminding them, that on the issue of the battle are staked the lives and fortunes of their wives, children, and friends, he arouses, at once, the three powerful propensities of *amativeness*, *philoprogenitiveness*, and *adhesiveness*. By representing to them, that their friends, their country, and their religion are in danger, that, by a brutal soldiery, violence is about to be offered to the honour of their sisters, wives and daughters, and insult to the ashes of their ancestors; and that, as the issue of defeat, a flood of licentiousness, rushing over the land, threatens to sweep from its foundation all that is moral—by representing to them these considerations, he enlists in his cause *veneration* and *conscientiousness*. Nor is this all. By vividly depicting the general and indiscriminate misery, the destruction of property, and even the subversion of the beauties of nature, that must mark the career of a triumphant foe, he awakens to action the faculties of *benevolence*, *covetiveness*, and *ideality*. And, by pointing out to the knowing and reflecting faculties the course and mode of action requisite to be adopted to insure victory, he concentrates, directs, and strengthens the confederacy of the propensities and sentiments, which he had previously formed.

In depicting character, intellectual and personal, the dramatist, the novelist, the painter, and the sculptor, will be directed hereafter by the lights of Phrenology. Nor will poets and historians neglect to avail themselves of the aids that are derivable from the same source. In every instance care will be taken, that a correspondence exist between intellectual manifestation, personal deportment, and craniological development.

In illustration of this, it is important to remark, that already have sundry efforts of this description been successfully made.

Pyramid

A Phrenologist having received a correct representation of the cerebral developments of an individual altogether unknown to him, has, by means of it, deciphered his character, with entire accuracy.

In other cases, the character being given, the Phrenologist has correctly described the developments. Of the truth of this, Mr. Combe, of Edinburgh, exhibited, in a well known instance, a very striking and satisfactory example. Before he had ever seen the Reverend Mr. Chalmers, he indicated, with perfect correctness, some of his leading cerebral developments, from the character of his sermons, and some of his other compositions, which he had carefully read.

Such, indeed, is the present advanced condition of *practical* phrenology, that this is now a common achievement. From a careful perusal of his writings, an experienced phrenologist finds no difficulty in giving a correct representation of the *general* developments of any author.

Nor is this all. From a mere knowledge of their character, derived from the narratives of those who had repeatedly visited them, the cerebral developments of the natives of the Sandwich and Friendly Islands, were long since *predicted*. And from the recent procurement of the skulls of that race of people, and their subjection to observation and accurate admeasurement, the prediction is found to be *substantially* true. This fact is a host in support of Phrenology.

From the mere examination of a brain, after its removal from the cranium, Dr. Spurzheim delineated very accurately the native character of the individual to whom it had belonged, although perfectly unknown to him.

That without an intimate and thorough acquaintance with the science, the instructor of youth is utterly incompetent to the duties of his vocation, appears satisfactorily from what has been already said on the subject of education.

But of all vocations, Phrenology is, perhaps, most intimately and essentially connected with the profession of medicine. It is as truly a branch of medicine, as either anatomy, physiology, or pathology. With perfect safety is this asserted, since it is nothing but the anatomy and physiology of the brain—as literally so, as the structure, functions, and general uses of the liver, constitute the anatomy and physiology of that organ. Anatomical analysis

exhibits the structure and constitution of the brain, while its functions and uses are disclosed by physiology.

But, without a knowledge of the physiology of the brain, it is impossible that its pathology can ever be understood. Nor, without the pathology of that organ, can a knowledge be attained of intellectual derangement, which is the immediate issue of that pathology. To be competent, then, to the understanding, exposition, or treatment of that affliction, every physician must become a Phrenologist.

Phrenology has given the death-blow to the belief, until of late so generally entertained, in the existence of a purely *mental* or *spiritual* disease—a disease in which the *spirit of man alone* is disordered, without any *concomitant disorder of matter*.

Intellectual derangement is an affection as exclusively *material*, as any other that attacks the system. It is as truly and singly a derangement of the *function* or *structure*, or *both*, of some portion of the brain, as hepatitis is of the liver, gastritis, of the stomach, or peripneumony, of the lungs.

If this were not true, the complaint would be always and necessarily incurable. For we have no remedies that can *directly* reach the mind—none that can act *immediately* on an *immaterial* substance.

Nor, in the treatment of intellectual derangement, is such a remedy requisite. To act on the brain, and remove the morbid affection, under which it labours, is all that is necessary. That being affected, the alienation of intellect immediately disappears. But all this is explicable only on principles of Phrenology.

By a few examples, this subject may, perhaps, be more clearly elucidated, and more satisfactorily confirmed.

In cases of real mania, or general and ferocious madness, of any duration, post-mortem examinations never fail to disclose some serious derangement of the brain. The entire mass is inordinately injected with blood, a portion of it is indurated and comparatively dry, or softened and nearly disorganized, a secreted fluid is found in preternatural quantity in the ventricles, or some other place, its investing members are partially ossified, or the structure of a part or the whole of it is much more coarse and fibrous than usual. I once saw, in the brain of a lunatic, the *fibrous structure* as plainly and almost as boldly developed, as it is in muscle, or any other tissue of the body.

Such are some of the phenomena exhibited in the brain of the *real maniac*; and they are all indicative of *cerebral congestion*—of a preternatural influx of blood into the *organ of the intellect*.

But a similar *congestion*, as is fairly demonstrable, exists in every other organ of the system, that is seriously diseased.

As relates to *mania*, then, the *prophylactic* indication is, to *prevent cerebral congestion*; and the *curative*, at an early period of the disease, to *remove* it. Between *mania*, therefore, and other diseases, there is a perfect analogy.

Is the affliction *monomania*? and does it take the form of *satyriasis* or *nymphomania*? It consists in preternatural excitement and congestion of the organ of *Amativeness*. So deep is the congestion, and so intense the excitement, that the affected organ takes an ascendancy over all the other organs, whether *moral* or *reflecting*.

This condition of *Amativeness* is also proved by dissection. In the inferior animals, moreover, that indulge in their loves only during a particular season, the amatory organ, *during that season*, is in a state of full congestion. Hence, in some of them, the passion approaches the borders of madness. It excites them to the most unbridled ferocity and rage. This is the case with the buck, the wild boar, the elk, and the buffalo. Examination proves in them, at that time, the existence of the specified congestion.

Is the complaint religious madness? It is the result of congestion and preternatural excitement of the organ of *Veneration*, to which is often added, a similar condition of the organ of *Wonder*. In the latter case, the lunatic believes in the presence of heavenly beings, in a visible form, and often converses with them.

Does the patient, being *poor*, believe himself *rich*; or being *wealthy*, does he consider himself in danger of starvation, on account of *poverty*? The disease is seated in the organ of *Covetiveness*, whose condition is congestion, and inordinate excitement.

Does the subject of disease consider himself a prince, an emperor, or a demigod? The organ of *Self-Esteem* is the seat of the affection, and its condition is the same with that already indicated in relation to the others.

Is the affection produced by the death of a child or a much beloved friend? It consists in congestion and preternatural excitement of *Philoprogenitiveness* or *Adhesiveness*.

Is the individual *generous*, in a ruinous degree beyond his means? Benevolence is congested and preternaturally excited.

Does he waste his estate in the erection of houses, which he cannot convert to any useful purpose? The organ of constructiveness is in a morbid condition.

Does he feel an ungovernable propensity to commit murder? Destructiveness is the organ congested and in fault.

Is he metaphysically mad? The excess is to be found in Causality and Comparison.

Has ambition maddened him? Love of Approbation is the organ affected.

Is his madness accompanied by imaginary fears? Cautiousness is the offending organ.

Thus might I analyse madness throughout, and show that, in all its forms, it consists in preternatural congestion and excitement of a part or the whole of the cerebral mass.

Is idiocy the species of intellectual derangement? and is the head preternaturally small? Some of the organs are defective in growth, or entirely wanting. The subject is probably a *cerebral monster*. Is the head unusually large? The organization of the brain is unsound.

Thus, in any of the other organs of the body, a preternatural want of size, or an unsoundness of structure, never fails to diminish the strength and efficiency of the part. Why, then, should the case be otherwise in relation to the brain? When candidly examined the analogy is perfect.

Were this a suitable occasion to speak of the cure of madness, the great practical advantages resulting from the preceding view of the subject, might be definitively proved.

That a physician may be prepared to treat a disease rationally and successfully, he must have a correct knowledge of its nature and immediate seat. But, in relation to madness, this can be attained only through the medium of Phrenology. *And through that science it can be attained.*

From no other source can even a reasonable conjecture be derived, as to the precise situation of the *local morbid affection*. Yet to efficient treatment, an acquaintance with that is known to, be essential. Cannot the practitioner treat Hepatitis the better for knowing that it is Hepatitis, Pleuritis, for knowing that it is Pleuritis, and Peritonitis from possessing a knowledge of its locality?

To this interrogatory no one will hazard a negative reply. Equally important is it to be acquainted with the positive seat of madness.

To the practical, then, no less than to the philosophical physician, the knowledge of Phrenology is indispensable. A few years hence it will be as disgraceful for a physician to be wanting in that, as in the knowledge of anatomy. Those who may affect to sneer at this assertion now, will be hereafter sneered at in their turn, for the shallowness of their attainment.

Competently to understand, then, the nature and treatment of intellectual derangement, a knowledge of that science is as essential, as is that of the anatomy and philosophy of the liver, the uterus, or the lungs, to the nature and treatment of affections of those organs.

That with physicians of distinction, in all parts of the world, this view of the subject is becoming general, appears conclusively from the fact, that in all systematic works on medicine, and separate treatises on complaints of the brain and nerves, the principles of Phrenology are uniformly considered, and respectfully treated. In proof of this, I might mention, in particular, Bostock's Physiology, Cooke's Treatise on Nervous diseases, Broussais's Physiology, and several other productions of continental Europe. Nor must I forget, on the present occasion, to mention with the exalted respect they deserve, the London Medico-Chirurgical Review, and the Archives Generales de Medicine, of Paris, the two most distinguished medical Journals in Europe, both of which are the decided advocates of Phrenology.

But the advantages of Phrenology are not to be limited to those branches of knowledge, that are more strictly denominated useful. They will be equally felt by the ornamental and the agreeable.

In the improvement of taste in architecture and the fine arts generally, its influence will be powerful; on the philosophy of the ruling passion, and the mode of governing and directing it, it will throw definitive light; and it will not leave, in the human character, an *apparent* anomaly unresolved. As relates to this, it will be proverbially under its light, that, in the words of the poet, "The prospect will clear, and even Wharton stand confest."

Phrenology discloses, clearly and satisfactorily, the cause of the intellectual differences between the several races of men. It shows the ground of the decided superiority of the Caucasian race; and the reason why, when nations of this description have come into

collision with those of the other races, they have always vanquished them.

As relates to the varieties of the human family, the two following problems have hitherto foiled philosophers and statesmen, in their attempts to solve them.

Why cannot the North American Indians be civilized? And why are so many millions of Asiatics, in Hindostan, and the adjacent countries, held in bondage, by a few thousand Englishmen?

In framing for these questions satisfactory answers, the Phrenologist experiences no difficulty. In the different cerebral developments of the different races, he finds the solution. His creed is, that a well organized and cultivated intellect confers moral excellency and constitutes power.

Of the Asiatics, conquered and held in subjection by the English, the general size of the brain is diminutive. Hence their inferiority in general intellection and strength of character. But the cerebral developments in which they are most defective, are those of combativeness and destructiveness. These organs, compared to the same in the European head, are remarkably small; a circumstance which, united to their cerebral inferiority just mentioned, fully accounts for the great inefficiency of the Hindoo in war, and his inability to maintain his independence against martial assailants.

The most prominent development of the Asiatic, is in the upper and central, portion of the brain. But it has long been notorious, that Asia is the hot-bed of superstition and wonder. Of all the fanatics that the world contains, those of Hindostan are the most extravagant. The same people are also, as appears from their writings and popular traditions, pre-eminently addicted to a belief in the *marvellous*. But these characteristics are to be attributed to a predominance of Wonder and Veneration over the reflecting faculties.

Of the aborigines of North America, the predominant developments are in the organs of the animal propensities generally, and in those of Cautiousness, Love of Approbation, Firmness and Locality. In the organs of the moral and reflecting faculties, their developments are defective; in those of the knowing faculties generally, moderate. Of the entire brain, the size is inferior to that of the white or Caucasian race.

But with the character of their intellects, these developments are in perfect harmony.

From the great predominance of their animal over their moral and reflecting organs, the American aborigines derive their strong propensity to a savage life; and their firmness renders that propensity inflexible. In the preponderancy of their cerebral organs, they approach towards that of savage beasts. Their brain stands related to that of the Caucasian as the brain of the wolf or the hyena does to that of the dog, or the brain of the bison to that of the domestic ox. Hence the certainty that they can never be civilized, unless by changing the race by intermarriages with the Whites or with Africans. For it will appear presently, that in their fitness for civilization, the Africans surpass them.

To his Combativeness and Destructiveness, the Indian owes his courage and ferocity in battle, and his cruelty to his prisoners; to his firmness and secretiveness, his endurance of tortures, without appearing to feel it; to his cautiousness and secretiveness, his vigilance and stratagem in war; and to his locality, his roving life, and his extraordinary facility, amounting to actual instinct, in finding his way through trackless deserts and interminable forests. To his Secretiveness and his defective Conscientiousness, Adhesiveness and Benevolence, he owes his *treachery*.

From his deficiency in the reflecting organs, it is impossible for the Indian ever to attain to pre-eminence in the more arduous and elevated branches of human knowledge. From the degree of development which he possesses of his knowing faculties, he can acquire, with sufficient readiness, the mere elements of science. But he never can become truly scientific and great.

Notwithstanding all the eulogies that well meaning writers have lavished on the talents, eloquence, and general character of the aborigines of our country, the sentiment here delivered will be found to be true, because it has the sanction of nature in its favor. *The race is radically and greatly inferior to that of the Whites.* A crossing of breed with the Whites, improves it. Hence, among the Indians, a *half-blood* rarely fails to become a *chief*.

The Indian may become a distinguished warrior, because a competent share of the knowing faculties, united to a large development of *firmness, cautiousness, combativeness, destructiveness* and *secretiveness*, is sufficient to render him so. But he can never become civilized, for want of the proper constitution of intellect. His native proneness to all that is animal, which is tantamount to an equal *estrangement* from the intellectual and the moral,

is too predominant ever to be counterbalanced by education and discipline.

For want of ideality the Indian can never become a distinguished poet; nor a profound philosopher, an enlightened statesman, an able political economist, or a great orator, from a radical defect in his reflecting faculties. And that he can ever become a pure and elevated moralist, is forbidden by the very restricted development of his moral organs. On the contrary, a true child of the wilderness, and adapted only to that situation, like most of the inferior inhabitants of the wilds, he is destined to retreat before the march of civilization, science, and the arts, and to be ultimately extinguished by it. The time is coming, nor is it now far distant, when he shall live only in history, and in the few mouldering monuments his labours have achieved. While of other *races, individuals only die*, the races themselves maintaining their existence, his days, *as a variety of mankind, are irrevocably numbered.*

Such is the boding representation of Phrenology, in relation to this unfortunate son of the forest; and, as far as it furnishes evidence on the subject, the history of the past pronounces it true.

All efforts hitherto made, and many of them have been fair and faithful, to civilize and cultivate the aborigines of our country, have failed. In vain have individuals of them, from various tribes, been carefully educated in our seats of learning. Their terms of pupilage having expired, they have returned to their home in the forest, and instead of attempting to improve their fellows in knowledge, and ameliorate their condition generally, they have even taken the lead of them in savagism and vice. This is the general rule. If exceptions exist, they are but exceptions, and to be so considered.

The result of experience is, *that the Indians are injured by an intercourse with the Whites.* They lose all the higher qualities of the savage of the wilderness, and become degraded, without acquiring any thing useful as a substitute. They imbibe abundantly the vices and depravities of civil life, but attain few, if any, of its virtues or intellectual improvements. The reason of this is obvious. Their animal faculties predominate so transcendently, that they swallow up the others, and prevent their cultivation and proper direction. No permanent improvement is effected in the moral faculties. The consequence is, that any additional strength the intellectual faculties may have acquired, ministers to vice.

Seven generations have passed away since first the intercourse between the Whites and the Aborigines of North America began; and, except where an approximation has been produced by an admixture of blood, the two races are as distinct and foreign from each other now as they were originally. As distinct, I mean, not merely in complexion, feature and figure; but in manners, habits, and modes of thinking. In no respect has the slightest assimilation of character taken place, except in degrading profligacy and vice. And, as respects even that, the Indian is profligate and vicious in his own way. His lowest degradation is rendered more revolting and hideous by *savagism*.

In all other instances, when, on any ground, the people of two nations have long intermingled with each other, some degree of amalgamation between them has been effected. Has one nation subdued another, and permanently settled in the subjugated territory? In a few generations the conquerors and the conquered have gradually run into an aggregate so homogeneous, that they could not, without difficulty, be distinguished from each other. In no instance has one party become extinct, while the other has augmented in number, and alone peopled the country.

But, in relation to the Indians and the Whites, the case is different. Of the former, many tribes have submitted to superior force, and settled as communities in the midst of the latter. But no reciprocal assimilation has taken place. Like the lion, the elephant and the wolf, in a state of subjugation, the Indians have lost their more elevated qualities, sunk into degradation, and ceased to exist. And here, as in many other cases, the history of what has been, may be received as a prediction of what will continue to be. The same thing will be reiterated, until nothing of the Indian shall survive but the name.

Of all the Indian tribes, the Charibs are the most savage and brutal, unconquerable and immutable. And their character is an accurate comment on their brain. The predominance of their animal organs is great beyond example. Their knowing organs are small, and their moral and reflecting ones almost wanting. The brain, in figure, bears a strong resemblance to that of an *inferior animal*. Yet the size of the entire mass is very considerable, and it lies almost entirely behind the external opening of the ear. Hence the character is *strong*, and composed almost exclusively of animal elements. Combativeness, Destructiveness, Secretiveness, and Cau-

tiousness are largely developed. The disposition, therefore, is warlike and sanguinary, cautious and full of stratagem. Although nearly exterminated, the Charib has never acknowledged a conqueror. Nor has he made the slightest approach towards civilization. He furnishes a perfect and most revolting epitome of savagism.

The African presents another distinct and well defined branch of the human family. The intellect is different, in no small degree, from that of the North American Indian. In some respects it surpasses it, while in others it is inferior to it.

In the composition of the African intellect, the animal propensities also predominate; but not the same class of propensities that gives character to the Indian. Although, in the former, Combative-ness, Destructiveness, and Secretiveness are full, they are not so large as they are in the Indian; while Amativeness, Philoprogenitiveness, and Adhesiveness are considerably larger. This confers on the disposition of the African a degree of softness and voluptuousness, and a strong susceptibility of general attachment, all of which combined give to him a fitness for civilization superior to that of the Indian. An inferior development of Cautiousness renders him less weary, and, in that respect, less formidable and efficient in war.

A further fitness for civilization, the African derives from his superior development of some of the moral organs, particularly, Benevolence, and Conscientiousness. In firmness he is inferior to the Indian, which gives to his character much more flexibility, and renders it more mutable by the influence of education and example. Hence an additional aptitude for civilization. For Firmness gives perseverance in savagism as well as in any other state of being or course of action.

In the development of the intellectual organs generally, the Indian is superior to the African. But on account of the controlling influence of some of his animal organs, it may be held doubtful, whether he is superior in the general exercise of them. In point of force and energy, the Indian surpasses the African character. In conflict, therefore, the Indian would triumph.

As the Charib gives the consummation of the Indian character, so does the Caffre, more especially the semi-human Boscheseman, give that of the African. Of these two varieties of degraded beings,

the character of the Charib is by far the most powerful. The other is scarcely superior to that of the Orangoutang.

Respecting the specific development of the Calmuc brain, I am not fully informed. I only know that the organs of the knowing faculties, and of the animal propensities, particularly those of Combativeness, Destructiveness, Covetiveness, and Secretiveness, to which must be added the sentiment of Cautiousness, predominate; the organs of the moral and reflecting faculties being deficient.

Hence the race is acute, warlike, and sanguinary, wary in enterprise, full of stratagem and treachery, and instinctively prone to theft, and plunder. In morals generally they are deeply depraved, and wanting in the higher powers of intellect. Of the Hyperborean development, my knowledge is still more defective.

In the real Caucasian race, which constitutes the chief part of the population of the United States and of Europe, and no inconsiderable portion of that of Asia, the balance of the cerebral development is different. Even there, the animal organs, being the most massive, must be said to *preponderate*. But their preponderance is much less considerable, and education can, therefore, more easily control them. The entire brain is larger than that of any other race, and its development in the frontal and superior regions much fuller. Hence results a wider range, more vigorous manifestation, and loftier aspirations and soarings, of all the higher intellectual faculties. It is here, in particular, that comparison sports in her pride and luxuriance, amidst her contrasts and analogies, Causality unfolds etiological relations, and, with the playfulness and brilliancy of the lights of the north, Wit scatters around her diamond conceptions, while, in quest of beauty, refinement, and elegance, superior to all that nature has exhibited, Ideality fancies a creation of her own.

It is here, moreover, that the moral sentiments, especially *Conscientiousness*, *Benevolence*, *Hope*, *Veneration*, and a well regulated *Self-esteem*, endowed with superior vigour and activity, rise to the highest degree of perfection.

Compared to that of the other races, the Caucasian intellect approaches the gigantic.

A large development of the *animal* and the *knowing* organs gives great acuteness and strength of character, which are reined in, and properly directed, by the influence of *moral* and *reflecting* faculties, formed on a scale of similar magnificence. The perfec-

tion of the human intellect consists in a well arranged and well balanced confederacy of these *four* orders of faculties. And such confederacy the Caucasian possesses. Weaken or inordinately strengthen either of them, and that perfection is destroyed.

An intellect thus constituted resembles a well constructed vessel at sea, under the guidance of a skilful helmsman, with a full press of canvass, spread to a strong and favouring breeze. Under such circumstances, her appearance is majestic, her force irresistible, her movement through the water swift and graceful, and she reaches, in security, her destined haven. Alter, in any measure, this confederacy of agents, and you deteriorate her movement, or endanger her safety.

It is in the Caucasian race alone, that we find real human greatness, marked by the omnipotency, and decorated in all the elegancies, of genius—There alone, that literature, science, and the arts, are carried to perfection—There alone that we find a Homer, a Socrates, an Alexander, an Aristotle, a Cæsar, a Cicero, a Bacon, a Shakspeare, a Milton, a Franklin, a Washington, or a Bonaparte. Hanno, Hannibal, and many other great men, although born in Africa, were not, as some very mistakenly suppose, of the *negro race*.

Although, on the whole, the Caucasian race surpass the others in *corporal* activity and powers, it is chiefly their *intellectual* superiority that gives to them the mastery of the world. It is from this cause, that when a Caucasian comes into conflict with a Mongolian, an African, or an Indian nation, of equal numbers, it is universally the conqueror—an event to which history presents not an exception. A single battle may be lost; but final victory and conquest are certain.

Had it not been for the great superiority of the Caucasian or White race to the Morgolian and the Indian races, neither could Hindostan ever have been subdued, nor the continent of America colonized by Europe. Nor, without the assistance of the European intellect, is it an event to be expected, that the British oriental provinces will ever be able to regain their independence. For such a lofty achievement, they are neither sufficiently warlike, nor sufficiently intellectual.

It is not unknown to me, that an opinion was started some time ago, by Dr Pritchard of England, and has been recently adopted by the Honourable Alexander Everett, Minister resident from the

United States, near the court of Madrid, and by some others, not only that *black* was the *primitive colour of the human race*, but that the ancient Egyptians, the *fathers of science*, letters, and the arts, and the most enlightened and powerful people of their time, were of the *true African race*—that they were characterized by a “*black skin, thick lips, a flat nose, and woolly hair.*”

The several lighter-coloured races of men, up to those that are *white*, Dr. Pritchard considers as nothing but so many varieties produced from the original *black* race, by a process of nature which he says pervades the whole animal kingdom. He contends that among animals of every description, any important and striking change of colour that takes place, is, if not from black to white, at least from *darker to lighter*. Thus the primitive family of the Bos, from which our domestic cattle are derived, is very dark coloured; although their descendants are of a much lighter shade. Hence the origin of the term, “*Black cattle.*” The hog, the goat, the sheep, and the cat, are much darker in a *wild* than in a *domesticated* condition. Squirrels, rats, and mice, lose, in many instances, the colour of their race, and become white.

In relation to the feathered tribes, the same thing is true. In their wild state, the pigeon, the turkey, and the common barn yard fowl are darker coloured than they are when domesticated. Nor, as Dr. Pritchard alleges, does the change ever take place in the contrary direction; there being no example of any race of beings *originally white* putting on a *sable* hue. Even *individual* changes of colour, in which nature might seem privileged to indulge in *caprice*, are always from *darker to lighter*. Among Africans, Mongolians, and Indians, Albinos are often found. But in no instance have Caucasians ever become black.

This chain of analogical reasoning Dr. Pritchard applies to man, as a race, and infers, that having been *primitively* of the *African*, he has changed, in colour, by this *natural* process, until he has assumed, at length, the *Caucasian character*.

Although this hypothesis is, in itself, exceedingly fanciful—so much so, indeed, as to be destitute of the least plausibility or weight—yet the high respectability of some of its advocates, gives it a claim to a brief analysis.

Did the difference between the African and the Caucasian race consist alone in the *colour of the skin*, the hypothesis we are considering might be less visionary; although even, in that case, it

would be, in a high degree, objectionable. But the difference extends throughout the *whole man*—the brain, the nerves, the muscles, the organs of sex, the bones, the teeth, the articulations, the blood vessels, and even the blood itself. To account, on the principles of Dr. Pritchard, for a change so extensive as this, must be acknowledged, on reflection, even by the Dr. himself, to be impossible. Among the inferior animals, nothing, in any degree, comparable to it occurs. The change, there, is limited almost exclusively to colour.

Nor is this all. Among inferior animals, the change is uniformly accompanied by *degeneracy*. Light coloured and white animals, are less powerful and hardy than those that are dark. In particular, they are less able to bear, with impunity, the impressions of vicissitudes of temperature, and particularly the impression of *severe cold*.

But, as already stated, the Caucasian is, in all respects, superior to the African race. It is especially superior in its capacity to sustain the action of cold. The African race comes to perfection only in a *warm* climate. The Caucasian flourishes, to a certain extent, in every climate; but attains perfection only in a *temperate* one.

Nor is this change in the colour of the human race, from *black* to *white*, now, nor has it been within the memory of man, or of history, a matter of observation. Dr. Pritchard can specify neither age nor place, in which the change he advocates is said to have been perceived and recognized in its progress. If, at present, there be any appreciable difference on the subject, it is favourable to the hypothesis, that the Caucasian race might be turned *black*, rather than the African *white*. And such, indeed, is known to have been, hitherto, the dominant belief. But the truth is, that both the Caucasian and the African have the same colour, structure, and figure now, that God has, *at some period, by his immediate agency*, conferred on them; and the *opposite hypothesis is a rank absurdity*. Not a single fact does nature furnish in support of it. On the contrary, she declares against it, in a voice and tone that nothing can resist. It rests alone on *superstition* and *prejudice*, and does not, therefore, amount to a *plausible conjecture*.

Nor is the hypothesis which confers the African character on the ancient Egyptians, any better founded. As far as we are acquainted with it, it seems to rest on a single passage in the writings of

Herodotus, setting forth that, in his time, the Egyptians were negroes—that their skins were black, their lips thick, their noses flat, and their hair woolly.

That, in the days of Herodotus, there might have been, in Egypt, a body of *slaves*, or some *inferior cast of inhabitants*, of this description, is altogether probable. For we well know that in Egypt slavery existed. But that the ancient, enlightened, and conquering Egyptians were negroes, like those that inhabit, at present, central and western Africa, or that they resembled, in any measure, the semi-human Caffre, is not true. Nor do we hazard this assertion on *dubious* authority.

The mummies from Thebes and elsewhere, which were prepared centuries before the era of Herodotus, were the *ancient Egyptians*—at that time the masters of the world. Those preserved human bodies give us, on this subject, the testimony, not of man, but of nature, which is, in reality, the testimony of God himself. But we perfectly well know, that they are *all of the Caucasian race*. Nothing *artificial*, as *all human writings are*, can counterbalance this. Hence, as we firmly believe, the utter fallacy of Dr. Pritchard's hypothesis.

Another work has recently appeared, containing a lecture on the "Varieties of the human race," which, although it neither advances, nor professes to advance, any thing new on the subject, requires, notwithstanding, a passing notice—Were it true to its title, no notice could be sufficiently respectful and complimentary. It is "THE BOOK OF NATURE," by John Mason Good, M. D. &c. a writer whose talents, learning, and industry have justly conferred on him considerable reputation. We regret the title of this work, which, to say the least of it, would seem to bespeak a degree of pretension and pomposity, which we sincerely believe do not attach to Dr. Good; and which are certainly unworthy of a man who holds so elevated a station among the intellectual characters of the age. But our main concern is with the third lecture of the second series of the work, not with its title, or its entire contents.

Dr. Good is a strenuous advocate for the *primitive identity* of the human race. In this hypothesis we do not profess to differ from him, in opinion. Nor, as philosophers, do we profess to concur with him. The topic is one, which, in the present state of science, philosophy cannot settle. Nor can we agree with the Doctor that, when fairly and liberally interpreted, the "Mosaic statement"

settles it. We cannot, therefore, concede the fact, that in *doubting* or even *disbelieving* in the primitive identity of the human race, the slightest disrespect would be offered to the writings of Moses. Without the least offence to any writings or any writer, the subject is open to fair discussion; although, as already stated, we regret to believe, that, at the present period, no discussion can completely dissipate the heavy darkness that hangs around it.

But when Dr. Good proceeds to state the *causes*, by which he alleges that one race of men may be converted into another, we differ from him entirely, because we conscientiously believe, that, notwithstanding the title of his book, he differs entirely from "NATURE" He as palpably *contradicts* nature, as he would do, were he to contend, that the same causes are sufficient to convert the dog into the wolf, the lion into the tiger, the quaga into the zebra, or the bison into the buffalo. For we venture to assure him, that the points of difference between those races of inferior animals, are much less striking than those that distinguish the negro from the whiteman—the genuine African from the genuine Caucasian.

Without meaning to call in question the general attainment of Dr. Good, either as an *anatomist* or a *naturalist*, we doubt exceedingly whether he possesses a thorough and correct knowledge of the immense discrepance, *corporeal* and *intellectual*, that exists between the African and the Caucasian races. Were this difference rendered familiar to him by observation and analysis, we confidently believe that his good sense would revolt from the very conception of attempting to explain it by the operation of causes so perfectly inadequate.

To justify us in the belief and assertion that any given agent is the cause of a given effect, we must be able to show either that it *has* produced it, or that, from its *specific aptitude*, it is *calculated* to produce it. Unless sustained by one or the other of these forms of evidence, all that can be said on the subject is but empty conjecture, and cannot be admitted in philosophical discussion. How this rule applies to the topic we are considering, will appear presently.

That we may be the better qualified to form, in the present case, something like a rational and satisfactory decision, let us take a brief survey of those *agents* and *phenomena*, that are alleged by Dr. Good to stand related to each other as cause and effect,

The causes which, in concurrence with others, he adduces as sufficient for the production of all the differences that exist between the African and the Caucasian races, are 1, DIFFERENCE OF CLIMATE. 2, DIFFERENT KINDS OF FOOD. 3, DIFFERENCE IN CUSTOMS AND MANNERS. 4, SOME MORE OR LESS HEREDITARY AFFECTION.

The effects, physical and intellectual, which these causes are supposed to produce on the human system, are so numerous, that they can scarcely be specified, and so important and striking, that they cannot, by a mere representation, in words, be fully appreciated, or correctly understood. They are the entire mass of phenomena, in all their variety, which constitute the difference between the negro and the white man, which reside in every portion of the body, and which can be learnt, in their full extent and bearing, by observation alone. To begin with the bones.

In his whole osseous system, not excepting the strength and flinty hardness of certain parts of it, the real African differs from the Caucasian.

In the size and form of the bones of the feet, and the mode of their articulation with those of the leg, the difference is striking. Nor is that less striking which exists between the bones of the leg and their articulation with the bone of the thigh. As relates to the bones of the leg, it is peculiarly worthy of observation, that while the tibia is *straight* in the Caucasian and *crooked* in the African, the fibula is *straight* in the African and *crooked* in the Caucasian.

The thigh bone of the African differs materially from that of the Caucasian, while a difference still greater marks the bones which constitute the pelvis. In the African, the os coccygis, in particular, is considerably elongated beyond its length in the other varieties of man. We allude to the *full-blooded* African, in his *native* form. It is also well worthy of remark, that in the length of the leg compared to that of the thigh, the *proportions are different* in the negro and the white man.

In the spinal column, whether we consider the vertebræ, in an insulated capacity, or in the mode of their articulation with each other, and with the ribs, the difference is obvious. Nor is it less so in the form and appearance of the ribs themselves.

In the bones of the upper extremities, the difference between the two races is not much less than in those of the lower. This is particularly the case in the bones of the fingers and hand, and

n the proportion, which, in *length*, the bones of the fore-arm bear to the humerus. In the *African*, the humerus is shorter, and the bones of the fore-arm, longer, than they are in a *Caucasian* of the same height. And, in the *former*, the entire length of the upper extremity is greater than it is in the *latter*, when the stature of the individuals is the same.

But the most striking difference is in the bones of the head, and in the relative position and attitude of the head on the neck. In the negro, the occipital portion so far preponderates as to fall backward, and direct the face *upward*, while, in the white man, the head is much more correctly balanced, and the face thrown *forward*.

In the African, all the bones of the head, not excepting the under jaw, and the teeth, are thicker, harder, more ponderous and stronger, than they are in the Caucasian. Hence it is much more difficult either to fracture his skull or to stun him, by a blow. The entire volume of his head is considerably smaller, and the amount of brain, therefore, much less. Nor is the size of certain portions of the brain, compared to certain other portions of it, by any means the same.

Instead of being nearly *perpendicular*, and meeting each other at somewhat of a *right angle* with a horizontal line, as they do in the Caucasian, the teeth and front portion of the jaws of the African take a *forward* direction, and form a *projecting* and unsightly muzzle. The upper jaw of the negro is *broad* from the nose downward, and he has a *retreating* chin, or rather scarcely any chin at all, while the upper jaw of the white man is much narrower, and his chin *projects*. The teeth of the African are larger in every dimension, sharper, stronger and wider apart than those of the Caucasian. They resemble more the teeth of a carnivorous animal, and, from the superior strength of his under jaw and the muscles that move it, the negro has a much more formidable apparatus for biting, than the white man. We have known a negro who could snap and bite almost as dangerously as a dog. Being in other respects powerful and exceedingly active, no one could encounter him in combat, without being severely wounded by his teeth. He has been known even to lacerate, by a sudden snap, the hand that gave him a blow in the face. From a want of development in the upper and front portion of his brain, the forehead of

the African is very retreating, and his facial angle restricted in a corresponding degree.

In the muscular systems of the two races, the differences are numerous, and some of them very striking. That existing in the muscles which move the lower jaw, has been already referred to. In the negro, the tendo Achillis is unusually long, and the belly of the gastrocnemii muscles, very slightly developed. Hence the unsightly appearance of his leg, in consequence of the calf being disproportionately small, and situated too near to the knee.

The thigh of the negro is much less round than that of the white man, being flattened laterally, thinner from side to side, and deeper from front to rear. It resembles much more, in form, the thigh of one of the inferior animals. Corresponding to this, the body also of the negro is less round, being flatter on the sides, than that of the white man. Analogous to the lower extremities of the Ourang-outang, those of the full-blooded and full-formed African, instead of being straight, like the limbs of the Caucasian, bend a little forward at the knee.

In the African, the glutei and other muscles concerned in forming the *nates* are not so well developed as they are in the Caucasian. Hence, in that region, the former is not so full and well developed as the latter.

Nor are the muscles of the hands and fingers so fleshy in the negro as they are in the white man. Hence the slenderness, hardness, and bony character of those parts in the African race, compared to the same in the Caucasian. The fingers of the negro, moreover, are comparatively longer than those of the other races.

As a general rule, the muscular fibre of the African is perceptibly coarser than that of the Caucasian. His fibrous tissue resembles more the same tissue in some of the inferior animals.

As being in part a muscular organ, the tongue of the African may be here mentioned as differing materially from that of the Caucasian. The vast difference in the lips, nose, and eyes, is a matter so notorious, that to dwell on it would be superfluous.

Another point of difference but very little known, yet radically important in the present discussion, is that which exists between the genital organs of the two races. Had we leisure, and were it proper to go into detail on this topic, and consider it thoroughly in all its bearings, we could conclusively show, that it is utterly irreconcilable with the views entertained on the subject by Dr. Good.

It is worthy of remark, that the flesh, blood, and several of the secretions of the African, differ in colour from those of the Caucasian. Nor is it less remarkable, that, in the two races, there is a considerable difference in the size and distribution of the blood vessels, more especially the veins, in the upper and lower extremities.

The skin of the African, differs from that of the Caucasian not less in structure and function, than it does in colour.

As the cuticle is much thicker, darker, and less transparent, the hair as different as any one plant is from another, and the rete mucosum much more abundant, and dissimilar in colour, so must also the cutis vera, which produces them, be equally dissimilar to the cutis vera in the Caucasian. Dissimilarity of function necessarily implies dissimilarity of structure. One gland secretes differently from another, as the liver from the kidney, and the parotid from the lachrymal gland, because, it differs from it in structure. And so, we repeat, is the true skin of the African materially different in structure from the true skin of the Caucasian, inasmuch as it produces by its action such different results.

We are particularly solicitous to direct attention to the specific difference between the African and the Caucasian hair. If the most careful and minute examination has not deceived us, we run no risk in asserting, that between the hair of those two races there is as radical a difference, as there is between rosemary and wormwood, or minionet and rue. Nor does the hair of the aborigines of America appear to us to differ less from that of the other two races.

As parts of much more importance than they are generally considered, the nails are peculiarly worthy of notice. They also differ widely in the two races.

In the African they are thicker, harder and more adunque than in the Caucasian, and project more beyond the ends of the fingers and toes, in resemblance of claws. The well formed Caucasian finger is soft and fleshy beyond the end of the nail; that of the African much less so. Hence the latter is a more efficient instrument to pinch and scratch.

Such is the only representation—and we are perfectly sensible how defective it is—we have leisure to give, of the differences that exist between the African and the Caucasian races. We shall only add, that those differences clearly show that the genuine African figure occupies an intermediate station between the figure of the

Caucasian and the Ourangoutang. This fact we simply state, as it appears to observation, and constitutes a point in the natural history of man in the relation he bears to other animals. In announcing it, therefore, we do nothing more than merely repeat, in the character of an interpreter, what nature herself has always announced.

We now put the question seriously and solemnly to Dr. Good, as a philosopher, a man of conscience, and a christian, whether any of the four causes he has enumerated, or all of them combined, have ever so far extinguished those differences, as to convert the real man of Caucasus into the real man of Africa?—or the reverse? or even to make an unequivocal approach towards such a change?

At any hazard our reputation may incur by the act, whether on the score of veracity, knowledge, or morality, we ourselves fearlessly answer these questions in the negative. By the alleged causes, no such change as that referred to has ever been produced; nor even *actually commenced*. All stories and rumours (and there is nothing else afloat) to the contrary of this, we pronounce to be unfounded; and challenge our opponents to adduce in support of them a tittle of evidence that true philosophy can receive as authentic.

The influence of tropical climates, continued for ages, has never, without an admixture of blood, assimilated, in the slightest degree, the real Caucasian to the African race. It has, to a certain but a limited extent, embrowned the skin, and there its operation has forever ceased. When that tinge has reached a given point, it there stops; and no subsequent continuance of mere tropical influences can render it deeper. This is a fact which observation and history alike establish. As to the figure of the bones and their articulations, and the form of the muscles, the genitals, the eyes, the lips, the nose, and the brain, the utmost influence of a tropical climate has never yet produced in them the slightest change—at least it has never so changed them, as to give to them the faintest impress of the *African character*. Wherever that impress has appeared, the cause has been confessedly an admixture of blood. As to a mutation of Caucasian into African hair, tropical influences have no more effected that, than they have converted oak into mahogany, or a chesnut into a palm tree.

Nor is the converse of all this any nearer to the truth. Northern climates have never, by their influence, converted an African into a Caucasian; nor even made an approach towards such a change.

It is not true, as many have asserted, that the real descendants of Africans, in the United States, have become, in any degree, assimilated to the whites. Where no admixture of Caucasian blood has interfered, the African descendant, after a lapse of near two hundred years, since his progenitors were brought to the shores of our country, is himself as genuine an African, as were those progenitors from whom he has sprung.

True, his complexion, perhaps, is not quite so dark. The ebony of his cheek is somewhat faded. But that is only an evidence of his degeneracy—at least of his want of that vigorous health, which his ancestors possessed.

Black is as much the native healthy complexion of the African, as a mixture of red and white is of the Caucasian. But the climate of the United States is less congenial to the constitution of the negro, than the climate of Africa is; precisely as the latter is less congenial than the former, to the constitution of the Caucasian. Hence if the white man loses the brilliancy of his complexion, by a residence in Africa, it is hardly to be expected that the negro complexion will not be similarly effected, at least to a certain extent, by a long residence in the United States. It is true, in fact, that it is so affected, and true to nature, that it ought to be. But it is at once deceptive and preposterous—the result of ignorance or dishonesty, or both, to represent this petty change, as a passage of the African into the Caucasian complexion. As well may the effect of every fit of sickness be thus represented. For the negro turns palid from sickness, as well as the white man; and, like the white man, resumes his complexion on the return of his health. And that complexion is the enduring ebony of his native climate. We repeat, then, that it is not true, that either in complexion, hair, intellect, or figure, the African descendant, in the United States, is passing into the Caucasian.

Were it a fact that the blackness of the negro results from the influence of the “calorific” or the “colorific” rays of the sun, those negroes, and those parts of the body, most exposed to such rays would certainly surpass all others in depth of colouring. In other words, field slaves would be blacker than house servants, and the face, hands, and other most exposed parts would be blacker than the covered portions of the body.

But is this true? We know it is not. On the contrary, house servants, that are well fed and kindly treated, have the most jetty

complexions; and those parts of the body most carefully concealed are of the deepest die. Had Dr Good lived either in the United States, or the West India Islands, and made correct observations, this truth would have been as familiar to him as it is to us. He would not, then, have fallen into the error recorded by him in the following sentence.

“Hence, too, the reason why the Asiatic and African women, confined to the walls of their seraglios, are as *white as Europeans*” See p. 221.

If by “African women” Dr. Good means *negresses*, the depth of his mistake must be obvious to every one. And if such be not his meaning, the sentence is entirely irrelevant to his subject. In either case it cannot be creditable to him that he ever published it.

He ought to know that the beauties of the African race are as vain and choice of the depth and gloss of their *ebony*, as the Caucasian beauties are of their *roses and lilies*; that they are as anxious to preserve and improve them; and that they do this, in part, at least, by carefully excluding themselves from the influence of the sun. Whiteness of teeth, and blackness of complexion are among the most highly prized ingredients of African beauty. To every one who has paid the least attention to the subject, it is perfectly well known, that the solar rays are peculiarly unfavourable to the darkness and glossiness of the African hair. Hence house servants who wear a covering on their heads, and are but little exposed to the influence of the sun, have much better hair, of the true African character, than field slaves, who, without any protection to their hair, are much more exposed.

It is not true, then, that, in any part of the world, the African has been converted into the Caucasian or the Caucasian into the African race, by any or all of the causes, which Dr. Good has alleged to be competent to that effect. As a historian, therefore, the issue of the controversy is fairly against him.

Will he, then, as a philosopher, undertake to demonstrate the aptitude of his causes to the production of the change?—will he convince us by any legitimate process of reasoning, that, although those causes have never yet produced the change, yet, that when fairly applied, they are altogether competent to it? Let him do this, and we shall cheerfully yield to him the point for which he contends.

But this is impossible. The competency of a cause to the production of an effect, can be known and established only, by its having actually produced it.

True, analogy may do something in giving an hypothesis plausibility; but it cannot confirm it. Nor must it ever be received as philosophical proof. Yet, when he attempts to reason on the subject, it is on analogy alone, that our author relies.

Sheep and oxen and hogs, says he, and he might have added, dogs and cats and geese and chickens, have sustained striking mutations by differences of climate, places of residence, and kinds of food; and why, therefore, in relation to man, may not similar effects result from the influence of similar causes?

Of the hog, in particular, he says, what others had said a hundred times before him; "In Piedmont the swine are black; in Bavaria reddish-brown; in Normandy white."

And what, we ask, as rigid philosophers, are we to make of all this? Do the human inhabitants of those several places differ from each other as their pigs do? Is man also black in Piedmont, reddish-brown in Bavaria, and white in Normandy? And if he is not, and the principles for which Dr. Good contends be true, *why* is he not? Has he not lived as long in those regions, to receive the influence of the climate, and of the productions of the soil as food, as his swine have done? And if he is not yet changed like them, is it because his nature is more intractable; but that the change is in progress, and will yet be effected? Or what other inference, at all to his purpose, does our author mean to draw from such premises?

As to ourselves, we are honestly compelled to draw from those premises an inference directly the opposite of that which we think it probable Dr. Good means to draw. For instance.

By the *influence of climate and food*, or from some other local causes, swine in Piedmont are black, in Bavaria reddish-brown, and in Normandy white. But, in those places, man, who has resided there, at least as long as his pigs have, and who *eats* as they do, and is constantly like them exposed to the *wind* and the *sun*, and to all the other *common* physical causes of the places, does not thus differ in colour, according to situation; but exhibits the same colour in each situation. Therefore the causes which thus change swine, are incompetent to produce in man a like change. If there be, in this reasoning, any thing fallacious, we shall feel obliged by the exposure of it. For *truth* is the object at which we aim. And a

regard for truth compels us to declare, that, in the present case, the analogical reasoning of Dr. Good and his partizans, is altogether inapplicable. *Observation*, which we must not gainsay, is in direct opposition to it.

We see that man *is not* changed, by the same causes that change other animals. The superiority of his intellect united to a corresponding corporeal structure, enables him to resist those causes; and he *does resist them*. This capability gives him, on our globe, a kind of *potential ubiquity*, which is denied to all other terrestrial inhabitants, because they are not able to resist and control physical agencies, but are controlled by them. Hence, instead of being confined, like the inferior animals, to a particular region of earth, man is a *cosmopolite—the inhabitant of the globe*. This is more particularly true of the *Caucasian race*, which holds such an ascendancy over the others.

But we have another reply for Dr. Good, in reference to the varieties in domestic animals of which he has spoken, and on which he seems so confidently to rely in support of his hypothesis. We have seen and examined all the varieties of the swine which he has examined, and several others, which he has omitted, perhaps because they have been omitted by the writers he has *copied*; for his views, instead of being original, have been bandied until they are perfectly thread bare and tattered; we have also seen the wild boar, and compared him carefully with the domesticated hog; and we assert unhesitatingly, that the difference between the most discrepant of those varieties, is not a fiftieth part as great, as that which exists between the African and the Caucasian. No wonder, then, that the causes which may have produced the one, are utterly incompetent to the production of the other. The wonder is, that any enlightened observer should have been so regardless of facts, as to attempt to establish an analogy between them.

Certain causes existing in Piedmont, Bavaria, Normandy, and Cuba, have produced, in those places, varieties in the breed of swine; but the same causes have not produced there any varieties in the human race. Yet, says Dr. Good, they are capable of producing them, although they have not done it.

To show the Doctor how preposterous it is, suppose we reverse this chain of reasoning, as follows.

In Piedmont, Bavaria, Normandy, and Cuba, no causes exist capable of producing varieties in man. Therefore, neither do any

causes prevail there, to produce varieties in swine, although we see that such varieties are there produced by local influences.

We ask, is not the former process of reasoning as unsound as the latter? We assert that it is; and challenge any one to show its superiority. Yet it is virtually the process pursued by Dr. Good and his coadjutors, in their miserable hypothesis, to account for the varieties in the human race.

But the most extraordinary part of the Doctor's work remains to be noticed. It is that where he empties, *at a dash*, that they may have no warning to prepare to escape them, all the vials of his concentrated and scalding wrath, on the heads of those who have the audacity to believe, in opposition to him, that the African intellect is inferior to the Caucasian. That his ire may loose nothing of its native potency, it shall be represented in his own words.

"It may appear singular, perhaps, says he, that I have taken no notice of the wide difference which is supposed to exist in the intellectual faculties of the different varieties of man. To confess the truth, I have purposely omitted it, because of all the arguments that have ever been offered to support the doctrine of different species, this appears to me the feeblest and most superficial. It may suit the narrow purpose of a slave merchant—of a trafficker in human nerves and muscles—of a wretch, who, in equal defiance of the feelings and the laws of the day, has the impudence to offer for sale, on the polluted shores of our country, in one and the same lot, as was the case not long since, a dead cameleopard and a living Hottentot woman—It may suit their purpose to introduce such a distinction into their creed, and to let it constitute their whole creed, but it is a distinction too trifling and evanescent to claim the notice of a physiologist for a moment."

To have heard such a blustering tirade as this, from a noisy babbler, at a popular emancipation meeting, whose object it was to secure to himself, for some place of trust and profit, the suffrages of fanatics in the doctrine of the "equality of man," would not have surprised us. To such a declaimer on such an occasion, trumpery like this would be abundantly suitable. Besides eliciting from the rabble three rounds of applause, uttered in breath fragrant from the odours of cigars and whiskey, it could scarcely fail to secure to the orator the blessings of *crones* and the votes of *dotards*. But it is lamentable and mortifying, to find such embittered denunciation and miserable rhodomontade, admitted into a work, whose title

ought to be a guaranty, if not for purity and soundness of matter, at least for temperance in language, and decorum in manner.

We confidently assure our flagrant philanthropist, that we are ourselves no inhuman traffickers either in "human nerves and muscles" or in human feelings—We never purchased a slave with a view of selling him again—we have been instrumental in *manumitting* some, and have educated one to the profession of medicine—We are even charged by our neighbours and friends with doing an injury to our slaves by too much indulgence—Perhaps we have shown as much sympathy for the African race, and, according to our humble means, rendered them as many services, as Dr. Good has done—Yet, notwithstanding the kindness of our feelings towards them, in defiance of his logic, and in the face of the terrible thunders of his Vatician, we fearlessly declare our settled belief, that the African is greatly inferior to the Caucasian intellect. In forming this belief, we have conscientiously endeavoured to keep ourselves under the influence of the general rule, while Dr. Good appears to be influenced only by the exceptions. We have looked at the general and real character of the African race, and drawn our inferences directly from that. But Dr. Good has drawn his conclusions from the exaggerated praises bestowed by enthusiasts on a few individuals, some of them not real negroes, but all of them holding a portion of African blood in their veins. The chief of these are, Freidig, a half coloured fiddler and carpenter of Vienna, Colonel Hannibal, formerly of the Russian army, academician Lislet, of the Isle of France, the son of a Frenchman, and therefore not a real African, Doctor Arno, whose parentage was also suspicious, and Vasa and Ignatius Sancho, of scribbling "polite literature" memory in Great Britain. To these he might have added, in the United States, Phillis Wheatly, the doer up of doggerel, and Banniker or Bannister, we forget which, the black almanac-maker—et multos alios ejusdem generis—

"Omnes ingeniis florentes, Arcades omnes!!"

Seriously—Dr. Good must feel himself sorely pressed for resources, when, from such a scanty stock of wretched materials, he attempts to construct the sweeping inference, that the African is equal to the Caucasian intellect.

Lislet, our author tells us, was made a member of the French Academy, and Arno a Doctor of philosophy, by the University of Wertemberg. This is true. But why were those individuals thus

distinguished?—Was it merely on account of their *talents* and *attainments*? Dr. Good will not venture to reply in the affirmative. Nor will he contend, that similar talents and attainments would have procured for two Caucasians similar honours. The truth is, and the Doctor, we think, must know it as well as we do, that those two individuals were thus honoured, *because they were*, in part at least, of *African* descent, and were highly distinguished for intellect *among their race*. But compared with *intellectual* Caucasians, they *were not distinguished*. There were, both in Europe and America, cotemporary with themselves, hundreds of *white men* infinitely superior to them in natural endowment, and attainment in science, who were, notwithstanding, never dreamt of as candidates for academical honours, or doctorates in philosophy. The smallest star is visible *at night*, while the moon herself is swallowed up, *by day*, in the solar lustre. So were Lislet and Arno, sufficiently lustrous in the dark night of *African inferiority*, but only “dimly seen” in the meridian blaze of *Caucasian splendour*.

Shall we be asked, then, what *are* the causes of the existing varieties in the colour and figure of the human race?

We answer, as we have always done, *we do not know*. But, convinced as we are, after having seriously contemplated the subject, throughout a life-time of considerable duration, that there exists, on this earth, no array of physical and moral causes sufficiently powerful to produce such effects, we are compelled to refer them exclusively either to the *primitive* or *subsequent* agency of HIM, who created the universe of mind and matter, and can modify it in conformity to the wisdom of his purposes. Nor do we entertain the least apprehension of incurring HIS displeasure, for exercising *freely* and *conscientiously*, on the *present* or any other subject, such humble powers of observation and reason, as he has been graciously pleased to bestow upon us. Nor, while sustained by HIS APPROBATION, as announced to us by the voice of a *peaceful conscience*, shall we regard, as of the weight of the vagrant thistle’s beard, the whispered calumnies and loud denunciations of those *meddling railers*, who *presumptuously* and *usurpatiously* assume the right, to

—“Deal damnation round the land,
“On each one judged *his* foe.”

Let them persevere in their ostentatious work of what they denominate *christian charity*; and we shall persevere in our humble

inquiries. Nor do we envy them a leaf of the boasted wreath, which, by such *pious labours*, they hope to pluck from the hill of Horeb.

Shall we be told that the superiority of the Caucasian race is to be attributed chiefly if not entirely to their *superior education*? We answer, that even admitting this, (which, however, *cannot* be admitted consistently with truth,) whence did that race derive their superior education? Were they not once rude and uncultivated? and who then instructed them? Did they not educate themselves, and in that way attain to their present condition? And is not that very circumstance evidence satisfactory of their native superiority? Had they not been superior in *intellect*, neither would they have been so in education.

Why have not the other races, especially the *Mongohans*, also educated themselves; inasmuch as the opportunities of the *latter*, in particular, have not been inferior to those of the Caucasians?

Shall we be told again, that the answer to this question is found in the tyrannical, depressing, and soul-cramping forms of government and religion, to which the Mongolian race is subjected? To this we reply, in another interrogatory, why do they submit to schemes of government and religion so unfounded in nature, so contrary to reason, and so disastrous in their effects? And why have the Caucasians aspired to wiser and better forms of government, and embraced a religion more rational and true?

To all these interrogatories the correct answer is the same; the *native endowments, intellectual and corporeal*, of the Caucasian race, are decidedly superior to those of the Mongolian, and of every other race.

Had the Mongolians been equal to the Caucasians, in native endowments, they would have been equal also in cultivation and attainment; because they would have availed themselves of all *existing* means of education, and *created new ones*. Had they been equal, they would have organized forms of government equally favourable to personal and political freedom, and to the cultivation of the intellect, and adopted schemes of religion equally calculated to promote the improvement and the happiness of man. In fact, had they been equal to the Caucasians in native endowment, they would have manifested that equality by an equal range of intellectual achievement. And to every other race, these remarks are equally applicable.

It is not true that the Caucasians are indebted to *accident*, or *blind fortune*, for either their superior greatness or their superior education. Nature conferred on them the elements of superior greatness, and, applying those elements to the wisest of practical purposes, they took advantage of, and turned to the best account, all favourable opportunities that presented themselves, and *created* additional ones. For it belongs to genius to create and control occasions, as well as to avail itself of those that are offered.

Let the *Mongolians* and the *Caucasians* exchange *places* and *conditions*, the *former* being put into possession of all that the *latter* now enjoys, and many ages will not have elapsed, until their relative conditions will have been again reversed. The Caucasians, using to the highest effect, the superior endowments derived from their creator, will again take the ascendancy, expel the Mongolians from their strong holds and chosen places, "and reign in their stead." Such, in the government of human affairs, is the terrestrial omnipotency of genius and talent. And such is the native superiority of the race, on which God has bestowed them.

In opposition to these views, we know that something *called argument* is offered.

We are told of Africans capable of calculation, able to make tolerable sermons, and even to do up language in the form of rhyme. We are assured, moreover, and we neither deny nor doubt it, that some of them have become very respectable mechanics.

But it is of the high talents of the aborigines of our country, that we hear most—not in the form of *reason* and *argument*, but of *declamation* and *eulogy*. In relation to them, our ears are quite stunned with high wrought praises of their powers of eloquence. And, in confirmation of the truth of these penegyrics, we are told of the eloquent harangues of Logan, Little Turtle, Red Jacket, and others.

To all this we reply, that we judge of things by comparison—or, to speak in language, which, although plain and homely, is not meant to be offensive, that we admire a *dancing bear*, not because it dances *well*, but because it dances *at all*; and a *learned pig*, not because it is *really* learned, but because it seems *less stupid than its fellows*.

In like manner, the speeches referred to are *very good*, for the *Indians* who made them; but would be *very miserable*, for William Wirt, Edward Everett, Daniel Webster, or Henry Clay. When

we judge *comparatively*, we judge *fairly*; not otherwise. The savages of our country are inferior to the whites, not merely *because they are savages*, but because *nature has not framed them for a more elevated condition*. Their *cerebral organization*, and, therefore, their *intellect*, are both inferior. Compared with *each other*, some of them are *distinguished*. But, compared with *the whites*, they are a subordinate race.

Will it be alleged by any one, that the opinion here set forth is offensive to christianity, or in the slightest degree opposed to its recognized principles?

We answer, it has no more immediate connexion with the christian religion, than any other philosophical belief. If it be unfounded, then is it both *offensive* and hostile to *every thing that is true*, merely *because* it is unfounded; not on account of any tendency in it *specifically irreligious*, or *peculiarly vicious*. It makes no allusion, either *direct* or *implied*, to the *origin* of man. It relates to him only *as he now is*; and, for evidence of its truth, relies on the varied phenomena which he presents. Regarding him as a mere subject of natural history, it examines *him*, as it does the *rest* of the animal kingdom, and infers, in relation to him, *identity* or *difference*, on the same grounds—*identity*, where *radical* and constitutional phenomena are *uniformly the same*; *difference*, where they are *uniformly different*.

The dog, the wolf, and the fox, are of the same *general family*; but a striking and invariable difference, in certain fundamental and characteristic qualities, constitutes them different races. Nor do they appear to be more essentially and obviously different from each other, in their native intellectual endowments, than are the Caucasian, Mongolian, and African races of the human family.

For ought we know to the contrary, the dog, the wolf, and the fox, were *originally one*. With the *causes*, whether *efficient* or *final*, that might have produced a change in that race, we have, at present, no concern. We know the Deity to be competent to the change, if, for good and wise purposes, he thought proper to will it. But we do not mean to intimate a belief, or even a suspicion, that, in point of fact, the several existing races of the canine family ever were one.

Nor is a positive belief in the *diversity* of the races of man *now*, in the slightest degree at war with a belief, equally positive, in his *original unity*.

It is believed that the human family spoke, *originally*, the *same language*. If, for some of the great ends of creation, God found it expedient to divide that into *many dialects*, or *tongues entirely different* from each other, why might not the same thing be advisable, in relation to a *unity of race*? The power of Heaven to effect either is alike competent. Nor would it be difficult to show that there appear to exist as good reasons for changing the original race of man, the better *to adapt it to different climates*, as there does for the confounding of his original language. Indeed the one would seem to be an essential concomitant of the other. No *single race of inferior animals* does or can inhabit every climate. How, then, could the human race, admitting it to be a unit? Most palpably it could not do it all. The existing races of man are peculiarly adapted to the climates where they are found—the Hyperborean to the north, the African to the torrid zone, and the Caucasian and Mongolian to the middle latitudes. Transfer reciprocally these races from their present and *native abodes*, planting the Hyperborean in the torrid zone, the African in the frigid, and the Caucasian and Mongolian in either of the two, and, if you do not actually *destroy*, you will greatly *deteriorate* them; precisely as you deteriorate the inferior animals, by removing them from their native climate. But you cannot, by this change of abode, convert one race into another.

Without pretending to call in question the *original unity* of the human race, I have no hesitation in asserting my confident belief, that, admitting such unity as an established fact, the division of the original race into the present existing races, was effected by the *immediate* interference and influence of the *same Power* that first created it. Nothing inferior to this could produce the effect. No secondary causes now in existence, whether *physical* or *moral*, or both united, are competent to change the Caucasian into the Mongolian and African races, the Mongolian into the Caucasian and African, the African into the other two, or any one race into another. All attempts to establish the reverse of this, must prove abortive. Those already made, however highly gifted their authors may have been, *have proved abortive*.

Truth, on all subjects, must at last prevail. Although error may, for a time, predominate, it will be ultimately overwhelmed.

The christian religion, when fairly interpreted, we believe to be true. In this enlightened era, therefore, it can be neither sub-

verted nor injured by false doctrines in science. Those doctrines coming into conflict with it, will be like the noisy waves dashing against the adamant. Shattered by the concussion, they will recoil on themselves, or sink, in harmless fragments and foam, at the basis of the rock against which their baffled fury had been directed.

The christian religion does not depend on the truth of any branch or department of science. It depends on its *own truth*—its perfect harmony with the ordinations of Heaven, in relation to the government and destinies of man.

By far the most dangerous foes to our religion, are its *timid and unenlightened friends*—those who are apprehensive that its foundations are to be shaken by freedom of inquiry; and who, from a mistaken and most injurious tenderness towards it, would subjugate the intellect, and paralyse the spirit of liberal research.

If religion can be *subverted by error*, let it be subverted. The sooner the better. In that case, it is *itself erroneous*, and ought not to be maintained. For, of all falsehoods, a *false religion* is the most disastrous. While it deludes the *intellectual*, it taints with corruption the *moral* faculties of man, and too often gives a triumph to his *animal propensities*.

But the *fundamental and genuine principles* of the christian religion do not stand in dread of freedom of inquiry; nor are they endangered by it. It is only the *false constructions* of it that are thus endangered, and the *authors* of such constructions, that shrink from research. In these enlightened times, christianity is proof against the poison of error; especially if reason be left free to defend it.

Give to the human intellect unlimited scope; by a well conducted education invigorate its faculties and direct them in their operations, and it will then prove the greatest possible *earthly safeguard* to both science and religion. It will examine each with equal candour, intensity, and effect, reject the errors that corrupt and deform, and embrace the everlasting truths that adorn them.

But let religion, through its ministers, attempt to trammel the intellect, by interdicting the entire freedom of its actions, and it will become first an object of well grounded suspicion, and, afterwards, of disrespect and open disobedience. It will be rebelled against as a tyranny much more revolting, than that of the sword and the sceptre united. It is susceptible of proof, that the indiscreet ministers, and fallacious expounders of the christian religion,

make more infidels, than all the Humes, and Voltaires, and Paynes, that the world has produced. *By their mistaken mode of administering it*, they render repulsive and forbidding, that which is, *in itself*, most amiable and inviting. But, to return from this digression.

It has been observed, that the aborigines of our country, and many of the African tribes, have the *knowing* organs in good development. The consequence of this is, that they are acute, vigilant, and observing, and acquire, with no little facility and promptitude, the *elements* of knowledge. Hence, when at school, as children, their progress is nearly equal to that of the whites, until about the *age of puberty*. At that period, the brain receives its *last development*—that of the *reflecting* organs. But here the brain of the Indian and the African fails. The development of its reflecting organs is small; while that of the Whites is comparatively large. In the studies, therefore, appropriate to this period of life, in which the *reflecting* organs are chiefly concerned, the *Caucasian* or White leaves behind him, with the utmost facility, the Indian and the African. *He* advances rapidly, and comparatively without an effort, while *their progress* is equally *laborious* and *slow*. As *boys*, the intellectual standing of the Caucasian, the Indian, and the African is nearly the same; as men, very strikingly different. The two latter learn language, natural history, Geography, and all other matters of *mere individuality*, as readily and accurately, or nearly so, as the former. But, to the attainment of a high standing in *moral* and *intellectual philosophy*, philosophical criticism and taste, political economy, the more elevated branches and their applications, of mathematics, and all other *matters of relation*, they are wholly incompetent.

To revert once more, and that but briefly, to the comparative standing, in point of intellectual strength, of the African and the Caucasian races.

Some say that the former is the *primitive* race of man, and has therefore, existed longer than the latter. But be this as it may, all agree, and must agree, that it has existed long enough to have attained, centuries ago, the entire perfection of which it is capable.

Wherefore is it, then, that, in the lapse of ages, and in all the commotions and other opportunities for the development of greatness, which the world has presented, it has never been the origin of a

single character of prime distinction? Wherefore has there never been a *genuine negro really great*?—not great, *merely as a negro*; but as one of the human family?

Why has the African race never given rise to a Moses, a Homer, a Plato, a Socrates, an Aristotle, a Miltiades, a Demosthenes, an Alexander, a Cicero, a Cæsar, a Milton, a Newton, a Napoleon, a Hamilton, a Washington, a Jefferson, an Adams, or a thousand others, of Caucasian origin, whose names might be cited?

Shall we be told that this humbled race has exhibited no pre-eminent greatness, because it has been uneducated, and held in subjection, and thus debarred from opportunities of improvement and high manifestation, by the Caucasians?

Why has it been thus uneducated, subjected, and debarred?—The answer is plain—On account of its *native inferiority*. Had it been equal to the Caucasian race, no such obstacles and restraints could have impeded its march to equal greatness, renown, and power.

The Caucasians were once uneducated; but they had high intellect, and have educated themselves. They were once without *opportunities* of improvement; but they had exalted genius, and *created* opportunities. They were once without great men; but the race contained intellectually the elements of greatness; and greatness sprung up among them.

And did the African race contain, in their constitution, the seeds of greatness, those seeds would, ages ago, have vegetated and born fruit. Opportunities—golden opportunities have not been wanting to them; but the intellectual germ has been deficient; and hence the fruit has been stunted and scanty. And so has the blossom; for they are no more of poets than they are of philosophers.

Of all the arts, improvements, and great inventions that now dispense their benefactions to man, not one originated among the African race.

This single fact infinitely outweighs all the declamation that has ever been poured forth, in favour of their equality with the Caucasian race.

The Africans, although enslaved in America, and elsewhere, are not enslaved in their native country—or if so, they enslave one another.

Wherefore, then, we ask again, do we hear of no African greatness, in the continent of Africa?

We are told that a large and populous interior city of Africa, not long since discovered, is probably as old as London or Paris—and, as some conjecture, much older.

But is it marked by a thousandth part of the intellectual greatness of either? We know it is not. Nor is it possible for it ever to be so, while inhabited only by the African race. Such an event, could issue only from an absolute infraction of the laws of nature.

The *female intellect*, in early life, equals the *male*, at the same period. Until the age of puberty, the intellect of boys and girls, in relation to the facility of learning, is nearly the same. The female is not now the *inferior*. Perhaps, on the contrary, her powers of attainment are the most promising. But it is for the attainment of *individualities*, not *relations*—of matters appropriate to the *youthful*, not to the *matured* and strengthened intellect.

But when the last process of cerebral development has taken place, the female intellect falls not a little behind the male. Nor is the cause of this unknown. The female forehead is neither *elevated* nor *broad*. In both respects it is much inferior to that of the male. The reason of this is, a defective development of the reflecting organs, or those that perceive and judge of relations. Hence the female is inferior to the male, in her power of reflection, and, of course, in her aptitude for the more elevated and arduous pursuits of science, and the direction and management of momentous concerns. She learns *individualities* with great promptitude and ease, but *relations* slowly and with difficulty.

But if the male surpasses the female in the development and strength of his reflecting organs, he is inferior to her in the excellency of the organs of the social propensities, and the moral sentiments. In *Philoprogenitiveness* and *Adhesiveness*, two of the most amiable feelings of our nature, she has greatly the ascendancy. To such an extent is this true, that a “mother’s love” and “woman’s friendship” are employed as phrases proverbially expressive of tenderness, fidelity, intensity, and permanence.

In Benevolence, Veneration, and Conscientiousness, the female is also superior. Nor is she at all inferior in Firmness and Hope.

Her ascendancy, therefore, in the social and moral developments, may be regarded as a full counterbalance of her inferiority in the *reflecting* ones. As relates to the sphere in which she is intended to move, her aptitude is perfect. But she is not competent to the higher departments of *science*, *state*, and *war*. If to

this general rule the female world has presented exceptions, in the characters of Zenobia, Boadicea, Catharine, and Elizabeth, and a few others, they are *but* exceptions, and to be so considered.

Another peculiarity in the female brain, worthy of observation, is the uniformity of its development. In figure it is much less erratic and irregular than the brain of man. It is rarely marked by points of abrupt and bold projection. Its risings and descents, when they do occur, are more gradual, waving and graceful. As is the case with the general form of woman, her brain is rounder, less angular, and handsomer, than that of man.

This more entire uniformity and comparative smoothness of surface, arise from a greater *equability* of general development. And in correspondence with this, the intellectual character of woman is better balanced, by nature, than that of man.

I am aware that this sentiment will, on the first view of it, be very likely to be considered objectionable. It is, notwithstanding, true.

The character of woman is much less marked by strong and durable leanings or eccentricities, than that of man. It is less fixed in any given tendency or pursuit. Hence her attachments to any particular occupation, such as letters, science, music, drawing, or the acquisition of wealth, are less absorbing. For this reason, her character is more *fickle*, being more easily swayed by external impressions. She is more the creature of impulse and adventitious excitement than man. She decides quickly, and, for no very strong reason, as quickly changes her resolution for another, which, for the moment, appears to her preferable.

It is thus that the equipoise of a pair of scales well formed and perfectly balanced, is easily deranged by a very small weight. But, press down one of the scales, by a heavy weight, and it will require a strong force to sway it again.

In like manner, the intellect of woman is exceedingly *mutable* from the *perfection of its balance*. Give to it a strong and permanent bias, and you render it steady. This would confer strength on the female character. The want of it gives some colour of truth to the declaration of the satirist,

“Most women have no character at all.”

It is the same want that lays in nature a real foundation for a most touching and beautiful apostrophe to woman, in Scott's *Marmion*:

"O! woman! in our hours of ease,
 "Uncertain, coy, and hard to please;
 "And variable as the shade,
 "By the light quivering aspen made;
 "When pain and anguish wring the brow,
 "A ministering angel thou!"

In "hours of ease" possessing her natural balance, and being under no strong and enduring excitement, urging her to the attainment of a favourite object, she is indeed "uncertain, coy, and variable;" but "when pain and sorrow wring the brow," her Benevolence, Conscientiousness, and Adhesiveness become deeply excited, and impel her uninterruptedly and irresistably to the administration of relief. In her resolution and exertion, she then becomes fixed and steady, and is as benign and solacing as a "ministering angel."

The most exquisite monument of steadiness, fidelity and inflexible perseverance, that human nature can present, is that of a highly sensitive and cultivated woman, under deep excitement of amateness and adhesiveness, or adhesiveness and philoprogenitiveness.

In either case, according to the two organs that are synchronously affected, she will cheerfully incur hazards, sustain trials, and vanquish difficulties, to serve and save her husband and lover, or to preserve her child, in which the constancy of man would falter, and from which, with all his boasted resolution and bravery, he would be inclined to shrink.

The very fact, that, when not excited, woman has no strongly predominant faculty, and is, therefore, mutable, gives her the greater fixity and devotion of character, when some of her faculties are strongly excited. She experiences, then, but one impetus, without any counter-current to sweep her from her purpose.

The differences of condition that mark the human intellect, at the different periods of life, in its progress from infancy to old age, are explicable only, as heretofore observed, on principles of Phrenology.

In early infancy, the *organs of propensity* are alone so far developed and matured as to be capable of action. Hence, at that period, the *faculties of propensity*, as a natural consequence, are alone manifested.

As childhood advances, the *knowing* organs are next developed and prepared for the performance of their specific functions. Conformably to this, the knowing faculties, taking cognizance of external objects, in an individual or insulated capacity, are next manifested.

At the age of puberty, when the organs of reflection and of moral sentiment are developed, and not until then, the youth becomes a moral and a rational being. He now perceives and judges of things, not alone in their individuality, but in their relation to each other; and he feels the influence of moral responsibility. This, in his existence, is a new and most important era. It is marked by another development, of such moment and influence, as to give to him apparently another being. It is the development of the organ of Amativeness. No sooner has this taken place, than the youth feels that he no longer lives either for himself alone, or for his contemporaries, but also for posterity. He feels the force of the *procreative passion*.

But like his muscles and bones, his cerebral organs, although fully developed, as respects their size, have not yet attained their perfection, and strength. In the vigour, therefore, and the general excellency of their functions, they continue to improve until the period of manhood.

The brain, now, like the other parts of the body, is in the highest perfection of which it is susceptible, except so far as it may yet be improved by cultivation and exercise. So are the faculties appertaining to its organs. Hence the analogy between it and the muscular system is accurately maintained.

In all respects, corporeal as well as intellectual, this is the most stationary period of life, and it continues many years. But at length the season of decline comes on, and here, again, the intellect and the body go hand in hand. Has the latter less agility? the former has less sprightliness. The flexibility of youth is entirely gone; and the vigour of manhood is beginning to follow it.

As old age approaches, the brain, like the muscles, diminishes in size, its organization deteriorates, its vitalization becomes less perfect, and, in correspondence with these changes, the intellect more obviously and rapidly fails.

In fine, as the body and the intellect rise together, from the feebleness of *early* infancy to the strength of manhood, so do they

decline together, from that acme, until they experience the feebleness of the infancy of age.

These phenomena, we say, totally inexplicable on the principles, if any such exist, of metaphysics, admit of an explanation easy and plain, on the principles of Phrenology. They depend on the correspondence which always obtains between the condition of the brain, and that of the intellect—a correspondence as exact as ever subsists between the state of a muscle, a gland, or the stomach, and the function which each respectively performs.

In further evidence of this, it is known that the process of the diminution of the brains of old men is *partial*. Some organs begin to dwindle and deteriorate earlier than others. Conformably to this, the faculties appertaining to the same organs begin first to decline. And, in every instance, the declension of the faculty is in exact proportion to the decay of the organ.

GENIUS.—There are few words in the English language that have given rise to such inconclusive discussion, or have received such a variety of interpretation, as the term *Genius*. Phrenology alone can settle its meaning; because it alone possesses the means of setting forth the true *constitution* of genius. It can both analyse and compound it, and thus show the elements of which it is made up.

Genius is not, as some have contended, a *single* intellectual power. It is a compound condition of intellect, and consists in a peculiar combination of faculties, marked by a predominant inclination to a *given pursuit*, and a *specific aptitude* in the possessor of them to distinguish himself in it.

A genius for music consists in Tune, Time, Secretiveness, Imitation, and Ideality, *largely* developed, and Number fully so. To a genius of the highest order, competent to musical compositions of grandeur and effect, large Causality and Comparison are also essential.

A genius for sculpture is constituted by Form, Size, Individuality, Constructiveness, Imitation and Ideality, *largely* developed. To form a great sculptor, or real greatness in any of the fine arts, the reflecting faculties are also requisite.

To the above combination add Colour, and you form a genius for painting.

A genius for mechanics differs in no very striking degree from that for sculpture. Weaken Ideality, and diminish the size or

intensity of Form and Imitation, and add Number, and your sculptor becomes a mechanician. Here, in a particular manner, the reflecting faculties are necessary.

A genius for philosophy consists in Individuality, Comparison, and Causality. If Number be present in full development, the combination is the more complete.

A genius for dramatic representation requires Language, Individuality, Secretiveness, Imitation, Wit, Ideality, Combativeness and Destructiveness. To move in the highest sphere of the Drama, the actor must possess also the reflecting faculties.

The historian, to become distinguished, must have Locality, Time, Individuality, Language, Comparison, and Causality. To this must be added Conscientiousness, to secure to his narratives accuracy and truth.

The combination that constitutes a genius for poetry is rare and extensive. It comprises Language, Colour, Form, Tune, Time, Individuality, Locality, Comparison, Causality, Imitation, and Ideality. Has the poet Combativeness and Destructiveness largely developed? he sings of war—Amativeness and adhesiveness?—of love and friendship—Veneration and Wonder? His theme is drawn from heavenly or other spiritual things. These several varieties of the poetic genius are illustrated and exemplified in the characters of Homer and Lucan, Ovid and Sappho, Milton and Klopstock. The genius of Tasso leaned both to war and sacred things.

The union of Concentrativeness to the other faculties adds not a little to the strength of genius, while Adhesiveness gives it tenderness and pathos, and Combativeness and Destructiveness, fervour and intensity.

A genius for lofty and splendid eloquence differs in no very striking degree from that for poetry. Take from the poetic combination Imitation, or at least weaken it, weaken also somewhat Comparison and Ideality, and strengthen Causality, and you will convert the poet into an orator. To the latter character Combativeness, Destructiveness, and Concentrativeness, are essential.

To form an individual so highly gifted as to leave his impress on the age in which he lives, by giving a new direction to letters, science, or the affairs of nations; such as an Aristotle, a Bacon, a Franklin, a Washington, a Napoleon, a Hamilton, an Adams, a Jefferson, a Byron, or a Scott, all the cerebral organs must be *largely developed*.

This must be the case with the *knowing* and *reflecting* organs, to furnish the necessary amount of *knowledge*. To give purity of feeling and firmness of purpose, united to unflinching rectitude, and elevation and dignity of deportment, the same must be true of the *moral* organs; and that there may be activity, strength, and energy of character, the organs of the *propensities* must be in the same condition.

Embracing all these developments, the head must be large. Nor has any such high-talented individual as we have here designated, ever been known to possess a small head.

Owing to the wild irregularities and incongruities in their conduct, certain characters are pronounced *unnatural*. This sentiment is unfounded. The strongest and most energetic characters are the *most natural*; because in them the workings of nature are most powerful, and, therefore, most difficult to control. And Phrenology indicates, with accuracy, the peculiarities and combinations of primitive faculties, that form any description of individual character, however unusual and extraordinary it may appear. It analyses character, and teaches its component parts, precisely as anatomy shows the muscles that compose the arm, or any other part of the body, or chemistry the elements of inorganic matter. Under its lights, all the intellectual irregularities of human nature, hitherto deemed anomalous and unintelligible, will be rendered plain.

Nor will the moral influence of Phrenology be less important, than its effects in the promotion of knowledge and the arts.

In the abstract, whatever is favorable to truth and science, is, and, from the nature of things, must be, favourable also to morality and virtue.

But, added to this view of the subject, there is something in the character of Phrenology, peculiarly calculated to liberalize the intellects of men, in relation to opinions differing from their own, and actions of which they do not entirely approve. It cultivates and strengthens the virtues of charity and forbearance, by a clear and satisfactory disclosure of the fact, that, to intellects differently constructed and educated, the same subject must necessarily present different aspects; and that it must produce on them, therefore, different impressions. Hence the offensive accusation of foulness of motive and dishonesty of purpose, the chief cause of irritation and resentment between opponents and competitors, and

between different sects in religion and parties in politics, will cease to be preferred; or will, at least, be preferred much less frequently.

It will, then, be perceived and acknowledged, that, owing to a difference of intellectual constitution and discipline, as well as to a strong temporary excitement of different intellectual faculties, it is a law of nature, that different individuals must entertain discrepant opinions, on the same subject.

On this ground it is believed, that Phrenology will contribute much to the mitigation, at least, if not to the final extinguishment of those denunciations and persecutions, in politics, religion, and science, which have heretofore offended so deeply the enlightened and the virtuous, and retarded, to an incalculable extent, the progress of human knowledge, and the advancement of the interests and happiness of man.

The *beauties* of Phrenology, as a branch of science, constitute no inconsiderable recommendation of it. Independently of the pleasures they afford to the student, they testify to its truth, with a degree of force which nothing can withstand. For truth *alone* is beautiful; while error is *always and necessarily deformed*.

When we analyse the human intellect according to the lights and principles of Phrenology, we are struck and delighted with the aptitude it exhibits to the condition of man, as an inhabitant of earth. We find it to possess precisely the faculties it ought to possess, to constitute one of the most perfect specimens of adaptation, that creation presents. Diminish or augment the number of its faculties, and you create imperfection. By the act of diminution, you take from man powers and prerogatives, which, for his efficiency, happiness, and utility, he ought to possess. By the augmentation, you give to him powers for which he has no use. In either case, he is no longer man adapted, in all respects, to his *present* condition, but a new being adapted to a *different* one.

The pleasure of contemplating human nature, in this point of light, is known only to those who have experienced it. It is calculated to foster in us a spirit of delightful contentment with our condition, beyond what can be effected by any other influence. It convinces us that we have not been placed on this earth *by chance*; but as the result of the joint councils of *wisdom* and *benificence*, in a Being whose power is co-extensive with his will. The contemplation, therefore, is eminently favourable to the cultivation of gratitude, piety, and devotion.

But there is yet another aspect of human nature, presented by Phrenology, fraught with the highest gratification and delight of which we are susceptible. It is the *intellectual* and *moral grandeur* of highly gifted and educated man. Of all objects that earth can set before us, that is immeasurably the most impressive and sublime. Of all terrestrial monuments, a truly great man is unspeakably the most magnificent and imposing.

In extent and elevation the mountain has bounds. Nor is the expanse of the ocean without its limits. The blue arch of heaven, and the visible orbs that illuminate and adorn it, fill but a point in the immensity of creation.

But the intellect of a Washington, throwing its influence on the whole human family, cotemporaries and posterity, through the interminable duration of future years, sets *time* at defiance; while the genius of a Newton, and a La Place, encompassing, in its grasp, creation itself, dissevers the fetters which *space* would impose.

When compared, then, to these latter monuments, the former fade and wither in their grandeur. Hence, in the following well known passage, there is no less of philosophical truth, than poetical splendour.

“Look then abroad through nature, to the range
 “Of planets, suns, and adamantine spheres
 “Wheeling unshaken through the void immense;
 “And speak, O man! does this capacious scene
 “With half that kindling majesty dilate
 “Thy strong conception, as when Brutus rose
 “Refulgent from the stroke of Cæsar’s fate,
 “Amid the crowd of patriots; and his arm
 “Aloft extending, like eternal Jove,
 “When guilt brings down the thunder, called aloud
 “On Tully’s name, and shook his crimson steel,
 “And bade the father of his country hail!
 “For, lo! the tyrant prostrate in the dust,
 “And Rome again is free!”

The charges of immoral tendencies against Phrenology have been already alluded to, *in general terms*. To designate them specifically, they are, that it favours the doctrines of *materialism* and *fatalism*, and is, therefore, opposed to a belief in the immortality and accountability of man, and subversive of all morality and religion.

Without meaning, on the present occasion, to enter, at large, into the discussion of these imputations, I shall briefly observe, that they have not in truth a shadow of foundation.

On the doctrines of materialism, Phrenology has no bearing different from that of other systems of mental philosophy. And if it even had, it can be easily shown, that materialism, when properly understood, is not incompatible with *immortality* and *accountability*.

To the doctrines of fatalism, Phrenology is directly and irresistably opposed. That this is true, appears conclusively from the foregoing analysis of it, illustrative of the mode, in which, by the influence of countervailing faculties, the balance of the intellect may be always maintained.

Fatalism consists in a *want of intellectual balance*—an entire destitution of voluntary control. Did it exist, it would be the triumph of the propensities over the moral sentiments and the reflecting faculties—of the lower over the more elevated powers of the intellect. But the representations of Phrenology are, that the higher faculties are not only intended to control the lower, but, that, when properly educated, they do control them.

To religion, Phrenology is peculiarly favourable. It demonstrates it to be radicated in the fundamental principles of our nature. By establishing the existence of a sentiment of veneration, as an elementary part of the human intellect, it proves that man is *constitutionally* religious. By showing religion, therefore, to be founded in nature, it furnishes, in behalf of its truth and usefulness, the most conclusive argument, that can possibly be adduced.

Further, let the subject be dispassionately and honestly examined, and it will be found, that, to say the least, the advocates of Phrenology are as moral and pious, as those who oppose it. The science enrols in the long and brilliant catalogue of its advocates, some of the most exemplary and distinguished divines of the age.

Such, in brief, are the principles, and some of the proofs of Phrenology, and such the applicability of that science to the explanation of the varieties, and apparent anomalies, of the human character, and to all the most important purposes of life.

Should this production prove, in any measure, instrumental in successfully recommending the science to the notice and study of the gifted and the liberal, in the United States, the author feels as-

ured that, were the composition of it, humble as it may be, his only labour, he will not be hereafter regarded as having lived in vain.

NOTE.

The two following paragraphs, omitted by accident, ought to have stood immediately after that in page 271, beginning with "The very fact" &c. and terminating with "sweep her from her purpose."

Such, according to Phrenological analysis, is the cause of the well known fickleness of woman; and the facility with which adventitious circumstances sway her. Give to her, in predominancy, Tune, Duration and Firmness, and she steadily cultivates music; Colour, Form, Size, Constructiveness and Firmness, and she perseveres in painting; Causality and Firmness, and she is an *obstinate reasoner—a troublesome logician*.

Give to man equilibrium of intellect, as the result of a very regularly developed brain, and he will be as variable as woman. Having no predominant and settled leaning, the impulse of the moment will inflect and determine him.

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Callan

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