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The aim of the book is to be
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from the data of reason - But
the "method" must be derived
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Sculpture - (perspective not known)
Line vs painting, music is
artificial, depends on experiment
Poetry, Prose, Fiction,
Home, Anacronia, School
Cenotaphs, Light, Thruout



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ESSAY

ON THE

APPLICATION OF ABSTRACT REASONING

TO THE

CHRISTIAN DOCTRINES:

ORIGINALLY PUBLISHED

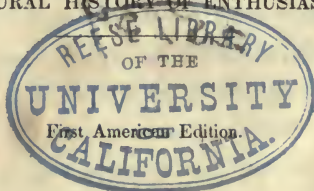
AS AN

INTRODUCTION TO EDWARDS ON THE WILL.

Isaac Taylor

BY THE AUTHOR OF

'NATURAL HISTORY OF ENTHUSIASM.'



BOSTON:

PUBLISHED BY CROCKER AND BREWSTER,

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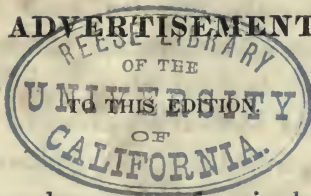
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Few men, by means of a single small volume, have added so much to the intellectual wealth of the world as the author of the 'Natural History of Enthusiasm.' Almost the whole book is a clear enlargement of the field of thought and investigation. The subject is new, and the manner of treating it is new. Giving such a work to the world is like adding to an empire a before undiscovered territory.

In the following Essay this author has fully sustained the character which he acquired by the work named above, of being a liberal contributor to the common-stock of thought. The subject is surely one of great practical moment, bearing directly on the method of explaining and discussing the Christian doctrines; and, of course, on the labors of the preacher and the student of theology. It is quite safe to say that half of all the theological disputation which has prevailed since the

Christian era, agitating the minds of men and distracting the Church, has had its origin in attempts to make revealed truth harmonize with systems of intellectual philosophy. It may fairly be doubted whether, on the whole, these attempts have at all advanced the cause of genuine orthodoxy and godliness. It is almost certain, that, if the same power of thought, and the same learning had been applied with equal zeal to a simple, apostolical exhibition of the great truths and motives of revelation, and to the inculcation of the spirit of the gospel, the result would have been far more auspicious to the cause of truth and human salvation.

The serious and candid manner in which the inquiry respecting the relation that the abstract doctrine of liberty and necessity bears to revealed truth is here pursued, and the purely evangelical and catholic spirit which pervades this as well as the other principal work of this author, are most exemplary. The reader can hardly fail to peruse these pages confiding in the writer as an honest and safe guide; and of finding, at the close, his own views of the subject corrected and enlarged.

Boston, Jan. 1832.



ESSAY.

SECTION I.

IF it be the prerogative of philosophical writings to command a more grave attention, and to challenge a higher rank in literature than is accorded to works of imagination, it is also their fate more often to fall into oblivion; or even if remembered and preserved, to be superseded, and to forfeit the honors they once and long enjoyed as canons of science. The reason of this difference is obvious; for in the one class of compositions, an end is proposed which may be attained in a thousand ways, and in the pursuit of which genius ensures its own success. But in the other class, where the discovery of truth is the single object, success depends not merely upon zeal and ability, but upon the good fortune also which may lead the inquirer upon the one only track amid innumerable devious paths.

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 The mass of ancient literature that has reached modern times, consists in great part of those products of mind, the immortality of which has not at all resulted from their value as vehicles of truth: yet are they still perused with delight—are handed down as inestimable treasures from age to age—pass in the course of civilisation from clime to clime—and (go where they may) awaken always, in every cultured mind, the liveliest emotions of pleasure. Along with the poetry, the oratory, and the histories of a bright and distant time, we have received also, in no small quantity, the philosophy of the same era. Yet is it a fact, that of this prodigious assemblage, a single small treatise* alone retains its place and office as a source of knowledge, or is actually extant as an efficient instrument of instruction. Nevertheless, it is far from being true that Pindar, Hesiod, and Homer, or that Anacreon, Sophocles and Aristophanes, were men of a higher order of intellect than those philosophers, their contemporaries, not a sentence of whose writings has been conserved; or than Plato and Aristotle, whose works, though handed down to us, exist in our libraries much rather as literature than as philosophy.

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 The arrogant chiefs of the Grecian philosophical sects looked probably with scorn upon the versifiers, and dramatists, and orators of their day, and deemed them triflers. And yet is it *these* who still command the admiration of mankind; while *those*, for the most part, do but hover in the recollections of the learned, as

* Euclid's Elements.

phantoms of an obsolete intellectual domination. But the one strove for a prize which is always attainable by genius;—the other reared their fame on the proud pretension that they were teachers of truth: their claim was disputed and disproved; and their ambition has long ago been trampled in the dust.

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Works of science lose their credit as such, either in consequence of the refutation and entire rejection of the principles they maintain; or they are gradually superseded, in the natural course of improvement, by better digested systems, founded on the same general doctrines. In instances of this latter sort, the discoverers of certain great truths which have become the property of the intellectual commonwealth, though they still hold their titles of honor, retain little real influence, and are more often spoken of than read; or are read only by the few who make the history of science their peculiar study.

As examples of the former class, we might mention the pseudo-scientific doctrines of Plato—those splendid errors which extinguished the then existing light of true philosophy; and the greater portion of the physical disquisitions of Aristotle; and the astronomy of Ptolemy; and then, in long array, and immeasurable bulk, the alchemy, and the astrology, and the physics, and the metaphysics, of the sixteen centuries, during which the human mind dreamed ingeniously, rather than employed itself waking upon the affairs of the real world.



Instances of the second sort (beside the single one above mentioned) are hardly to be produced from the extant remains of ancient literature; unless indeed we

were to consider as works of science the writings of the Grecian and Roman geographers, which though superseded by the more exact information of modern times, still exist, not simply as classical remains, but as sources of knowledge.* Passing them, the writings of the fathers of the modern astronomy may be named as examples completely in point; for these (the modern astronomy being assumed as in truth the system of nature) have possessed themselves of an immortality which must be coeval with the existence of science. Nevertheless, it has happened, and indeed it is a distinction belonging to genuine discoveries in science, that the writings which opened the path of truth have ceased to be read, except by the curious, even while still regarded as the spring-heads of real knowledge. It was the glory of Copernicus, of Tycho, of Kepler, and of Galileo, to say to their successors, "Leave us, and go on."†

Yet is it true of the few works that take rank in the *highest class* of philosophical literature, that, though they may have become obsolete, either because essentially erroneous, or because superseded, they still challenge attention and respect as *products of mind*; and though no longer valuable as guides in the pursuit of knowledge, are precious as works of genius, and as exhibitions of an athletic force of intellect. It is in this

* We should perhaps say *topographers*: topography being more remote from the fields of speculation than any other branch of learning, was less vitiated than any other branch among the ancients; and their writings of this class retain their value to the present day.

† Is the "Principia" now taking its place in this class of superseded philosophy? Though this were the fact, Newton would lose none of his fame.

sense that the unmatched writings of Aristotle must be immortal; and thus that the best of his expounders may continue to be read: and it is on this ground also that Hobbes, and Des Cartes, and Malebranche, and Berkeley, and Hume, and Hutcheson, and Hartley, retain, and will, perhaps, long retain, their place in the literature of Europe, and be perused by a future and more enlightened generation, to whom the absurdities and whimsical sophisms with which they abound, shall seem even more frivolous than they do to ourselves.

Whatever may in the next age be the fate of the "Inquiry concerning Freedom of Will," (in the *present* age it holds all its honors and authority), it may safely be predicted that, at least as an instance of exact analysis, of profound or perfect abstraction, of conclusive logic, and of calm discussion, this celebrated essay will long support its reputation, and will continue to be used as a classic *material* in the business of intellectual education. If literary ambition had been, which certainly it was not, the active element of the author's mind (as it was the single motive in the mind of his contemporary and admirer Hume), and if he could have foreseen the reputation of his "Essay on Free Will," he need have envied very few aspirants to philosophic fame. What higher praise could a scientific writer wish for, than that of having, by a small and single dissertation, reduced a numerous, a learned, and a powerful party, in his own * and other countries (and from his own day to the pres-

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* We claim Edwards as an *Englishman*: he was such in every respect but the accident of birth in a distant province of the empire.

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 ent time) to the sad necessity of making a blank protest against the argument and inference of the book, and of saying, "The reasoning of Edwards must be a sophism; for it overthrows our doctrine." And then, if we turn from theology to science—from divines to philosophers, we see the modest pastor of the Calvinists of Northampton assigned to a seat of honor among sages, and allowed (if he will lay aside his faith and his Bible) to speak and to utter decisions as a master of science.

It might indeed have been well if the devout Edwards * could have foreseen the consequences that have actually resulted from the mode in which he conducted his argument; for in that case, assuredly he would not have allowed to sceptics the opportunity of triumphing by his means over faith as well as reason. He would, then, instead of abandoning the ground of abstract reasoning as soon as he had achieved the overthrow of the metaphysical error of his opponents, have carried it (and he was able to do so) to its utmost extent, and have so established the responsibility of man, as should have compelled infidels either not to avail themselves at all of his proof of universal causation, or to yield to his proof of the reality of religion.

The diffidence and the Christian humility, or the retired habits of the American divine, prevented, perhaps, his entertaining the thought that he might be listened to by philosophers, as well as by his brethren, the ministers of religion. Supposing himself to write only for those who acknowledged, as cordially as he did, the

* See note A at the end of the Essay.

authority of Scripture, he scrupled not to make out his chain of reasoning, indifferently, of abstractions and of texts; and especially in the latter portion of his treatise, readily took the short Scriptural road to a conclusion, which must have been circuitously reached in any other way. Just and peremptory as these conclusions may be, they commanded no respect out of the pale of the church; nay, they rather excited the scorn of those who naturally said—If these principles could have been established by abstract argument, a thinker so profound as Edwards, and so fond of metaphysics, would not have proved them by the Bible.

Sceptics of all classes (it has ever been the practice and policy of the powers of evil to build with plundered materials), availing themselves greedily of the abstract portions of the inquiry, and contemning its Biblical connectives and conclusions, carried on the unfinished reasoning in their own manner; and when they had completed their edifice of gloom and fear, turned impudently to the faithful, and said—"Nay, quarrel not with our labors; the foundations were laid by one of yourselves!"

Notwithstanding this unhappy and *accidental* result of the argument for moral causation, as conducted by Edwards, this celebrated treatise must be allowed to have achieved an important service for Christianity, inasmuch as it has stood like a bulwark in front of principles which, whether or not they may hitherto have been stated in the happiest manner, are of such consequence, that if they were once, and universally abandoned by the church, the church itself would not long make good

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its opposition to infidelity. Let it be granted that Calvinism has often existed in a state of mixture with crude, or presumptuous, or preposterous dogmas. Yet surely, whoever is competent to take a calm, an independent, and a truly philosophic survey of the Christian system, and can calculate also the balancings of opinion—the antitheses of belief, will grant, that if Calvinism, in the modern sense of the term,* were quite exploded, a long time could not elapse before evangelical Arminianism would find itself driven helplessly into the gulf that had yawned to receive its rival; and to this catastrophe must quickly succeed the triumph of the dead rationalism of Neology; and then that of Atheism.

Whatever notions of an exaggerated sort may belong to some *Calvinists*, Calvinism, *as distinguished from Arminianism*, encircles or involves GREAT TRUTHS, which, whether dimly or clearly discerned—whether defended in Scriptural simplicity of language, or deformed by grievous perversions, will never be abandoned while the Bible continues to be devoutly read; and which, if they might indeed be subverted, would drag to the same ruin every doctrine of revealed religion. Zealous, dogmatical, and sincere Arminians little think how much they owe to the writer who, more than any other in modern times, has withstood their inconsiderate endeavors to impugn certain prominent articles of the Reformation. Nay, they think not that, to the exist-

* It is hardly necessary to say, that the term Calvinism is used without any reference to the particular opinions of the illustrious divine who has given his name to a system of doctrine much older than the age of the Reformation.

ence of Calvinism they owe their own, as Christians. Yet as much as this might be affirmed, and made good; even though he who should undertake the task were so to conduct his argument as might make six Calvinists in ten his enemies.

Yet it will not be affirmed (unless by the advocates of a party) that the treatise on the Will is in itself complete; or that it is open to *no* reasonable objection on the part of those who refuse to admit its conclusions; or that it leaves nothing to be desired in this department of theological science. Very far, we think, is this from being the fact. Edwards achieved, indeed, his immediate object—that of exposing to contempt, in all its evasions, the Arminian notion of contingency, as the blind law of human volitions: and he did more;—he effectively redeemed the doctrines called Calvinistic from that scorn with which the irreligious party, within and without the pale of Christianity, would fain have overwhelmed them:—he taught the world to be less flippant; and there is reason also to surmise (though the facts are not to be distinctly adduced) that, in the reaction which of late has counterpoised the once triumphant Arminianism of English episcopal divinity, the influence of Edwards has been much greater than those who have yielded to it have always confessed.

But if the inquiry on Freedom of Will is regarded, and it ought to be so regarded, as a scientific treatise, then we must vehemently protest against that mixture (already alluded to) of metaphysical demonstrations and Scriptural evidence, which runs through it, breaking up the chain of argumentation—disparaging the

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authority of the Bible, by making it part and parcel with disputable abstractions; and worse, destroying both the lustre and the edge of the sword of the Spirit, by using it as a mere weapon of metaphysical warfare. Yet, in justice to Edwards it must be remembered, that while pursuing this course, he did but follow in the track of all who had gone before him. To this ancient evil we must again advert.

But, besides the improper mixture of abstract reasoning with documentary proof, the attentive reader of Edwards will detect a confusion of another sort, less palpable indeed, but of not less fatal consequence to the consistency of a philosophical argument; and which, though sanctioned by the highest authorities, in all times, and recommended by the example of the most eminent writers, even to the present moment, must, so long as it is adhered to, hold intellectual philosophy far in the rear of the physical and mathematical sciences. For the present it is enough just to point out the error of method alluded to, remitting the further consideration of it to a subsequent page.

It is that of mingling purely abstract propositions—propositions strictly *metaphysical*,* with facts belonging to the physiology of the human mind. Even the reader who is scarcely at all familiar with abstruse science, will, if he follow our author attentively, be perpetually conscious of a vague dissatisfaction, or latent suspicion, that some fallacy has passed into the train of proposi-

* The reader is referred also to a subsequent page of this Essay for a definition of the sense in which the writer employs the term *metaphysics*, as distinguished from the physiology of the mind.

tions, although the linking of syllogisms seems perfect. This suspicion will increase in strength as he proceeds, and will at length condense itself into the form of a protest against certain conclusions, notwithstanding their apparently necessary connection with the premises.

The condition of those purely abstract truths which constitute the higher metaphysics is, that they might (though no good purpose could be answered by doing so) be expressed by algebraic or other arbitrary signs; and in that form made to pass through the process of syllogistic reasoning; certain conclusions being attained which must be assented to, independently of any reference to the actual constitution of human nature—or to that of other sentient beings. These abstractions stand parallel with the truths of pure mathematics.—And it may be said of both, that the human mind masters them, comprehends and perceives their properties and relations, and feels that the materials of its cogitation lie all within its grasp, are exposed to its inspection, and need not be gathered from observation. To such abstractions the artificial methods of logic are applicable.

Not so to our reasonings when the actual conformation of either the material world, or of the animal system, or of the mental, is the subject of inquiry. Logic may place in their true relative position things already known; but it aids us not at all (the logic of syllogism) in the discovery of things unknown. Hence it follows, that if an inquiry, the ultimate facts of which relate to the agency and moral condition of man, be conducted in the method that is proper to pure abstractions, and if, as often as the argument demands it, new materials are brought in, *unexamined*, from the actual conforma-

tion of the human mind, very much may be taken for granted, and will flow in the stream of logical demonstration, which in itself is at least questionable, and which, whether true or false, should be stated as simple matter of fact, and by no means confounded with those unchangeable truths which would be what they are, though no such being as man existed. This error of method—an inveterate one—is as if a mathematician in calculating (for example) the necessary dimensions of a timber which, being supported at its two extremities, was to sustain a given weight, were, in carrying on the *mathematical* part of his reasoning, to assume the specific properties of timber as an invariable abstraction; or were either to leave out of the process all consideration of the density, compressibility, and tenacity of oak, ash, fir, elm, &c., or were to take certain facts of this sort upon vulgar report, and blend them with his calculations, without having experimentally informed himself of the *physical constitution* of the materials in question.

In the scientific procedures of the mechanic arts, the ultimate result, whether it be a building, a bridge, or a machine, usually combines *three* perfectly distinct and independent series of truths, or classes of causation; namely, 1st, the *mathematical* relations of extension or number; 2d, the *mechanical* laws of gravitation, motion, friction, &c.; 3d, the qualities and properties (in part mechanical, in part chemical) of the several materials that are to be employed or wrought upon.

Now these distinct principles or truths must be separately considered; and *each in the method proper to itself*; and must then be combined in the single result. It is thus alone that the arch can be made to sustain

itself and its intended burden;—that the roof will rest on its plate;—that the engine will perform its complicated part; or the simplest implement execute its destined drudgery.*

But owing, in part, to the abstruse nature of the subject, and to its not being susceptible of palpable proof; and, in part, to the unhappy accidents which in every age have beset intellectual philosophy, problems belonging to the science of mind have commonly been attempted to be solved, on the principle of confounding the abstract with the physical. And then if, in addition to this capital error, there have been mingled with the process the jargon of religious factions, and with that, the antagonist dogmas of the enemies of all religion, the smallest probability of attaining a satisfactory result has been removed; and the actual issue of the controversy, instead of going calmly to its place, like the conclusions of physical science, has served only to exacerbate new contentions, either among theologians, or between them and the assailants of Christianity.

In the case, therefore, of our availing ourselves of the reasoning of a writer, like President Edwards, it behoves us to take heed that we do justice, at once, to him and to ourselves. To him, by not imputing to him, *individually*, a blame which belongs in common to all metaphysico-theological writers, of every age—not one perhaps excepted. And to ourselves, by assenting to his argument only so far as it is purely of an abstract kind; while we hold ourselves aloof from every conclusion.

* See note B.

which involves *physiological facts* of a kind either not considered by the author, or not known to him.

SECTION II.

SUCCESS in the prosecution of a scientific inquiry demands that, if the desired result, or the ultimate fact, be of a simple kind, we should, 1st, Seek for it among the class of truths to which it actually belongs; * and 2d, That, in conducting the process, we exclude the facts and avoid the methods proper to other branches of knowledge. Or if the ultimate fact be complex, involving truths of different classes, it is necessary that we pursue each class separately, and in its proper manner, and at last truly combine the several products.

Of what sort, then, we may ask, is the inquiry concerning human agency, free will, liberty, and necessity? In other words: to what department of science does the controversy belong, and on what ground is it to be argued? Now, in order that every probable supposition may be included, and that we may disengage ourselves from such as are groundless, let it be affirmed, successively, of this question, that it is one

- I. Of common life, affecting the personal, social, and political conduct of mankind;
- II. Of theology and Christian doctrine;
- III. Of the physiology of man;
- IV. Of the higher metaphysics.

* See note C.

It is proposed to consider, as briefly as possible, the question of moral causation and necessity separately under these heads. And first, suppose it to be affirmed that the controversy may, in its result, affect the conduct of common life, or ought to influence the feelings or behavior of men in their ordinary transactions, private and public.

Unless for the sake of an important inference (soon to be mentioned), it might well be deemed in the last degree trivial and impertinent, even to assume as at all reasonable the supposition, that the substantial interests of life are liable to interruption or interference from abstruse dogmas of any kind, and especially of such as are advanced in the controversy concerning liberty and necessity. There has, indeed, been a season among our near neighbors, during which an interference of this sort was allowed;* and it may also have found indulgence within the circle of German philosophy; and it has always had a place among the mystics of Asia.† But in England, the force of common sense is far too great, and the credit of metaphysics is, happily, far too small, for any room to be granted to extravagances of this order. Or, were it otherwise, the supposition of a practical consequence belonging to the question would stand discharged by the leave of even the most resolute impugners of the common sense and common feelings of mankind, who, not only by their personal conduct, but by explicit admissions, excuse their fellow-men from paying any more respect to their sublime demonstrations, than is ordinarily thought due to the inexpli-

* See note D.

† See note E.

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cable whims of men who abound in learning and leisure.*

Yet let us for a moment contend, as if in serious controversy with the supposition, that such doctrines as the Pyrrhonic or the Stoic; or the modern doctrine of necessity; or if there be yet in the womb of chaos any other dogma of similar quality, that these high principles have a claim to be listened to before men can, with reason or consistency, proceed to transact the business of life, or with propriety give indulgence to certain vulgar emotions.

Now, we should overturn a preposterous pretension of this sort in more ways than one; as, *first*, we should, by a loose technical argument, procure a relegation of any such controversy from the haunts of real life in this manner. Let it be supposed, that, in due course of law, and after hearing and sifting of evidence, a prisoner at the bar has received sentence of death; but his legal advocate pleads an arrest of judgment, on the ground, we will say, of an error in the arraignment. The court assents to the propriety of this sort of interruption—admits the objection to be formal and pertinent—examines with care the allegation, and finding it valid, allows to the convicted man the benefit of the demurrer. But let it be imagined that the prisoner's legal defender,

* "When the Pyrrhonian awakes from his dream, he will be the first to join in the laugh against himself, and to confess that all his objections are mere amusement, and can have no other tendency than to shew the whimsical condition of mankind, who must act and reason, and believe though they are not able, by their most diligent inquiry, to satisfy themselves concerning the foundation of these operations, or to remove the objections that may be raised against them."—HUME'S *Inquiry concerning the Human Understanding*, sect. xii. part 2.



destitute of any such fit objection, wherewith to protect the life of his client, stands up to impugn the good policy, or the abstract justice, or the morality of the statute under which he has been condemned; or he affirms that this enactment is contrary to the spirit of the constitution, and is in itself an outrage upon unalienable rights. In an argument of this sort, he might happen to have all reason and good principles on his side; and might, if permitted to speak, actually bring judge, jury, and the crowd around, to think with himself. But the court peremptorily excludes any such *impertinence*, though valid in itself, as utterly improper to the place and occasion; nor for a moment to be listened to, where laws are to be put in force—not repealed or amended.

And yet *this very same argument*, overruled and rejected in a court of justice, may be carried into the senate, and shall there be respectfully entertained. *Senators* will hear and weigh reasons which *judges* repudiate. The ground of this practical procedure is manifest;—every one to his business. In the senate, motives of policy, and legal consistences, and special necessities of state, together with arguments of abstract or universal justice; and even, to some extent, religious considerations, are brought together from all sides, and go to influence the legislative decision. Nevertheless, limits are imposed upon the indulgence given to senatorial argumentation. Were it, for instance, to happen that a legislative body included a mere theorist, or dabbler in philosophy; and were such a one, instead of alleging some of the topics just mentioned, to advance,

as a motive for repealing a penal statute, certain doctrines of phrenological science, and were to say, that inasmuch as the murderer and the thief are the pitiable victims of an unhappy cerebral malformation, and in depriving their fellows of life or chattels do but yield to an organic necessity, springing from a certain too-much-bloated inch of brain—therefore, to pursue crime by punishment is only to add cruelty to misfortune;—we say, in such a case, the improper argument would be overruled. Or, instead of the phrenologist, let it be supposed that a stanch and consistent disciple of the modern “Philosophy of the Human Mind” announces to his peers the now demonstrated fact, “That virtue and vice are mere relations—absolute nonentities, except just so far as they are thought of and perceived by other minds; and not more real or positive than the most recondite properties of a triangle.”* Let him thence argue that, to inflict the pains of death upon an unfortunate being, who (in consequence of a volition in itself *purely contingent*) has given rise to the existence of some such relative notion in the minds of other men, would be an inhumanity, equally barbarous and unscientific.

Or, to come nearer to our subject, we may imagine some such speculative senator to oppose a penal enactment, on the ground of philosophical fatalism, averring that, as “all things are as they must be,” human responsibility is a fable, virtue and vice empty names, government and law the trickery of kings, as religion is of

* Brown's Lectures, 73 and 74, especially pp. 595 and 596, vol. iii. Brown must not, however, be confounded with the enemies of religion and virtue. But his preposterous theory of morals affords striking illustration of the assertion, That intellectual philosophy is yet in its infancy.

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If the doctrine were true it were well applied

priests. But, in any such supposed instance of learned quackery or philosophical impertinence, not a moment's indulgence would be granted, in a senate, to the man of theory: all ears would be stopped, or his voice drowned in outcries of contempt. Nor would this impatience spring so much from the belief that the argument was sophistical, and the theory baseless, as from the feeling that, whether true or false, questions of this order belong not to *senators*, but to *philosophers*. Every man to his business; and whenever men have long occupied a position where extensive experience has authenticated certain modes of procedure, and where great, many, and substantial benefits have been obtained, they are not to be thence removed, or to be driven from their ancient inheritance of known advantages, by the mere demonstrations of pretended science. If an abstruse dogma be indeed well founded, it will in time vanquish to itself the convictions of mankind, and will then properly come in to regulate the conduct of life, when all men have confessed its right to do so.

But there is a bar to the interference of abstruse dogmas with common interests, more determinate than the preceding. Let fatalism in its most perfect form *

* "Regardez-y de près, et vous verrez que le mot liberté est un mot vide de sens; qu'il n'y a point, et qu'il ne peut y avoir d'êtres libres. . . . Le motif nous est toujours extérieur, étranger attaché ou par une nature, ou par une cause quelconque, qui n'est pas nous. . . . Mais s'il n'y a point de liberté, il n'y a point d'action qui mérite la louange ou le blâme; il n'y a ni vice, ni vertu, rien dont il faille récompenser ou châtier. . . . Il n'y a qu'une sorte de causes à proprement parler; ce sont les causes physiques. Il n'y a qu'une sorte de nécessité, c'est la même pour tous les êtres." —DIDEROT, as quoted in the First Dissertation prefixed to the Ency. Brit. 7th edit.—If indeed there be neither vice nor virtue, and nothing which

but it was in application in the case Ergo sententia

I will mention viz, none

be assumed as the mooted question,—a question about to be peremptorily decided. Now, on the supposition that the doctrine is disproved, exploded, and for ever cast out of the minds of men, what (except, indeed, that the world would be exorcised of a demon lie) what is the practical result? Absolutely none; the product of the controversy in that case is just—zero. Or if this *nothing* must indeed be attenuated in a length of words, it comes to this: That the course of nature *is* what it seems to be; that the actions of men *are* what they have ever been thought; that the common sense of mankind is in truth, as it has always been supposed, a reasonable guide; and that the position of man in the present state is not “whimsical,” “absurd,” “contradictory,” “preposterous,” “frightful,” but altogether explicable and consistent. By such a determination of the controversy, all things, we say, would be left as previously they were; nothing altered, nothing amended, nothing superadded. Nor is it as in those branches of science where, even if positive and practical results are not obtained, some new and agreeable objects are discovered, or some region of delightful contemplation opened to the mind, or certain demonstrable relations set forth, for the exercise of its powers of abstraction. Nothing like this takes place when fatalism is disproved;

deserves praise or blame, it is certain, not merely that the conduct of mankind throughout one large department of its ordinary proceedings is enormously absurd, but also that *the constitution of human nature* is founded upon error; an error which this true, and *only true*, philosophy exposes. Now it is this pretence to convict the sentiments, conduct, and constitution of mankind of illusiveness and absurdity, which affords the ground of comparison between itself and every other science, and which convicts itself of falseness.

and therefore, if *this* issue be anticipated, the entire controversy may as well be at once dismissed from the precincts of common life and of ordinary interests; inasmuch as the question, when *thus determined*, resolves itself into a simple nonentity.

But let the alternative be taken, and let it be supposed that this fatalism is so convincingly demonstrated, that no way of escape from the dire doctrine can at all be discovered;—then, and in that case, its practical influence might be rejected as completely and effectively as if it had been disproved. Fatalism (by the supposition) has been established by a demonstrative, or, at least, an irrefragable course of reasoning; and therefore takes its place along with the truths of other exact sciences, and should maintain sociality with them;—at least not stand alone, repugnant to all, and frowned upon by all. Yet, as it will appear, this must be the fact; and its insulation and oppugnancy will be as great on the side of the absolute principles of mathematical science, as on the part of physical and experimental philosophy, where certainty rises not so high.

To prove our assertion, we say that a *presumption* exists that the material world is so constituted as to fall in with the prosperous condition of the moral world; or, in other words, that such a harmony prevails throughout the system of nature, material and intellectual, as shall make it *invariably true* that each discovery of the actual constitution of the one shall, directly or indirectly, promote the well-being of the other.

We say a *presumption* of this kind exists. But is it supported by facts? Does the general suffrage of phi-

losophy—does the gross result of mathematical and physical science—of those sciences which, resting upon demonstration or conclusive experiment, are not to be trifled with—authenticate, or does it invalidate, the supposition? Does it go to favor the belief that the system of nature is one vast contrariety, inimical to man, and far better unknown than explored? or does it corroborate our theorem, that the world, having been put together by a Beneficent Power, is so framed as to adjust itself to the comfort and welfare of man, and *precisely in proportion as its laws and movements are understood by him?** The answer need not be formally given, nor the evidence in detail be recounted. Or is it the fact that, though his ready ingenuity turns to his particular advantage some few favorable accidents of the material world, yet, that no *general* correspondence between him and it can be traced? It were superfluous to affirm that the reverse is the truth, and that human ingenuity is wholly occupied in keeping pace with those wealth-giving instructions which philosophy every day hands over to her sister arts. Man invariably receives, as well from the surface of nature, as from her depths, articulate invitations to employ his inventive faculty for extending his command over her movements, and always for his own benefit. His condition, as a reasoning and active being, in this system, is by no means to be likened to that of a shipwrecked crew, cast upon a desolate island, who, impelled by necessity, are fain to convert the rudest and most improper and unfitting fragments of things to the purposes of art, for

* See note F.

supplying the primary wants of life; and who (if the phrase may be excused) exist from day to day *by shifts*. But rather his circumstances in the abode in which Beneficence has placed him, might be resembled to the case of a company of untaught savages, who, drifting across the seas in their canoe, set foot on a shore, where they find a deserted city and vacated palaces. At first their rude ignorance is astounded by the various works and products of mechanic and elegant art;—they gaze in idle amazement upon implements, machineries, decorations, and luxurious contrivances: and they misname and misuse all things. But after a while, the dormant faculty of reason is quickened by observation: tentatives are made, and every day is gladdened by a new discovery of the end and intention of this or the other article, or implement. Every accession to their knowledge turns out to be a contribution to their comforts or advantages; and this for the simple reason, that all things were designed and constructed for the benefit and accommodation of just such beings as these are, who now are learning the use of them. At length, when knowledge has reached its completion, it is confessed, that within this city there is nothing *rude*, *fortuitous*, or *chaotic*; but that all bears directly or remotely upon the welfare of those who have become its occupants.

Such is the tenor of the evidence given by the demonstrable and physical sciences, in support of the presumption (now no longer a mere presumption) that man, as an inventive and active being, is placed in the centre of the harmonies of the material universe; so

that it shall always, and by the very necessity of nature, be true, that knowledge is his friend. And while he learns this great lesson, he derives from it the means of detecting the mischiefs and fallacies of false philosophy. GENUINE SCIENCE, he well knows, approaches him always as a kind and beneficent instructress:—she has ever some boon in her hand:—she aids and comforts her pupil; she walks on *with him* in the path of improvement; accelerates his pace; stimulates his energies; and calls him still on and on towards higher ground.

But let it for a moment be granted, that certain metaphysical doctrines which convict the common sense and moral sentiments of mankind of absurdity, and which profess to abstain from urging home upon the vulgar their practical consequences, only by a gracious indulgence towards certain useful delusions, and necessary infatuations;—let it, we say, be supposed, that these doctrines are established by abstract reasoning of the most peremptory sort. In that case, the human mind would be placed between two oppugnant demonstrations. On the one side it looks upon the inathematical and experimental sciences, which are all, in their thousand forms, of a friendly and auxiliary character—which smile upon human affairs and human activities. And, on the other side, it sees the single gloomy metaphysical demonstration, whose first salutation, when it encounters human nature, is—Fool and slave! which instructs only to baffle and to astound, and to sicken the reasoning faculty, and to create a contempt of man and of the universe. And it is found,

that while it is the auspicious property of natural philosophy to diffuse itself safely and kindly, and, like a fountain of healing water, from its sources in colleges and seats of learning, to flow out among the multitude, as a pure blessing;—this other science, this abstract demonstration, is (by the confession of those who darkly divulge it) a dire mystery, an éoteric truth, fit only for sages, and one which it is wise to hide from the populace. In fact, it proves itself, when it comes among the vulgar, to be susceptible of no interpretation that is not pernicious. It is a philosophy which, by no ingenuity, by no refinements, can safely be broken up into morsels for distribution among the people.*

How, then, shall a choice be made between the two demonstrated, but incompatible philosophies? How, but by an indignant rejection of the dark and hostile science, as a sophism, even though to prove it such were impossible? This doctrine, we say, even though it could not be disproved, would be overwhelmed, silenced, and scouted, by the concurrent suffrages of all other sciences. It is contradicted by the number or quantity of proofs; and surpassed in the *quality* of its evidence: it may then properly be driven home to the cavern whence first it issued, and for ever forbidden to approach the precincts of humanity, or to infect the atmosphere of knowledge, action, and virtue. In a word, the question of necessity may be pronounced as **NOTHING TO HUMAN NATURE**; for if it be decided in the manner that is favorable to ordinary notions, it merges in a void—

* See note G.

what
proof

disappears, and becomes the most nugatory and idle of all learned trifles. But if determined in the other manner, then it assumes an aspect which places it in contrariety to every other science—demonstrable and experimental; and therefore may be spurned as a lie, because it speaks as an enemy.

SECTION III.

WE come to our second supposition—namely, that the question of liberty and necessity is important to THEOLOGY and CHRISTIAN DOCTRINE.

All venerable usages, and all venerable notions, backed by the very cordial acquiescence of atheists and infidels, answer in the affirmative; and agree in acknowledging that the controversy involves the very existence of religion. But does common sense authenticate the same decision? Does the analogy of the *real sciences* approve it?* Will the sounder views and better feelings of a future and happier era of Christianity consent to it? We venture to give the negative to these interrogations; and are bold, moreover, to predict, that the very next race of divines, our own sons and successors, will reject as a sheer absurdity, and as a preposterous pedantry; that practice and opinion, on this subject, which has stood sanctioned by the approval of all theologians, and all philosophers, of all ages!

* See note H.

The history of the connection between religion and metaphysical science might be very profitably pursued.* But volumes would not suffice for the theme. The *natural history* of that fatal alliance might be set forth within much narrower limits; and would, indeed, resolve itself into a few well-known facts, or usages of the human mind. It is common to human nature (we cannot here stay to inquire why) to throw itself off from the familiar ground of proximate and intelligible causes, and to seek such as are abstruse, difficult, and ultimate, whenever it is agitated by powerful emotions. We have in this fact one of the sources of superstition; and as it is in a sense true, that fear is the mother of the gods, so, in a sense, is it also true that anxiety, despondency, and the impatience of pain and sorrow, are teachers of metaphysics. It may be doubted whether certain profound speculations would at all have suggested themselves to the human mind, if life had been a course of equable prosperity. It may be questioned, whether the inhabitants of worlds unvisited by evil, how large soever their intelligence may be, have thought of asking, What is virtue?—or, What is the liberty of a moral agent?

The conflicts of hope and fear in the heart, and the assaults that are made upon hope by the scepticism or mockery of those around us, impel us naturally (but unwisely) to throw up the good and proper evidence which, though simple, and intelligible, and sufficient, does not open to the mind a depth profound enough to

* See note I.

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give room for the mighty tossings of the soul in its hour of distress.—The only testimony or proof that is *strictly applicable* to the point in question, is thoughtlessly rejected; and in an evil moment we transgress the limits of safety and of comfort, and pass from the φυσικα to the μεταφυσικα. When this unhappy error has been committed, two courses offer themselves; the one is to beat up and down through the regions of night whereupon we have entered, until we find, or fancy that we have found, solid footing, and discern a glimmering of light. The other course is, by a buoyant effort of good sense, to spring up at once from the abyss, and effect our return to the trodden and familiar surface of things.

The process is a frequent and familiar one, which leads the mind to reason on *important occasions* in a manner which it shuns as absurd in parallel instances of a trivial sort. The man who loses his footing in the street, and besmears a new suit with mud, makes mirth of the simple accident. But if, when he is on his way to accomplish some important purpose, to make a fortune, or to rescue one, he falls and breaks a limb, and, as the consequence, irretrievably forfeits the only auspicious moment of his life, he then looks at the *philosophy* of the mishap; and, as he lies on his couch, meditates and reasons—“of Fate and Providence,” and bewilders his best convictions, and, in the gloominess of his sorrow, persuades himself that there is no heavenly superintendence of human affairs—that chance is mistress of the world; and at length concludes, that forethought, prudence, and activity, not less than faith and piety, are a specious folly. He resolves, therefore,

henceforward to pursue nothing beyond the sensualities of an hour. Nevertheless, this same man, whom calamity has taught to be a metaphysician, adheres still, on all trivial occasions, to the maxims of vulgar good sense; his philosophical principles he takes up and lays down, according to the magnitude or insignificance of the business in hand, and is not consistently sage or simple through the course of a single hour. To avoid the destined track of a bullet that is whizzing through the air, he would deem a folly; and yet flinches from a splash of dirt! But should he not remember, that the very same awful fate that rules the flight of leaden balls, presides, not less arbitrarily, over the whirling of straws, the drifting of dust, and the projectile curves of mud?

It is just conceivable, or may at least be imagined, for the sake of an illustration, that a corporation, college, or company, possessed by charter of great prerogatives, extensive rights, and vast wealth, might, if vehemently urged to defend its monopoly or its privilege against the envy and cupidity of the community, be seduced so far from the path of common sense, as, instead of insisting pertinaciously upon the intelligible evidence of the antiquity and genuineness of its charter, and, instead of establishing the fact of that remote transaction, which lawfully invested its ancestors or predecessors with these disputed rights, to join issue with its opponents on some such physical question, as that of the possible perpetuity of material substances, like paper or parchment, from age to age; or on that of the actual existence of any generations of men antecedent to the present; or upon that of the abstract communicableness

of rights from person to person. Many such whimsical doubts may be supposed to take place of the simple business-like questions—Is the charter valid?—Has it been truly interpreted?—Is it lawfully put in operation? Yet these, it is manifest, are the only questions in which the privileged parties have any *peculiar concern*; for those higher and abstruse difficulties belong not in any specific manner to the college or corporation, but are either absolutely futile, or must be held to supersede and invalidate the whole course of human affairs.*

An instance very nearly analogous to that of the connection between religion and metaphysical science, has, in modern times, been actually obtruded on the world. The portentous spectacle has been exhibited on the theatre of nations, of a people, when convulsed by political revolutions, and while agitated by the furious passions of revenge, pride, and rapacity, and while eagerly contending for the partition of rights and possessions, to forget the urgent considerations of national prosperity and public safety, and to plunge headlong into the abyss of those unfathomable speculations that affect the very existence of man as a social being. So that the frenzied multitude, instead of asking—How best shall we be governed?—have become infected with a metaphysic madness, which has rendered them incapable of reasonable submission to any government, excepting that of brute force and terror.†

* See note K.

† The *American* revolution involved no metaphysical problems; and it produced no reign of terror, nor did it end in a military dictatorship.



And thus, too, it has happened, that the momentous interests of the future life, as set forth by Christianity, because they profoundly move the soul, and because, by their interference with ungoverned passions, they excite hostility, lead both the defenders and the impugn-ers of a documentary religion aside from the only per-tinent inquiry—Are the facts duly established, accord-ing to the ordinary maxims of testimony, and belief?—while they discuss controversies, to which religion is related only in common with the most familiar move-ments of social life. Let philosophers (or sophists) deny, if they please, the existence of a material world. Why should the teachers of Christianity, rather than any other class of men, rush forward to oppose the pe-dantic whim? If that denial has in fact any meaning at all, or if it carries any inference which men ought to listen to, then should lawyers leave their courts, as well as divines their pulpits, and merchants their markets, and physicians their hospitals, to join in the fray. If *any* persons are interested in this abstruse quarrel, *all* are so alike—demonstrably interested in one and the same degree. Or let philosophers or sophists turn about and deny the existence, not of the material world, but of the intellectual and moral.* All men, in this instance, as well as in the other, and all human inter-ests, duties, functions, hopes, and fears, are either alike concerned in the refutation of the learned nonsense, or may alike, in their several circles of practical activity, look upon it with utter contempt. Or again, let philo-

* See note L.

which, by their very essence, are equally true of all things, or false of all, is the same sort of proceeding, as if a mathematician, after demonstrating the properties of the triangle, were to apply his doctrine only to such triangles as are formed by the rafters and joists of a roof.

If Christianity asks credit on any principle that is not recognised by the customary proceedings of mankind; or if it demands any motives or course of conduct, for justifying which we must appeal to abstruse theorems; then it must, of course, be separated from the fellowship of human affairs, and left to contend as it can with every hostile abstraction. But, if none of these things can be said, is it not most preposterous to involve it, at all with such abstractions? And assuredly it need not be implicated with the question of necessity; for this, as we have already said, if determined in *one* manner, is a perfect *evaporation*, leaving no residuum: or if determined in the other, even though by a seeming demonstration, ought to be spurned in its assault upon religion; *first*, because it must arrest the entire movements of the moral and intellectual world, if it would impede any one class of these movements; and *secondly*, because, if it does so interfere, or claims a right to disturb an existing and salutary order of actions and sentiments, it stands as a solitary exception among the sciences, all of which, both abstract and experimental, are found, when brought to their perfection, and when purified from empiricism, to be of a benign character, and actually come in to promote and facilitate those operations which the uninstructed common sense or the instinctive ingenuity

of men had previously set in movement.* The probability, therefore, that this pretended demonstration is a mere sophism, favored by the abstruseness of the subject, and the vagueness of its signs, is as a thousand to one—or much more than a thousand. The teachers of Christianity should, then, barely cast upon doctrines of this class a smile of contempt; and hold on their way, as men whose business stands upon the intelligible ground of facts and experiment.

The more delicate, but not more obscure question, now meets us, whether the abstractions of pure metaphysics can at all avail, or ought to be had recourse to, for the purpose of determining those controversies which arise *among Christians*, in consequence of a different interpretation of certain portions of the Document of Faith.

Whoever should undertake to answer this question in the negative, might, if he chose to argue the point by an appeal to facts, find abundant materials fitted to his purpose in the whole course of church history, commencing with the Platonic fathers, and ending with the last writers on both sides of the Calvinistic controversy. Nothing, we say, would be more easy than, in this way, to throw immense disgrace upon the venerable practice of converting Christianity into a quibble of metaphysics.

But the fruitlessness and inexpediency of this method of conducting Biblical controversy might be forcibly argued alone from the instance of the "Inquiry concerning Freedom of Will." Its acknowledged supe-

* See note N.

riority to any theological work with which it might properly be compared—a superiority confessed, as well by philosophers as divines—and its exemption from the vulgar sins of polemical literature, point it out as an instance of the most unexceptionable sort. Yet, what has been the result? A real and signal service, as we have already granted, has been rendered by it to the cause of important truths; but the service has accrued indirectly; while it has utterly failed to bring the controversy between Calvinists and Arminians to a satisfactory issue.—The *metaphysics* of Edwards demolished the *metaphysics* of Whitby. This was natural and fit; for the *philosophy* of Arminianism could no more endure a rigid analysis, than a citadel of rooks could maintain its integrity against a volley of musketry. And, moreover, the metaphysics of Edwards imposed a degree of respect upon the flippancy of philosophers. But then (not again to insist upon the fact, that the “Inquiry” has become almost the text book of infidelity) it has not in any sensible degree brought home the abstract argument to the purely theological difficulty. It has left things where they were, in this respect, only with the disadvantage of suggesting a tacit conviction—that, what *Edwards* could not effect, *can never be effected*. The apparently incompatible propositions may therefore be affirmed, that, while our author, as the champion of Calvinism, has achieved a victory, and driven his antagonists from the ground they had unwisely occupied; he has confirmed and perpetuated the religious difference, by the mere fact of having failed in his attempt to compose it. Is it, then, at all to be

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desired that a second philosophic Calvinist* should undertake the task of leading Arminians on the path of scientific demonstration, to a cordial acquiescence in the plain meaning of certain portions of the Scriptures?—We think not.

Nevertheless, it ought not to be regarded as an improbable event that *pious* Calvinists should at length meet *pious* Arminians on common ground; and that the difference between the two parties should for ever be merged in a Biblical doctrine.

But an accordance so happy will assuredly be the result, not of the perfection of metaphysical theology, but of a better understanding of the special nature and unique constitution of the Document of Faith, which, unlike any other writing, is at once simply the work of human minds; and not less absolutely the work of the Divine Mind.† As a human work—as a collection of ancient treatises, letters, and histories, composed by almost as many authors as there are separate pieces, it is plainly liable to all the ordinary conditions of other ancient literature; and not merely to the *critical*, but to the *logical* conditions that belong to the products of the human mind; and of course when categorically interrogated for its evidence, in relation to *certain abstract positions*, derived, *not from itself*, but from a variable theological science, will yield not a few apparent contrarieties. This would certainly be the case, even were the Bible the work of a single author.

* See note O.

† See note P.

But the Bible claims no respect at all as an authority in religion, unless it be received as, in the fullest sense, a Divine work. As such, it must have *its peculiar conditions*; and these (or the most important of them) spring from the fact, that the Scriptures contain true information, explicit or implied, concerning more systems of things than one, or more orders of causation than one. But then this information consists just of those portions, or sections, or segments, of these several systems, or of these series of causes, which contain practical inferences, important to the special process of restoring mankind to virtue. It will follow from this description of the heaven-descended canon of religious truth, that the harmony of the various portions will never come within the range of the methods of human science; for human science is drawn from *one system only*, and is *imperfect* and vague, even in relation to that one system.*

Illustrations are always faulty, and always liable to be perverted; yet may they serve a good purpose when advanced simply as such; and not urged as proofs or arguments. Let it then be supposed that, to a number of intelligent persons, instructed in nothing beyond the first elements of mathematical science, there were to be given—not a diagram or description, but some of the distinguishing, and some of the most recondite properties of the three conic sections—the ellipsis, the parabola, and the hyperbola; and that it were demanded of them, not only to find curves possessing precisely such

* See note Q.

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properties, but to find *one regular and simple figure* which should contain the three harmoniously upon its surface. Now it must be granted, as hypothetically *possible*, that some one of these persons, either by a happy accident, or by force of intelligence, might at length produce the cone, and demonstrate upon it the several properties of the theorem. But to make our illustration complete, it should be supposed that no such figure as a cone had ever actually been seen or thought of, by the persons to whom the problem is given. What then would be the probable event?—May we not assume it as likely, that each individual, attaching himself by preference to the properties of some one of the three propounded curves, and giving his attention almost exclusively to its peculiarities, and succeeding, perhaps, in the attempt to reconcile among themselves these separate conditions, would be inclined to impugn, as *necessarily false*, the processes by which his companions were finding the other two curves; and, being satisfied with the soundness of his own reasoning, would deem that of his friends absolutely irreconcilable with it. And so it must seem inevitably, until the one true harmonising figure is actually produced.

But how soon might a fierce controversy arise among the perplexed inquirers! How soon would there take place a separation of the partisans of the ellipsis, the parabola, and the hyperbola! The friends of the first of the curves would think themselves justified in denouncing the hyperbolists as extravagant heretics; while these, and *with equal reason*, would hold in contempt the timidity of the ellipsists. Meanwhile, the parabol-

ists, much admiring their own moderation, and not doubting that it was they who alone held the happy middle way upon which truth loves to walk, and hence believing themselves qualified to act as mediators between the extreme parties, would gravely say much that was very plausible, and exceedingly well intended; but would not in fact advance *even a single step* toward a true conciliation of the difference;—for this simple reason—that they are just as far as their companions from knowing the one actual principle of explanation.—The parabola may *seem*, but it is not in fact, or in any degree, a *reconciling truth* between the ellipsis and the hyperbola, for the ellipsis and the hyperbola are not at variance. But the controversy, though it tends to no satisfactory issue, is producing these two ill consequences (not to mention the excitement of bad feelings among friends,) namely, that those of the company whose temper was the most calm and sceptical, would be haunted by troublesome suspicions, that he who proposed the problem had made sport of the ignorance of all, by affirming things strictly paradoxical. And then the bystanders would almost certainly learn to treat the whole affair—the problem, its propounder, and the factions, with utter contempt. But we suppose that at this instant the propounder enters, and forthwith extinguishes the feud by the production of the cone! and all contrarieties are at once reconciled; all suspicions are dispelled; and eager dogmatists of all creeds are put to the blush!

To defend the propriety of this illustration in all its parts would be idle. It is enough if it explains the as-

sersion, that the Scriptures, *because true and divine*, and because that they propound separated parts, properties, or relations of systems not known, will for ever baffle the attempt to reduce their testimony within the completeness and rotundity of a human science. If it be so, it will follow, that metaphysical reasoning, how rigid and exact soever, is not to be looked to as the means of adjusting Biblical controversies. That it may *seem* for a while to do so, is granted; but the specious conciliation will either be a mere confounding of an antagonist by force of logical strength; or it will have been effected by *constraining* some portions of the scriptural evidence.

We conclude that the question of liberty and necessity, or of moral causation, is one in which Christianity has no *peculiar* interest, and from the determination of which it can neither derive permanent advantage, nor receive lasting damage.

SECTION IV.

WE proceed to inquire in what manner, and to what extent, the question of liberty and necessity belongs to the **PHYSIOLOGY OF THE HUMAN MIND.**

No one would affirm, or indeed could consistently imagine, that either the idealism of Berkeley, or the *non-causal* causation of Hume, or any similar doctrine, can properly occasion even the smallest difficulty or obstruction to the chemist who is discovering the affinities

of acids and alkalies, or resolving earths into their elements. Whether or not there be an external world, and whether or not it be put in movement by efficient causes, it remains true—that heat is evolved or absorbed in the process of a new combination;—that sulphuric acid will change a vegetable blue to red;—and that combustion goes on more rapidly in oxygen gas than in common air. These facts may be mere phenomena of the world of mind;* or real events in the world of matter;—they may result from efficient causes, or not so, *with perfect indifference* to the science of chemistry.

And, in like manner, is it a matter of absolute indifference to the naturalist, while informing himself of the internal structure of animals, or of their dispositions, faculties, and habits, in what way the systems of idealists, of materialists, of necessitarians, or of sceptics, are disposed of. The stomach, the brains, the bone, of the dog, the horse, and the camel, will continue just what they are, whether or not those animals are affirmed to be mere intellectual phantasms, or are allowed to be actual existences, and whether or not causation be “an empty illusion of the fancy,” or a connection of power between successive events. And not less independent of these speculative doctrines is the inquiry (for instance) concerning the internal process which fills up the interval of time, or which completes the connection between an impression on the senses of an animal, and the correspondent movement of his limbs. If it be asked, What takes place within the cerebral machine

* Principles of Human Knowledge.

when the hawk, from his motionless point in the sky, discerns his victim in the grass, and descends like lightning to the earth?—this *purely physical inquiry* has no more connection with the theories of metaphysicians, than subsists between those theories and any chemical or mechanical fact.

And, manifestly, the conditions of physical science are not altered by merely turning from one class of sentient beings to another;—from the lower to the higher order of animals, from zoophytes to reptiles, from quadrupeds to man. If, for example, a scientific inquiry relates to the anatomy of the visual organ; or to the mental processes of perception; or to the combinations of impressions from two or more of the senses; or to the laws and conditions of volition; or to the influence of animal appetites, or moral emotions; or to the operation of the reasoning faculty;—all these are *matters of fact*, belonging to the actual conformation of this or of that animal; and are as strictly *physical*, and as absolutely independent of metaphysical dogmas and abstract truths, as are the affinities of acids, and the crystallization of salts. There would, indeed, never have been occasion, even so much as to affirm this independence of physics and metaphysics, were it not that the immemorial practice of confounding the science of the human mind with pure abstractions, has filled both departments of intellectual philosophy with absurdity; and has detained both, to the present day, in a state of infancy.*

* See note R.



If it were asked—Of what is the dog or the horse capable? what may fairly be demanded of them in the way of service? or of what improvement may their native faculties be susceptible by means of education, by rewards, punishments, and instructions? These inquiries, simply physical as they are, must be resolved by observation and experiment; and cannot, even in the most remote manner, be affected by abstract doctrines of the sort that constitutes the greater part of what is termed the “science of mind.” Whether the intelligence and moral sensibilities of a certain species might be wrought upon by culture to a greater extent than has yet been attempted, or whether it has already reached its limit of improvement, is a question upon which not a single ray of light could be thrown, even by the most complete solution of the problems which fill the pages of writers on intellectual philosophy. The intellectual character and capacities of each order of conscious beings are matters of fact; as much so as the fusibility and malleability of a metal.

In a word, any sort of practical question, relating to the dispositions, constitutional motives, or proper treatment, of this or that species of animals, higher or lower, must be determined in the methods proper to physical science; and can neither be illustrated nor interfered with by those unchanging truths which draw not their materials from the world as it is. Thus, we not only *distinguish* the two sciences of physics and metaphysics; but affirm their absolute independence one of the other. And as no inference drawn from the former can impugn the demonstrations of the latter; so neither can

these demonstrations reach, or modify, the actual conformation of any of the families of the sentient world:— spite of metaphysics, lions, bears, antelopes, and men, will go on to feel and to act as always they have done. To suppose the contrary, were the same absurdity as to imagine that salts will henceforward crystallize in other angles than formerly, when it shall be proved that there is no such thing as efficient causation.

The end of physical science, is to discover, or lay bare, the actual constitution of its subject;—not to expunge or reject any of the facts belonging to the nature of that subject. And it should not be forgotten, that as, in investigations of this sort, the ultimate facts are already in our possession, no very important truth can be expected to result from even the most complete analysis of the phenomena. Science is little better than a learned amusement, when employed in analysing a mechanism, the powers of which are already familiarly known, and the conformation of which is unalterable.—This is very much the disadvantage of the entire circle of intellectual philosophy.

If the operation of motives in the human mind, or if the laws of human agency, be the subject of inquiry, our business is to explain, if we can, these familiar processes; not to deny any of their conditions. The science of human nature finds man a reasoning animal, and finds him master of his welfare (to a certain extent,) and finds him a moral and religious being, influenced by the anticipation of future events, and ruling his conduct by a reference to the opinion and conduct of other beings. These facts are to be denuded, if it be

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possible to denude them; but assuredly not to be rejected or overlooked. We may describe *how* the moral emotions work; but not affirm that there are no such influences. The less indulgence should be granted to the audacity of speculation in the region of mental philosophy, because, though its *sophisms* may dangerously pervert the common sense of mankind, its *truths* (except just so far as they explode such sophisms) have almost nothing to offer of practical instruction. And if this be true of the science in general, it is peculiarly so of that branch of it which treats of the process of volition;—no one would be so fantastic as to expect that even the most complete anatomy of the voluntary principle could, in its inferences, be so brought in contact with the minds of the mass of mankind, as either to lessen the violence of impetuous passions, or to enhance the vigor of virtuous emotions.—This truly is not the style of human nature:—man is not constituted to draw his reasons and motives from the theory of his own mental conformation: and if we would imagine an extreme instance of intellectual *hypochondriasis*, it must be the case of a philosopher, who, whenever he proposed to move, speak, or act, must first anxiously consider in what order to pull the strings of the intellectual machine.

We grant, indeed, that the philosophy of the agency of sentient and voluntary beings is a matter of rational curiosity. But it is nothing more; and of far less consequence to the welfare of man, than would be the discovery of a new chemical agent; or of a satellite to the planet Mars: for the one might facilitate three or four of the mechanic arts; and the other would give to the

navigator an additional celestial chronometer. But a perfect and true theory of volition must leave volition precisely what always it has been.

Moreover, physical science is distinguished from abstract science, both mathematical and metaphysical, in this important particular, that the processes of the latter are entirely dependent upon absolute precision in the use of the signs or terms employed;* so that the smallest inaccuracy disturbs the whole series of deductions, and falsifies the conclusion. Hence the confessed obscurity and uncertainty of intellectual philosophy, arising from the vagueness and variableness of language—the only signs it can employ. But the processes and results of *physical* science are happily exempt from any such disadvantage. For if a fact in the conformation of an organised body be ascertained—if it be *really known* to the discoverer, it may be expressed or described in a variety of modes; and may be spoken of in a copiousness of terms, more or less proper, until there shall be no danger of mistake on the part of the reader. It follows hence (when the philosophy of human nature is treated, as it ought, physically, not abstractedly) that that anxious and prudish nicety of language which belongs to metaphysical discussions, will be discarded with contempt. Whatever pretended fact in the philosophy of mind cannot be correctly communicated, except in one set of phrases, may safely be rejected as a subtilty, altogether insignificant to physical science. The modern chemical nomenclature, though it must be regarded

* See note S.

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as a highly important *instrument* for facilitating the diffusion of the science, and for giving simplicity and precision to the record of its discoveries, cannot be deemed an inseparable or indispensable means of making them known. The same facts might be correctly described in *any* colloquial medium; or might be conveyed to the minds of a people destitute of the erudition which makes our Greek and Latin terms intelligible to the English, French, and Germans. The same is true of physical facts of all kinds; but not of metaphysical truths, which are precisely—as their signs are.

The custom of considering the volitions and agency of man as a matter of abstract science, has favored the supposition, that volition is simple or uniform in its mode of springing up from the mind. But if the real world of sentient beings is looked at, it will at once be seen, both that each species has its peculiar conditions of the voluntary principle, and that volition in each species results, at different times, from very different internal processes. It would appear, then, to be the natural course to look out, first, for the simplest instances of volition; and then to ascend from them to such as are complex, and not so readily analysed. This order of investigation directs us to the inferior classes of the animal community; it being probable that, in narrowly observing instances of less complicated organisation, we shall become insensibly qualified to dissect that which is more so. For as we may fairly presume, the more complicated orders take up into their mental machinery the elements that have been singly developed in the lower ranks of existence. It is, indeed, alone on this

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presumption that we can avail ourselves at all of the fruits of observation, gathered from the movements and habits of inferior species. For it is only by a reference to our own consciousness, that we *interpret* such facts; and this interpretation presupposes the homogeneity of the elements of sentient existence. If a pure intelligence, or simply rational essence, wholly destitute of all appetite, emotion, imagination, were to descend into this world of hungry, thirsty, passionate, irascible, and pleasure-loving beings, it would find itself utterly at a loss in endeavoring to comprehend the movements which it witnessed. That is to say, having no participation of the elements of the animal and moral nature, it would want the glossary of mundane life, and possess no means of interpretation:—all it saw would be a riddle.

But this is not the case when man looks around him upon his fellows of inferior rank;—for, possessing as he does all the elements of animal and moral life, he discerns very few operations which he does not at once know how to translate into the language of his own nature; and he is thus qualified to philosophise, as well upon the mental conformation of birds and quadrupeds, as upon that of his own tribe. We say, he witnesses *very few* operations unintelligible to him; for there *are* movements carried on, especially by the more minute tribes, and those that are the most remote from himself, which nothing in his own nature enables him to understand:—they are facts *not interpretable* by consciousness, and are accordingly designated by a term which has no other significance than that of standing for *a class of facts not understood*. Whatever principle of agency

in the animal world is no element of the *human* constitution, is called INSTINCT.* These inexplicable facts, it is evident, can afford us no aid in the business of analysing the operations of the human mind; and are therefore to be excluded from the process of induction.

The inferior orders of conscious beings offer to our notice two or three distinguishable elements of volition, together with the rude commencements of another, for the full developement of which we must look to the higher nature of man.

When the huffing gusts of November assail the embrowned forests, it is the amusement of an idle moment to watch the course of a single leaf, torn from a topmost bough, and to follow its flight, hurried by eddies of wind into the fields of upper air—there to perform giddy circuits—the sport of chance; until, borne away by the general current, it travels west or east, and slowly descends to its destined resting-place on a distant spot. A movement not altogether unlike that of the severed leaf, driven of the winds, is displayed by the wanton flight of the swallow on a tranquil summer's evening: and if the atmosphere were not seen to be motionless, one might well imagine that the bird, like the leaf, was passively yielding to every fitful blast. But let the little aeronaut be brought to the earth, and his structure examined; and it will become manifest that his movements have sprung from other than external impulses. We first notice the mechanical apparatus by which the living machine is held buoyant in the air; and then, by

* See note T.

dissection, follow the silvery threads which connect the merely mechanical parts—the solid frame-work—and the contractile fibres, with the head; whereon, also, are set those instruments which bring the animal into intelligent contact with distant objects around it. Here, then, are the *means* of movement; and the means, also, of keeping this movement in correspondence with place and circumstance of the external world. But we still have to seek the *motive*, or impulse of movement.

Let, then, the palpitating bosom be reft, and we shall find the gastric sack, with its solvent juices and its peristaltic action; and we perceive that it is gorged with insects, in every progressive stage of dissolution and of assimilation to the solid and fluid matter of the animal. We need not doubt, then, that the acrid chemical agent, which is accomplishing this conversion of the substance of one animal into that of another, acts also, when not so occupied, in some such way upon the sack itself as to excite an uneasiness, which being conveyed to the centre of consciousness, and being there conjoined with familiar impressions from the external world, and meeting there, also, the springs of muscular irritability, give impulse to the machine in the direction towards that external object, the image of which already exists in the memory conjoined with the sensations of gratified appetite. Now, in this dissection of the machine of animal life, the relation of parts, and their interaction for the production of a single result, are perfectly intelligible;—as much so as is the mechanism of a watch. But in the construction both of the watch and of the bird, there are certain ultimate connections which lie beyond

our ken, and which can be known only in their products. In the watch, these inscrutable facts are—the principle of elasticity in the springs, and the *vis inertiae* of the balance-wheel. That is to say, the two *last causes* in the machine can be traced no further than to a certain expansive property of steel, and to the universal law of momentum. In the machinery of the bird, the unknown or ultimate facts, though more in number, are not in themselves more recondite or obscure; but just as much so—neither more nor less. They are such as these; the chemical power of the several fluids; the principle of muscular contraction; the principle of assimilation and growth; and the whole cerebral apparatus of sensation, and the interaction of sensations from without and within, producing locomotion, or muscular action. That is to say, as in the watch, so in the bird, the arrangement of parts and functions is intelligible, but the *powers* are unknown.

And yet, notwithstanding our hopeless ignorance, in *both instances*, of the ultimate connections, we may safely and certainly reason concerning the proximate and intelligible parts of the contrivance; and may, without being supposed to understand what in all cases lies beyond human knowledge, affirm that we comprehend the mechanism both of the watch and of the bird. The theory of the regular movement of wheels and indicators is truly given when all the parts that connect the elasticity of the two springs with the *vis inertiae* of the balance-wheel are described. And in like manner, the theory of action in the animal is truly given, when the several correspondences between the stomach, wings,

eyes, ears, and brain of the bird, are enumerated.

But this one account of the movements of the animal machine does not explain all the facts observable in the wanton flight of a swallow; for, beside some other movements, which, like those already mentioned, are easily traced home to certain functions or organs, as those were traced to the stomach, there are actions not to be in any such manner explained. It by no means appears that the little unlicensed venator invariably directs his flight towards the nearest or the best-fed gnat at any moment within his circle of vision; nor that he is diverted from the pursuit of his victim, only by this or that assignable object of alarm, or of social attraction: his aerial gambols are too various, free, and erratic, to be all assigned to impulses of this order. It may be well, however, to turn to another subject in search of this other law of animal agency.

The young horse that, free a-field, makes large orbits over the level mead, is neither hunting his prey, nor flying before an enemy; yet does he put forth his powers of speed as if death were behind him, or life before. He stops on his course; snuffs the gale; leaps and plunges; snorts, and again darts onward;—in pursuit of nothing! Here our consciousness (unless octogenarians) aids us to interpret the seemingly causeless activity. To the plenitude of muscular power, and to the full tide of animal spirits, belongs an appetite asking for movement and sport; and this same desire, combined with other impulses, or taking its turn with them, in colts, kittens, children, and boyish adults, is the cause of a great part

of all the hurry and the change which keep the world from stagnation.—But again; if the gay activity of the young horse be narrowly observed, a belief will be suggested that his course from side to side of his pasture—his capricious pauses, and his starts, obey yet some other internal law. He bites the grass a moment,—raises his head,—seems to ponder some freakish device, and, like the lightning, springs from his place, and is hardly to be followed by the eye. May it not be surmised—and if the manners of animals of all classes are watched, must it not be believed, that within the brain of the animal, (if indeed the brain be the seat of consciousness) as well as within the brains of men, an incessant movement is going on;* or a stream of recollected sensations, fortuitously connected one with another, is flowing perpetually? Then these recovered emotions, or sensations, meeting, each moment, either with impressions from the senses, or with desires from the several viscera of life, form infinitely varied combinations of action. It is as if this under-current of thought had been included in the mental structure of the animal for the very purpose of breaking up that uniform, and mechanical, and *calculable* succession of movements, which must needs have resulted from the dull influence of three or four simply reasonable motives of action. By the means of this exquisite contrivance, which diversifies, indefinitely, the agency of the animal—the animal moves over a far larger circle of activity—meets with a thousand times more new occasions, and comes

* See note U.

in contact with many more means of enjoyment, than could happen, if he were the mere creature of his appetites and desires.

In reference to these primary causes of action, namely, the desires of animal life, and the irascible, amatory, and cautionary emotions that spring from them; and the love of muscular action; and the suggestions of the perpetual current of thought; it is to be noted, that muscular movement takes place, in the strictest sense, spontaneously; or, shall we say, simultaneously with its cause? The cause and effect are not divided by an interval of deliberation; there is no "determining to determine," nor "willing to will," nor balancing of reasons. To such instances the metaphysical analysis of volition, as consisting of a series of mental operations, is utterly inapplicable. We derive the notion of such an analysis from a class of volitions essentially differing from animal agency: and it is a gross violation of the rules of science to extend it to cases with which it has no affinity.

But the lower classes of the sentient system offer also to our observation (in its ruder forms, at least) that complex order of volitions which, in the adult and cultured human subject, often supersedes those of a simple and elementary kind. Let us turn from the young horse a-field, to the old horse in the stable; and we shall find, in his behavior, many instances of an agency which implies *a mental process of inference*; or, the connecting of event with event, and the deduction of a motive therefrom: or, in other words, we shall find him reasoning to a certain extent; and acting in a manner which



could never be accounted for on any of the principles already mentioned. The hackney who, times innumerable, has been saddled or collared, when he catches the footstep of his groom approaching the stable, awakes from the lethargy in which perhaps he had been standing in front of his rack: and if this lord of his destinies appears booted and spurred, and lays a hand upon the saddle and bridle, the provident animal, not doubting that he is to be led from his stall, to which he may not soon return, begins, without loss of time, and with the utmost possible assiduity, to grind and swallow as large a stock of the material before him as his powers of mastication and deglutition will admit of. Now we must suppose, in this instance, a mental process in some degree complex, or ratiocinative, and one which differs essentially from that mere association of memory and perception which is shewn when the same animal swerves from his track, and turns aside toward the inn where heretofore he has been stabled and fed.

Yet is this faculty of mental combination very limited in the horse; so much so, that (a few extraordinary instances excepted)* he scarcely at all conforms himself *reasonably* to the new occasions that arise in the course of the service he renders to man. Let him but entangle his fore leg in the strap or chain of his head-stall, and he will either stand so shackled until he is lamed, or will plunge and kick until his strength is spent; although, if he were capable of calmly considering the nature of his embarrassment, he might, by the simplest

* See note W.

movement, get himself free from all difficulty. The horse, therefore, must be cared for, as an infant, by his master; and under the circumstances of the artificial mode of life which he leads as the servant of man, thwarts his own real welfare in a hundred instances, because he cannot comprehend that connection of cause and effect on which it depends. He cannot compare; or simultaneously entertain different ideas; or only in a very low degree.

Nevertheless, the horse possesses enough of intellectual faculty and sentiment to be dealt with advantageously, in the method of praise and blame, of punishment and reward;* and he actually takes rank in the world of moral agents, inasmuch as he is sensible to emotions of shame and honor; and is capable also, in a small degree, of governing one impulse by another. A horse may, therefore, be managed by means which it would be utterly absurd to address to a hen, a goose, a pig, or an ass. The agency of one class of animals is found to differ from that of another, by all the amount of *an additional element*. And it would be highly unphilosophical to reason concerning the two as if they were one and the same. And here the reader must again be reminded that, whether or not we are able to push our analysis of these elements as far as we might desire, we must concede the fact of a diversity in the mental conformation of different animals, giving to one species a much wider range of action than is occupied by another; and the reader, while he grants this fact, will easily

* See note X.

•divine the application that may be made of it to the human race.

We ascend many degrees on the scale of reason, of moral sensibility, and of complex volition, when we turn from the horse to the dog. This intelligent and sensitive animal, associated, not by mere accident, with man, but made for his companionship, and not unworthily called his friend, may be said to stand as an anomalous instance in the system of sentient beings; inasmuch as, while in other species (perhaps *every* other species) there exists a manifest correspondence, or *functional equality*,* between the mechanical structure of the animal and his mental capacity; so that any supposed addition to his muscular implements would be useless, without more intelligence than he actually possesses:—the dog has more *mind* than *instrument*. His power of reason and his sensibility, on a thousand occasions, and very remarkably, go beyond the range of his mechanical apparatus. The dog is, in this sense, a *needy* animal; and he is the only one so put to difficulty. He could effect much more than he does, both for himself and his master, if his legs and paws were capable of a greater diversity of movements: yet, perhaps, we ought rather to consider him as an *animal over-rich* in sense, than as an *intelligence* poor in means.

A good test for discovering the elements of the mental conformation of any order of beings; is afforded, *first*, by the familiar and unquestionable facts of the *educational treatment* which common experience proves to be applicable to it; and *then*, by the emotions or sen-

* See note Y.

timents which are excited in our minds by its qualities or dispositions. In this method we employ, as it were, a chemical agent for bringing to light a concealed ingredient. The dog is the subject of abundantly more *education*, and is the object of far more *sentiment* than the horse; not arbitrarily or accidentally so; but because he possesses more intellectual faculty, and more sensibility. His senses are eminently acute; his memory is retentive and exact; his passive power of acquiring habits is great; and, to complete his mental endowments, he is able, in a considerable degree, to hold in combination more than two or three connected ideas; and among them to select the proper inference from the antecedents. Thus qualified, he remembers his master's usages; comprehends his master's operations; and acts his part in accomplishing his master's intentions. Then, as a moral being, he is susceptible of so lively and pertinacious an attachment to individuals; he has so much sense of duty and of honor; and is capable of so intense a wretchedness under the sense of ill conduct and merited displeasure—that he becomes properly the object of correlative sentiments of affection, complacency, or displeasure, in the human mind. The dog, in virtue of his personal character, or his individual dispositions, is, apart from all sophistication or extravagance, regarded with feelings which it would be as unreasonable to restrain, when so called forth, as to bestow in the same degree upon any other species of domestic animals.

And yet the dog is limited in his range of mental faculty and of sensibility; and, in comparing his powers

with those of man, we discern the more clearly the foundation of that different treatment of which the higher nature is the subject;—and discern, too, the ineffable absurdity of the metaphysical doctrine which assumes the agency of men, of brutes, and of machines, to be one and the same thing. The dog, not endowed with that inexplicable faculty which prompts the beaver to construct for himself a hut; or the white ant to erect a cathedral of mud; or the rook to weave for his family an aerial tabernacle,—has no *rational* power of attaining a similar result. If deprived of his comfortable kennel, he will nestle in a corner, or edge himself into a rick; but never attempts (though loose materials of all sorts are lying about) to construct a house. He feels that a wall, or fence, or stack, gives him protection from rain and wind; but he does not separate this *common quality* of the wall, fence, or stack, from the particulars in which it is found; or think of it abstractedly; and therefore does not conceive of it as residing in a new combination of matter, to be assembled by himself. Or, to exhibit the same limitation of faculty under another condition. The dog may learn to take a penny to the shop, to deposit it on the counter, and, with significant gesture, to demand his roll. But the most laborious endeavors would, probably, fail to teach him the equity of the relation between two pence and two rolls, and three pence and three rolls. Nor, supposing that he had dropped one of the pieces of money on the way, would he draw for himself the inference, that he must, *therefore*, content himself with one roll the less. And yet a very young child would

perceive these relations, and deduce these inferences; or would, at least, understand them instantaneously, or as by a flash of intelligence, when explained to him.

The want, or, at least, the extreme limitation of the power of abstraction, and of comparison of complex relations, affects, in an essential manner, the moral constitution of these inferior species; even of the most intelligent of them. And the possession of such powers gives to man his responsibility, invests him with the anxious prerogative of being master of his destinies; and, in a word, transfers him from the present to a future system of retributive treatment.

But we must advance by degrees towards our conclusion. The more sensitive species of animals, especially the dog and the elephant, enter within the pale of the moral system, or stand at its threshold (just as, in virtue of their sagacity, they enter within the pale of the intellectual,) by their susceptibility of elementary emotions, which place them, to a certain extent, in communication with man, and render them the objects, individually, of *his* moral sensibilities. And the parallelism between the *intellectual* and the *moral* difference between man and the brute holds entire. The dog and the elephant will do any thing that comes within the range of association of ideas; or of the simplest connections of cause and effect:—but not more. And, in like manner, are they open to the keenest emotions of gratitude, shame, revenge. Yet do we soon touch the boundary of their moral capacities. The elephant has his direct emotions, and is retentive of them; but he does not abstract the quality which has so strongly af-

fects him from the act or person to which it belongs:—he is conscious of that difference in temper which distinguishes one of his keepers from another, and treats them both accordingly; but he forms no *separate idea* of goodness and malignity; much less compares such abstracted ideas with his own correlative emotions; and therefore he digests no complex notion of virtue and of vice. As the inevitable consequence of this deficiency of faculty, neither the dog nor the elephant cogitates upon *his own* dispositions, or personal character; or ever institutes a mental comparison between his own behavior or habitual temper, and any such notion of a moral quality. *Therefore*, neither dog nor elephant condemns or dislikes *himself*; much less conceives the abstract idea of a better disposition as an object of desire: and, therefore, never attempts the work of self-education, by repressing ill feelings, and favoring the better.

Accordingly, a self-originated reformation of manners is never looked for from the brute. He may indeed be amended in his dispositions by *external treatment*;—he may become more or less bland or tractable, in consequence of changes in his *constitution* or *diet*; but he never changes in consequence of a mental process, bringing two abstract qualities into comparison, and allowing the one to be chosen and followed, while the other is hated and avoided.—If it be asked, on what ground we infer these deficiencies of *internal structure* in the brute mind; we reply, that the internal defect may fairly be implied from the absence of the proper outward results of the supposed faculty. In following:

even the most sagacious animal through his movements in connection with new and artificial occasions, we catch him at fault, precisely for the want of the power of abstraction: the internal structure, though recondite, is as good as laid bare in such instances; and we cease to wonder, that a being so deficient should not provide for his welfare by artificial means.

And the very same deficiency necessitates his moral condition; and (knowing it) though we feel complacency or displacency towards the dog or the elephant, according to his dispositions, we neither assign to him the praise of virtue, in the one case, nor impute to him the blame of vice, in the other. The animal that does not observe proportions, nor use instruments, nor construct machines, does not, *for the same reason*, turn or remodel his own character;—does not, *in any degree*, educate himself. Virtue, vice, praise, blame, law, government, retribution, are proper conditions of the existence of a being who, by his use of *arbitrary signs*, by his employment of *complicated means*, and, by his conversions of the powers of nature to his particular advantage, makes it evident that he possesses a faculty which, *in connection with his moral sensibilities*, renders virtue, vice, praise, blame, law, government, retribution, the *true correlatives* of his nature.

The sophism which would *sever* virtue, vice, praise, blame, law, government, retribution, from the human nature, contains an absurdity of precisely the same degree as must belong to an argument that would *attach* these conditions to the brute. It were a whim of the same order, to look for arts and accomplishments

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among tigers, kites, sharks, as *not* to look for them among men; and it is nonsense of the same magnitude, to deny that the being who builds, plants, writes, and calculates, cannot work upon his own dispositions, or, in other words, is not blame-worthy; as to affirm that tigers, kites, and sharks, might, if they so pleased, convert their natures, and become more amiable, and less rapacious, than hitherto they have shewn themselves. While instituting a physical comparison of this sort, in what light, we may ask, appears that abstract doctrine which would measure men and worms by the same standard? we may surely say, that, though affirmed to be demonstrably certain as *an abstraction*, it is a nullity when brought into contact with the real world. The demonstrations of mathematical science, when applied either to earth or heaven, fit all things, and correspond to all;—the one class of truths works glibly with the other; and we confess, with an emotion of delight, the presence of that harmony, which is the test of universal truth.* But when *metaphysical* abstractions, of a certain order, are attempted to be dovetailed upon the actual constitution of nature, the one set of principles calls the other fool, and both utterly refuse to coalesce.

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SECTION V.

THE conjunction of the higher elements of intellectual and moral being with the common ingredients of

* See note Z.

animal life, is beautifully developed to the eye that, with philosophical attention, observes the growth and expansion of the human mind from infancy to manhood. Nature, in preparing to bring upon the theatre of the world so noble an agent as man, steps back, that she may take the bolder leap, and reach a higher stage. Man, throughout the period of his infancy, is, *as an agent*, below zero. Though launched as a separate being in the world; he is still an *embryo*, and exists only within the coil of maternal vigilance. It cannot be doubted that the perceptions of the human infant are more confused and illusory than those of the young of animals; and probably amount to nothing more (during the first six or eight weeks) than vague sensations, conveying no knowledge of the external world. His instincts also are few, and less *determinate* than those of other new-born animals; and his muscular power, far from being commensurate with his weight and bulk, is a mere element of action, which remains yet to be developed. But the developement of this necessary power commences at once; and seems to be effected by the constitution of an immediate and invariable connection between the muscular excitability and *every sensation* that effects the conscious principle, whether arising from internal organs, or from impressions on the senses. The babe is, while waking, a machine of perpetual movement, in a greater or less degree; and it is not difficult to trace the movement, in each instance, to some passing sensation. To affirm that such *actions* (if so they may be termed) have in them the conditions of agency as described by meta-

physicians, were most preposterous.—There is no *volition*, in any intelligible sense of the word; nothing but the simple fact of muscular contraction, as an immediate sequence upon sensation. This primary element of agency holds a continued, but diminishing, force, to the latest period, and when other elements take the lead; and it maintains the animal activity in a way that might be compared to the use of a fly-wheel in a machine. Thus at once are the muscles brought into play, exercised, and strengthened, and taught to obey instantaneously the mind. The strivings of the arms and legs, the turning of the head, the cries, the smiles, give to the little scholar his lesson, until fatigue prevails; and all the forces of the system are sent in upon the involuntary muscles and the secreting organs.*

The distinction commonly made between voluntary and involuntary muscular action, is clearly founded upon a real difference. But when this physiological distinction is conjoined with the metaphysical description of volition, as a mental process, consisting of successive parts, it gives rise to a false supposition; and suggests the belief that *all* movements not involuntary, are effects of rapidly conducted deliberations and determinations, are *orders in council*. That complex process which, even *in the adult*, takes place only on special occasions, when antagonist motives are in conflict—as when prudential or moral considerations are wrestling with desires, is assumed as *the model at large* of all the acts of the mind. But if we fix an atten-

* See note A A.

tive eye upon the preparation which nature is making in the first months of life for bringing the machine into full play, we shall discern no evidence whatever of any such deliberative operation; and, on the contrary, shall be led to think that the main business of infancy is the formation and cultivation of that habit of the animal system which places its movements in *immediate contact* with the sensations and emotions of the mind. This habit (to the formation of which the first two years of life are allotted) is the broad foundation of agency, upon which is slowly to be reared the secondary habits, which may at length become principal and predominant.

At a very early period the agency of the infant is enriched and extended by the developement of the two correlative emotions, which, in their multiform combinations, are afterwards to constitute the moral life. Nature is eminently *conservative* in all her operations; and, in the instance of the human infant, is seen to make timely provision for its safety and comfort, in a double method. As soon as (indicated by the intelligent movement of the eye) external objects are discerned *as such*,—as soon as the perceptions of touch and sight are well combined, and *persons* distinguished, evidence also is given that the sensation of animal enjoyment, and the elementary delectations of the senses of sight and hearing, pass out—or shall we say cluster—around that familiar object, and concomitant of all pleasure—the mother; and awaken an emotion, not to be analysed, of complacency, which, as afterward tutored and informed, assumes the name of love, and is

the primary constituent of the moral life. It need not be said in what way the developement of this emotion secures the wellbeing of the infant, so far as its wellbeing depends upon maternal vigilance.

But this single conservative means does not adequately meet all the occasions that arise in this world of perils. It is a universal truth, affirmed by the elegant Greek, that nature has given weapons to all her children;—

Ὀύσις ἕτερα ταύροις, &c.

And he might have added—to the human infant smiles and cries. Not merely are pains and uneasiness instantly and involuntarily made known by one of the most awakening and disturbing of all sounds, but an emotion is engendered which is the antagonist of the one already mentioned, and which, like that, (though at a much later era)* attaches itself to particular external objects; and when so attached, is called resentment. This feeling, whatever ill consequences may result from its excess, is manifestly a conservative element of life; and actually operates to secure the habitual watchfulness of the nurse or mother, who is fain to prevent or divert its excesses. The intelligent mother (or which is the same thing) the affectionate and instinctively sage mother, uses her skill incessantly, as *manager* of the two elementary and antagonist principles of the moral life; and, by avoiding, as far as possible, to excite

* See note B B.

the irascible emotion, and by giving the fullest play to the loving principle, she strengthens the latter by all the force of habit, and deprives the former of the corresponding advantage. Thus the ends of nature are secured; though one of her means of preservation is superseded, or is confined within the narrowest limits.

That developement of the reasoning faculty, and that power of complex thought, which are the grounds of intelligent and responsible agency, are not apparently developed, even in the lowest degree, until some time after the habits both of the animal and the moral life have become firmly settled.

Mobility, elasticity, promptitude, as the conditions of muscular action, and the custom of the mental operations, get the start of the deliberative faculties; and so possess themselves by usage of the physical and intellectual being, that they hold through life their priority; and, whatever power reason may at length acquire, man acts ten thousand times in the simple, elementary, or spontaneous manner which he learns in infancy, for once that he acts in the manner which metaphysicians describe when they analyse the process of volition.*

It is not until the power of locomotion has put the little pupil of nature in trust, to a certain extent, with his own preservation, and when, as its consequence, he is brought hourly into new circumstances, that the first unquestionable developement of reason may be observed. By this time usual sequences of events begin to fix themselves connectively in the memory, and give birth

* See note C C.

to the expectation of like results from like antecedents. Then follows (aided by the imitative principle, to a greater extent than perhaps we imagine) the employment of means for the attainment of an end:—and the occasions which give exercise to this incipient work of reason are presenting themselves every moment. About the same era, the growing use of language, and especially of its adjectives, generates and favors the process of abstraction; and the sounds *good, nice, pleasant, sweet, fine, light, dark, white, red, green, blue, hard, soft, high, low, &c.* so fix themselves in the memory in connection with *qualities*, as to admit of *sejunction* from their concretes; and are all, with many others, very soon actually employed by the tiny metaphysician, in a manner which makes it unquestionable that the mental machine is fast getting all its wheels, one after another, into movement.*

It would be curious and entertaining, if not instructive, to trace, by a series of exact observations, the influence of language (and other signs) in eliciting or hastening that last expansion of the mind, which imparts to it a deliberative power; or which constitutes man a voluntary agent in the higher sense of the term; and which, in its matured state, carries him to an immeasurable distance beyond the inferior species of sentient beings. Daily, hourly, occasions arise in that world of *commencements*—the nursery, whereon the hasty strides of desire are arrested by maternal vigilance, and *other motives* placed before the mind; and

* See note D D.

antagonist considerations urged upon its attention. Here begins the process of complex volition:—at the moment of its commencement the being sets foot upon a course that has no limit, is translated from the lower world of animal life, into the higher sphere of rational and moral existence;—is introduced to the community of responsible agents; and takes up his heirship of an interminable destiny.

Language is the instrument employed in awakening this hitherto dormant faculty. But when once aroused, and in some degree strengthened by use, the law of association, (or suggestion) also calls it into exercise; and continues through life to do so; except in instances in which such associations are obliterated, or superseded by long habits of vicious indulgence. The condition of the accustomed sensualist is, in the view of science, a true infancy of the mind: Many accidents, also, bring such of the desires as are purely sensual or selfish into opposition, rendering the gratification of the one incompatible with that of the other:—the two stand in conflict for a moment or more: and whether the final decision be better or worse, the mind is by the mere contestation exercising its faculty of complex thought; and not improbably admits, during the moments of hesitation, many other considerations of a prudential or moral kind, which, even if they do not prevail, enlarge the power of mental comprehension and comparison.*

From this time forward (and according to the excellence or deficiency of the moral education he receives,)

* See note E E.

the human infant acts in a considerable proportion of instances deliberately. As a consequence of this new mode of agency, the association or suggestion of ideas becomes so modified (especially where education does its work efficiently,) as that it obeys, to a great extent, the law of *real or rational connection*, in the place of that of mere juxta-position; and brings forward, like a faithful and intelligent minister, those considerations or emotions which properly belong to the immediate occasion. This expansion of the mind makes itself apparent, though somewhat later, by the development of the inventive faculty; and the little mechanism, soon after the time when he has taken rank among responsible agents, is seen, by the exercise of the very same faculties of abstraction and of complex thought, to form conceptions of an end or design, and to select, from among the stores of suggestion, the fittest means for its attainment. These nearly simultaneous phenomena deserve especial attention, as they illustrate each other; and, if duly considered in conjunction, would dissipate much of the obscurity which metaphysical science has shed over the physiology of man.

We should here notice that change in the sentiments of those around it, which insensibly accompanies the development, as already described, of the infant mind. Even before it has taken place, the infant has made himself the object of fondness and complacency, or of displacency, in various degrees, according to his permanent dispositions or individual character; and, before he is *blamed or applauded*, is loved, more or less, not only with a love of general benevolence, and not only

with the instinctive parental yearning of the heart; but with a specific feeling which (allowing always for the susceptibility of the *subject* of it) is related to the qualities of the *object* as directly and infallibly, as the mercury of the thermometer is related to the temperature about it. It is of no avail for metaphysicians to demonstrate that such correlative feelings are unreasonable, unjust, and absurd: the physiologist *finds them* an inseparable and universal ingredient of human nature; and thinks himself entitled to *presume* that they are founded in the reason of things, even though he should not be able to demonstrate so much; and, at all events, he clearly discerns that these involuntary emotions are the great conservative principles of the moral world, and could not be obliterated without reducing that world to horrible confusion. But happily there is no danger of any such prevalence of sophistical philosophy as should unhinge the course of nature. A very few minds excepted, and these already diseased—it will remain true, that gentleness, meekness, candor, kindness, will excite affection; while irascibility, sullenness, obstinacy, and malignant acerbity, will as certainly draw towards the subject of them dislike and repugnance.

This happens, we say, *before* the era of the unquestionable development of the power of self-government, and before the child is properly deemed praiseworthy or blamable, or amenable to law. But after this important change has manifestly taken place, a corresponding change is insensibly effected in the conduct and sentiments of those around him.

In the first place, *his particular actions* are approved or blamed, on the tacit principle that, *now*, by the expansion of his faculties, it has become the law of his mental operations, that, in the moment of action, the several antagonist motives that should influence action, were, with more or less distinctness, presented to the mind, in consequence of previously formed associations. The agent, therefore, is deemed to have made his choice, for the better or the worse, *from among alternatives*; and it were to degrade him from the rank to which he has attained, to suppose that, like the inferior orders of the animal world, he did but obey a *single impulse*, or sensation.

This is not all:—the agent is supposed to have made his choice, for the better or the worse, in this particular instance, according to his habitual dispositions; and the action is approved or blamed, not only as an insulated fact, but as an indication of *character*. And then, again, this character is the object, not only of complacency or of displacency, but of *approval* or of *blame*. The character is approved or blamed on the very same tacit principle (differently applied, and further extended) which is the ground of the approval or blame of particular actions, namely, that the now-expanded faculty of the agent enables him, at once, to form abstract notions of moral qualities—to compare such notions with the sentiments they excite in his own mind, and in the minds of others—to institute comparisons between *his own* dispositions and the dispositions which he admires or condemns in others; and, finally, to make his dispositions the subject of a process of self-education.

That so much as this is supposed, and is presumed to be true, by mankind generally, and is established by universal experience, is shewn by the threefold treatment that is adopted with the view of amending the conduct and dispositions; both of children and adults.

First, rewards and punishments are employed for insuring right determinations in particular instances of conduct. This is done on the strength of the well-known fact, that the law of association will, on the next occasion, present to the mind of the agent the consideration of good or ill consequence to result to himself, as the fruit of his behavior; and this consideration may actually avail (as often in fact it does) to counteract the most vivid selfish desires. *Secondly*, it is usual to attempt to amend the dispositions and the character by *an external management* of the exciting causes of the various emotions, and passions, and appetites. This *management* constitutes a great and most important part of the business of education; and should also receive much more attention than hitherto it has done, from legislators, and public instructors, and guardians of the people.*

These two methods are applicable, as we have before said, in an inferior degree, even to animals—to the horse, the dog, the elephant. But the *third* method of treatment is exclusively proper to human nature; and its propriety rests upon the fact, that the human mind includes an element of action not granted to the brute. It is, we say, common to endeavor to awaken

* See note F F.

in the mind the desire of amending or reforming itself—that is, its habits and settled dispositions. This attempt differs from the second method, or the management of dispositions by external means; and it proceeds upon the known and familiar fact, that an introverted effort of the mind does actually, and often, and under a great variety of circumstances, take place. We are not obliged to shew how these facts consist with certain metaphysical principles, or with certain theological doctrines: it is enough that we know them to be recorded, *passim*, on all pages of the history of man; and that they belong to his physiology. By all means, let the mental process be analysed, if it be possible to do so: but, if not, it nevertheless stands among things known and acknowledged by all mankind.*

It is, we say, known to be the usage of the human mind, to make its own acts and dispositions the subject of its meditations, and that these meditations enkindle emotions of the same kind with those excited by the view of similar acts and dispositions in other men—and that to these generic emotions is superadded a specific feeling, more intense than the first, and which borrows its force from the principle of self-love, and takes its quality from that of the contemplated act or disposition, becoming either complacent or displacent: in the latter case bringing with it emotions of shame, fear, and remorse. It is, moreover, proper to the human mind to conceive abstractedly of a mode of action, or a style of character, *better than its own*; and to assume that conception as a permanent object of desire. In consé-

* See note G G.

Grace
 quence of such a desire, a tendency towards it, more or less strong and uniform, takes place. In this manner, amendments, reformations, and even complete revolutions of character, are every day occurring in the human system. It should here be stated, that those deteriorations of character, which are also continually going on in the same system, do not come about by a corresponding process of the mind, or as the result of a conception of vicious qualities, and a consequent pursuit of them; but arise simply from the unresisted progress of sensual or malignant passions, which, by indulgence, become at length paramount habits.

If it were demanded to analyse more strictly the first movements of this mental process of self-education, it would seem the most auspicious method to turn from the *moral* operation, which has been enveloped in mystifications; and to examine the corresponding intellectual operation, wherein the mind holds to a certain abstract quality, pursues it, notwithstanding a thousand disturbing causes, through a long and intricate series of relations, and actually attains its ultimate conception. It is in such operations that the human mind displays its vast superiority to the most sagacious of the brute tribes, and proves that it can soar with a steady wing far above the region of mere animal impulses, of accidental associations, and of all determining causes, except such as lead it toward the high ground of unchanging Truth. Now this intellectual operation runs parallel with the moral operation of self-education; and the one may be taken to illustrate or explain the other.*

* See note H H.

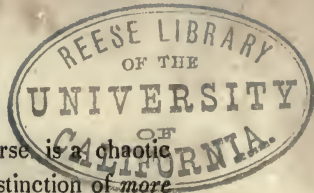
Whether this distinguishing faculty which divides man from his fellow-sentient beings by an immense interval, must be regarded as inscrutable—like the ultimate properties of matter; or whether (as is probable) it admits of being separated into its components, is not *highly important*, even to physiology; and is scarcely, in the remotest manner, significant to morals or religion; since the fact of its existence is familiarly known; and this fact is enough for all practical purposes. The simple and intelligible interests of ethics and theology have no more connection with such a scientific analysis, than have the labors of the mechanician with an explanation (could it be given) of the law of gravity.

It can hardly be necessary to state the well-known fact, that this power of introverted action, which, by emphasis, may be termed, the excellence of human nature, is liable to lie absolutely dormant, for want of excitement;—just as the fellow-faculty of abstraction also lies dormant, or nearly so, among barbarous tribes; and, moreover, that it is exposed to much damage, and may at length be quite enfeebled, by a course of vicious indulgences. Man, we say, may either lie inert, beneath the level of his proper destiny; or, which is a more melancholy case, he may *fall* below that level: he may revert to the moral imbecility of infancy; he may sink into an abyss, where he grovels hopelessly, and is less estimable than the brute; nay, must be content to share sentiments of loathing with the hog, or the hyæna. Sad condition this of *necessity!*—miserable ruin and decay of the noblest structure!*

* See note I I.

It should also be remembered, that, apart from any theological principles, if the actual condition of human nature be contemplated purely as a matter of physical science, it must be admitted to have sustained, from whatever cause, a *universal* damage, or shock; inasmuch as its higher faculties do not, like the faculties of the inferior classes, work invariably, or work auspiciously; but are often, and in a vast proportion of instances, overborne, defeated, and destroyed; or they lie absolutely dormant; while, in *no instances*, do they take that full, free, and perfect course, which is abstractedly proper to them. We may, if we please, compare this physical fact with certain principles of theology, and may derive from the comparison a confirmation of our religious belief. But this is a matter not pertinent to our immediate purpose.

And now, if we must indeed bring those ill-chosen and ill-fated words; *liberty* and *necessity*, to bear upon the physiology of the sentient world, all that is proper to be said may be comprised in a very few words.—It is manifest, then, that in passing on from mechanical and chemical to animal agencies, we are not passing from infallible to fallible sequences, nor from causation to contingency, nor from necessity to liberty (as the opposite of necessity.) The transition is of altogether another sort; namely, from a *less* complex system of causation, to one that is *more* so. But the one system is as truly causal as the other,—or else neither is at all so: *both* are necessary, or neither is necessary; both contingent or neither. If the one system may be foreknown, so may the other—or neither:—if there be



any fortuity in the universe, the universe is a chaotic mass of fortuities. Nevertheless, the distinction of *more or less complex*, is an important one. The course of a bullet propelled by gunpowder from a musket, may readily, and with great precision, be calculated, for it is determined by a few known powers and laws. And so is the course of a bullet that is violently shaken in a canister: indeed, in *this* instance, there is a power or two the less to be included in the calculation. But, who would attempt to forecast the thousand successive reverberations of the ball from the sides of the canister, even though it were agitated in the most exact and regular manner; much less if it were shaken by the hand? Yet is that track, though not to be calculated by human faculties, as strictly the consequence of the combined laws of impulse and gravitation, as is the course of a bullet shot from a gun; and if the one may be calculated by *human* intelligence, the other might also be foreknown by super-human faculties. Every one is aware that the application of the word *chance* to the course of the ball in the canister, is a mere colloquial impropriety.

The complexity of causes is vastly increased when we turn to the animal world;—so increased, that all *human* calculation is utterly set at defiance. Even if we knew all the external circumstances of an animal, at a given moment, and all his sensations of a physical kind, we could not know the succession of mental states which each moment combines itself with the passing impressions and desires: nor, if we did know this also, could we calculate those combinations. We therefore

can merely forecast *probabilities*, in regard to the movements of animals; but can never set a foot upon the solid ground of certainty. A calculation of causes so many and so intricate, must be assigned to an intelligence immensely greater than that of man. Every new power that is admitted into a complex machinery, tends, of course, to multiply the variations of its movements; and so to render a calculation of those movements more voluminous or difficult; yet not to render them at all less *causal*, or more fortuitous.

But this general principle is open to an important exception;—to wit, if the new and superadded power be of a paramount or commanding sort, it will simplify the movements, rather than complicate them, and bring them more within the range of calculation: instances may easily be adduced in which the agencies of higher and more complex natures are far more simple and invariable than those of inferior beings. An example or two will illustrate this statement.—The mental machinery of the adult contains more movements, is more complex, than that of the infant: new faculties have come into play; the materials of intellectual action have been vastly augmented; and many susceptibilities have been quickened, which are dormant or non-existent in the infant. But the mere combination of internal and external impressions renders the agency of the infant absolutely incalculable (to the human mind;) whereas the agency of the adult, though open to a hundred times more influences, is often simplified by the predominance of some one or two of its powers. As, for instance, a vehement animal desire, or a ruling mental passion, long

indulged, *sets* through the soul like an impetuous current, and gives a high degree of uniformity to the conduct. Or a similar uniformity and simplification may result from the predominance of virtuous emotions. Or, again—and this is an instance of the most significance—that very expansion of the intellectual faculties which imparts the greatest *organic* complexity to the machine, does, at the same time, *when it reaches its perfection*, restore (if we may so speak) to the operations of the mind the most absolute simplicity. Truth is one; and it is the glory and perfection of the intellectual nature to perceive that oneness: and in proportion as truth is so perceived, and embraced, and delighted in, the agency of the being will become more simple, and *calculable*, and will lose its character of variableness. The same is true of the perfection of moral faculties; and it may, as a general principle, be affirmed, that perfection in all orders, and of all kinds, tends, with equal steps, towards simplicity, uniformity, and constancy.

And yet what, it may be asked, is gained by applying to this simplicity or constancy, which is the character of perfection, the term necessity? There is a sense, unquestionably, in which it *may* be so applied; but it must be called one of the most infelicitous, and ill-omened of all pedantic perversions so to do. We gain, it is true, the poetical conception of an awful, invisible goddess, stern in feature, inflexible in temper, and implacably despotic, who rules the universe, and who vouchsafes no other reply to supplicants, than the monotonous response—"Whatever is, must be." Apart from this poetry of metaphysics, nothing is more simple

*This is not Edwards's necessity
 or inevitability, but as necessary
 as uniformity.*

than the *certain connection* between perfect intelligence, and the perception of a truth presented to it. Who would wish to be endowed with a freedom from this sort of necessity? To whom is this kind of despotism galling, or intolerable? To none, surely, but to madmen and fools. Nor can any but the debauched covet that other species of liberty which excuses from the moral necessity of taking always the road of virtue. To be bound by this *necessity* is the true *liberty*; and, in fact, as we approach to the high ground of intellectual and moral perfection, liberty and necessity merge in one and the same condition; and he is the most nobly free, whose reason and whose volitions are the most invariable and uniform; or, to use an improper term, are the most imperatively necessary.

Whoever revolts from this union, and would court rather a mode of agency as far removed as possible from certainty, and from calculable sequency—an agency in this improper sense *free*, should look for it, not in the heavens, but upon earth, and among the most infirm of its tribes. He should put off the man, and revert to infancy; and should plunge among the eddies of ignorance and folly. There he will find a liberty to follow the ten thousand paths of error, instead of the one path of truth; and there he may surrender himself to a course so capricious, so broken, and so tortuous, that his wanderings must defy the power of any intelligence short of the Supreme, to calculate their terminations.

Nothing, one would think, ought to be wished for by any order of beings, but that its mechanism should be

It seems to have the idea that uniformity is necessity or at least the ground of it.

so constructed as to secure (in the ordinary course of things) its welfare. It is by such a well-ordered construction of parts and functions, that the preservation and reproduction of the animal tribes are actually secured: their machinery, while it obeys the great laws of matter and mind, accomplishes the beneficent intention of the Creator; and each individual enjoys his hour of physical good. The well-being of man is in the same manner provided for, in the constitution of his more complex nature; and so long as *all the parts* of this constitution perform their functions, all is well. Damage and ruin arise from the inaction or decay of some of the parts. *The actual existence of this damage is precisely that point of physical science at which it is intersected by theology, and where the former must ask light and aid from the latter.*

For a moment, let it be inquired, what advantage a sentient and intelligent being could derive from an absolute emancipation from causation, or from the certain sequency of effects? The very notion of a real contingency, in *this* sense, is inadmissible in philosophy. But let it be granted as a thing conceivable. Ought not, then, this freedom from causation to be termed rather a necessity of the most dire and formidable sort? and he whose prerogative it should be, would become an object of as much pity as the wretch who lives in the grasp and keeping of a madman. This power or prerogative of contingency, *by the hypothesis*, obeys no motive; adheres to no connection of truth with truth; is not to be calculated upon, or foreknown; is not governed by relationship to any actual existence, or abstract

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principle. But it is manifest that, to an intelligent being, whose welfare is committed to himself, and who provides for that welfare *by calculating upon the known order of nature*, the liability to contingency, whether in the external or internal system, must be a pure curse, by deranging every provision, and thwarting every purpose. A liability to sudden frenzy, would not be at all more fearful than the liability to sudden contingency. The unhappy being, so privileged to live beyond the circle of nature, and so distinguished as an outlaw from the orderly system of causation, would be justified in making for himself such an apology as this:—"Whenever, and as long as my conduct is governed by reasons and motives, I cheerfully consent to be treated as a responsible agent; and am willing to receive the due consequences of my actions. But not so in those dark moments when the fit of contingency (my fatal glory) comes upon me:—then, and in those portentous moments, I am no longer master of my course; but am hurried hither and thither, by a power in the last degree capricious, whose freakish movements neither men nor angels, nor the Omniscient himself, can foresee. Fain would I surrender this fatal freedom, and take my place among those who enjoy the benefits of the laws of nature and reason; but it is the unalienable condition of my existence to be governed by a power more stern and inexorable than Fate herself,—Alas! Contingency is mistress of my destinies."

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If it be no excellence, no advantage, to be liable to contingency, in the matter of volition, it may, on the other side, be asked, if intelligent agents are deprived

+ By contingency he does not mean a want of ^{divine} knowledge — he seems to mean, say an

of any conceivable advantage, or are necessitated in the sense of *confinement* or *restraint*, by being placed in a state of inseparable connection with a settled order of events in the worlds of matter and mind?—The reply of common sense is, that this connection is the very ground of their safety and happiness; and that to dissolve it, were to render reason useless, and ruin inevitable. And if common sense thus responds to the question, physical science corroborates the same conclusion, by developing in detail those occult correspondences between the structure of animals and the great laws—mechanical and chemical—of the material world, which give so much evidence at once of the wisdom and beneficence of the Creator.*

But the fatalist (we mean the philosophical fatalist) and his opponent also—the advocate of contingent free will, concur in affirming that this alleged connection of the intellectual and moral system with the fixed laws of the worlds of mind and matter, actually removes from virtue and vice all their substance, and renders these terms the representatives of a mere illusion. “Where there is *causation*,” says the philosophic defender of Arminian theology, “there can be neither praise nor blame, virtue nor vice.—But virtue and vice *must* be affirmed, and therefore human volition is free from causation.”—“Where there is *causation*,” says the philosophic fatalist,† “there is neither praise nor blame, neither virtue nor vice. But there is causation in hu-

* See note K K.

† See Diderot, as quoted above, p. 31.

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man volitions; and therefore virtue and vice are empty names."—Thus reason the extreme parties in this controversy.

Now, the *physiologist* might well content himself with spurning, unrefuted, the premises and conclusions of both parties. It is enough for him that he finds, belonging to human nature—human nature as compared with that of inferior classes—certain emotions, and modes of feeling and acting, which, as they are specific and broadly distinguished from all others, must not be confounded, or lost sight of; and must therefore have names to themselves; and if the words *virtue*, *goodness*, *merit*, &c. are taken from his nomenclature, he must instantly invent new terms to stand in their places; but as well retain the old ones. Moreover, he finds that the qualities so designated subserve the most important and indispensable purposes in the constitution of the human system; and he would therefore, without infringing upon the duties of either moralist or theologian, reject, as a pestilent sophism, any theory which should tend to lessen the intensity of such salutary powers.

But the philosophical fatalist might be asked—If virtue and vice are not virtue and vice, what are they? He replies—"Virtue is *good fortune*; vice, *bad fortune*." We will then apply this method of resolving an illusory notion into its proper nihility, to another case of a parallel kind; and then judge of its soundness.—While intent upon another object, the attention of Newton was suddenly attracted by a phenomenon which led him at length to the principle of the different refrangibility of the several elements of light. This was *good fortune*;

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but he laboriously pursued the causal suggestion, and after a long course of experiments and calculations, gave to the world the true science of optics. And this ultimate success, also, may be called *good fortune*. For must we not admit the original vastness of his understanding to have been good fortune; and was not that mental character, or intellectual temper, good fortune, which made the attainment of scientific truth the paramount desire of his nature; and were not his external advantages of leisure and education also good fortune? and so was that physical wellbeing which allowed him to carry on his researches, until they reached their happy issue. No.

Now, if the philosophic fatalist means no more by his queer use of the term *good fortune*, in such an instance, than, by a pious conceit, to preach us a lesson in theology; and by a *quirk* to induce us, unawares, to trace "every good gift, and every perfect gift" to Him from whom all excellence descends, we can make no objection to his *intention*; but must protest against the method he adopts, which is puerile, affected, and circuitous.

But the sophist in question would, we are sure, indignantly spurn the imputation of couching a *religious* meaning under his quibble. Does he, then, intend by it to hide from the notice of mankind all those mental qualities—all that intelligence and perspicacity, and that activity, constancy, fortitude, and consistency, which intervened, *as causes*, between the first *fortunate* hint, and the ultimate establishment of the theory of light and colors? By applying the term *good fortune*, both

to the accidental suggestion, and to the laborious workings of the mind upon it, does he wish to insinuate that the difference between the one and the other is a mere nothing—a shade, which should be disregarded? In this case we ask why, or for what imaginable purpose, should we so confound things immensely different, and between which even the rudest mind discerns an infinite disparity? We beg leave of the sophist to adhere to the usages of common sense, and shall always, in future, as heretofore, call intelligence *intelligence*; labor *labor*; and good luck *good luck*.

But further; if it were really conceivable that so whimsical a use of the word good fortune should gain general credit, so as at length to dismiss from the recollections of men the difference between mere luck, or the accidental possession of an advantage, and the attainment of advantages by labor, skill, and perseverance; then it would immediately operate (and especially upon inferior minds) not merely to confound things distinguishable, but to destroy the very qualities that are the objects of the distinction. The sophism, we say, if really assented to, would debilitate those motives which are the springs of action, and would lead mankind back from the state of civilisation wherein many more advantages are received from labor than from luck, to the savage state; wherein the few advantages that are actually enjoyed spring more from luck than from labor. But can any such retrogressive movement be the work of true philosophy? Far from it! It is philosophy that has led mankind forward from the savage to the civilised condition; and whatever would arrest him in his course, or beat him back, is not philosophy.

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If, then, it be a pedantic whim, and a whim of mischievous tendency, to apply both to an accidental benefit, and to a benefit acquired after long and laborious efforts, the same term—good fortune; it is also a pedantic and a mischievous whim to call virtue good fortune; for virtue is not an accidental boon, thrown in a man's path, and with which he has nothing to do but to pick it up:—it is the result of a long-continued and laborious process, wherein the mind works upon and among its emotions, its desires, and its propensities. But, then, the pedantry in *this case* carries with it a real and efficacious power of mischief; inasmuch as the difficulty of attaining virtue consists, greatly, in that very laxity of spirit which the sophism tends to increase; and, on the other hand, it cherishes, favors, and enhances those specific illusions which hover around all vicious habits of the mind.—Vice, of every kind, is, to the spirit, an *inebriety*, having both its season of delirium, and its season of lethargy. Now, if the vicious subject be taught that his sensuality and his crimes are simply *ill fortune*, his delirium will be heightened by desperation; and his lethargy deepened by the removal of all sense of remorse.

This doctrine, then, of the philosophical fatalist, which, if applied to the intellect, would lead mankind to barbarism; does, *by a parallel process*, when applied to the conscience, lead him into the abyss of brutal debauchery and of ferocity. Shall we then admit, or shall we discard it?

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you are a fatalist in philosophy, but you deny that your philosophy accords with your facts—

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SECTION VI.

It now only remains—and this part of our task may soon be dismissed—to consider the question of liberty and necessity, as belonging to metaphysical science.

There lies before us a long series, or chain of prolate spheroids, linked together by a *copula*, and marked in pairs,—*a, b; a, b, &c.* Now, a philosopher of a certain school comes up, and lectures upon the series in the following manner:—

“You have always seen these spheroids arranged in this precise order; and your mind has acquired, as a habit, the belief (a pardonable prejudice) that they are inseparably or necessarily connected in this order, and could exist in no other. And in consequence of this habit, you have arbitrarily lettered them in pairs *a, b, &c.*, and furthermore have called *a*, cause, and *b*, effect: and then have formed to yourself a certain groundless and inexplicable notion, to which you give the name power; and you say that *a* has a power to produce *b*, and so on. But all this is a tissue of illusions. You really know *nothing* beyond the fact of the actual conjunction, or juxta-position, or uniform sequency of *a* and *b*; and your word *power* stands for nothing but an abstraction, that has grown, we hardly know how, out of this habit of your mind.”

How satisfactory is this exposure of an old and firm prejudice! Who shall dare in future to attach to the words *cause* and *effect* any other sense than that of an often-observed connection? Or who shall venture, henceforward, to deduce an inference from the exploded

doctrine of causation, in favor of the existence of a first cause, or creative power?

Nevertheless, unwilling to part so easily with an ancient belief, and so promptly to dissolve an inveterate habit of the mind, we look again to the spheroids before us; turn them about, examine them on all sides, and endeavor, if possible, to discover if there be not a *real*, as well as an accidental connection between *a* and *b*. At length we find that *some* of them may be broken open, and their contents exposed; and it appears, on examining the interior of a pair, marked *a* and *b*, or *cause* and *effect*, that the spheroid *a* contains a series of figures, as thus—

$$4 + 8 \times 2 - 6 \div 2$$

Within the spheroid marked *b* is found another series—

$$8 \times 10 + 10 \div 10$$

Now, removing the spheroidal envelope, and retaining only the *contents* and the *copula*, *a* and *b* stand thus—

$$4 + 8 \times 2 - 6 \div 2 = 8 \times 10 + 10 \div 10$$

That is to say, we are simply presented with an *equation*; or the same quantity described in two forms, and connected by a sign which indicates their equivalence, and their *indissoluble connection*; a connection, not indeed of *power*, but of *relation*, and a connection so absolute and real, to receive *a*, and to reject *b* as its equivalent, would be a conspicuous absurdity.

Encouraged by this instance of success, we proceed, with our analysis, and taking up at hazard, from dif-

ferent parts of the series, several pairs of spheroids, we find that, in every instance in which, by force or patient assiduity, we can break the shell, the contents consist of some such equation as was discovered in the first. We have therefore, to a certain extent, refuted our philosophic reprove, who told us that these connected bodies were linked *only* by juxta-position; for we have ascertained that *some* of them, at least, are wedded by a real and indestructible relationship. But then there remain (and it is no small number) the infrangible spheroids. What shall be said concerning them? Nothing conclusive; but our philosopher is now deprived absolutely of the force of his specious argument: for it is *not* true, as he affirmed, that the connection of the spheroids, was nothing but a sequency which might have assumed any other order than the one it actually observed. If, on the faith of his word, we had disturbed the order, and then analysed them, nothing would have appeared but confusion. And if, in regard to the analysed bodies, he is free to *surmise* that they are not linked by a real connection; we are equally free to suppose that a true and abiding bond ties them one to the other.

We are free to suppose this;—and should in fact use our freedom so far as to entertain the hypothesis—an hypothesis which can never be refuted, *until all the spheroids are actually analysed*—that *some* of these that defy our curiosity contain, like those we have opened, *equations*; and that the residue are joined by an *efficient* connection; or in other words, that *a* is a *power*, properly so called; and that *b* is its effect.

The reader who is familiar with the controversy on the relation of cause and effect, will readily make the intended use of the above illustration. As the question concerning human agency has been confused and embarrassed by considering volition as one and the same thing in all sentient beings, and in all instances; whereas it differs by essential elements in different cases; so has the question concerning causation been surrounded with difficulties, by the common practice of allowing all conjoined events, vulgarly designated as cause and effect, to pass undistinguished under one and the same description. The puerile sophism of Hume takes its appearance of force from this confusion of things essentially different. It becomes, therefore, necessary to distribute into classes the mass of things popularly spoken of as cause and effect.

Such constant connections, whether belonging to space or time, may be arranged under three heads, of which the First will comprise those that may be analysed, and which are found to resolve themselves into simple relations of equality, or proportion, or fitness.

The Second comprehends those in which the presence of an efficient power must be confessed:

And the Third those which are inscrutable by the human mind, and therefore ambiguous; and concerning which a surmise only can be entertained, as to the nature of the bond which unites them; but concerning which, it may safely be presumed, that, if they could be laid bare, they would resolve themselves into connections, either of the first or of the second sort.

For the FIRST CLASS.—So many cubic feet of water are raised, per minute, from the deepest adit of a mine, by a steam engine; and in popular language it is usual to call the engine the cause, and the raised water the effect. But if, from this stupendous apparatus, are deducted *two powers*, the one chemical, the other mechanical (presently to be spoken of) then the whole vast system of contrivances resolves itself into a series or apposition of relations of equality, proportion, or *equilibrium*: and it is a proposition of precisely the same kind to say—

$$4 + 8 \times 3 = 36;$$

Or to affirm that the steam engine will raise so many cubic feet of water every minute from the bottom of a mine. Or if a complete description of a steam engine were placed on one side of the sign of equivalence, and the measure of water expressed on the other, the predication implied would be infallible and invariable; and to affirm of its two members, that they are connected by mere constancy of occurrence, would be an absurdity of the same sort, as to say, that $4 + 8 \times 3$ is connected with 36 in no other way than by accidental juxtaposition. Heat and water, applied the one to the other, combine; and water combined with heat becomes an elastic vapor, occupying a space vastly greater than before. Now, though the reason of this irresistible combination has not hitherto been found, we are free to suppose that it is the consequence of a *relation of occult form* in the two elements; and the hypothesis is favored by all that is actually known of the structure of

the material world. Meanwhile we assign this unknown fact or hidden power, to our *third class*, and after deducting it, then resolve the complicated machinery of the steam engine into an equilibrium of forces.

All the works of human ingenuity are resolvable into cases of equilibrium, or equivalence: and, in like manner, the functions of plants and animals,—their growth, agencies, and decay, and, to a certain extent, the interaction of the elements, are also to be resolved into connections or relations of this first class. And if the business of natural philosophy were to be described in a single phrase, we should say that its office is, as the interpreter of the creation, to exhibit or unfold physical equations.

It is hardly needful to say that, in reference to this first order of causes and effects, the word *liberty* can have no place whatever—can assume no shadow of meaning. What idea can we affix to the proposition, that there is a *freedom* in the connection between twice three and six? And if the sister term necessity *may* be applied on occasions of this sort, it adds nothing to the perspicuity of our notions. It is, we readily grant, *necessarily true* that seven taken three times makes twenty-one. But why should we not be content with simply saying that it is *certainly* true; or, better still—that it is true. *All* that the mind can understand is contained in the very modest expression which declares that three times seven is twenty-one. And to talk about *necessity* in such an instance, is as rational, as would be the pomposity of affirming, that three times seven is immutably, and by the adamant decree of eternal truth, equal to twenty-one!

or better still
that it is

This is an absurdity of one kind: and the history of the controversy would furnish a thousand instances of such learned verbosity. The opposite absurdity is that of Hume and others, who, confounding causes and effects of all kinds, affirm *of all alike*, that they are nothing but often-observed sequences; whereas a large proportion are intelligible relations, which cannot be denied or separated without a contradiction in terms.

It may seem superfluous to remind the reader, that all *effects* belonging to this first class are directly cognisable by their relation to their *causes*. The intelligence which knows the antecedent, knows also the consequent, when that consequent is a correlative equality or proportion.

II. In defining the SECOND CLASS of causes and effects, or those wherein the presence of an efficient power must be confessed, it cannot be thought necessary, as a preliminary, either to insist upon the demonstration, *a priori*, of the existence of a First Cause, or to state the argument *a posteriori*. This great truth is here assumed as unquestionably established by the two methods, separately and conjointly. But it follows from it, that the worlds of matter and mind, with all their contrivances and forms, are effects of that First Cause, and that this relationship is, in the most absolute sense, real and indissoluble; nor even to be imagined as broken, otherwise than by the annihilation of the effect.

The doctrine of Hume and his followers, (and of many of his opponents), That we know, and can know nothing of cause and effect, beyond the fact of invaria-

ble sequency, is, by a logical necessity, atheistical.* That is to say, it has *no meaning*, and can have no appearance of truth, except on the assumption, that the belief in a First Cause is incapable of proof. For if that belief is by any means established, the fact of efficient causation is established with it; and it is no longer true, that we know of no connection between cause and effect beyond that of invariable sequency.†

Whence the human mind derives its notion of power, might be shewn; but it can never be imagined that the reason of the connection between power and its effect can be exhibited. This were, indeed, to penetrate beyond the deepest secrets of nature. Yet this connection, though not to be analysed, must be affirmed to be necessary, or, more properly, *infallible*: for to suppose otherwise, would be only a circumlocutory denial of the very existence of power. Power not productive of its effect is not power, but is either inertness or weakness. And again, the denial of liberty to power, if liberty means *freedom from restraint*, would, for the very same reason, be absurd; and thus, as we have before observed, liberty and necessity merge, the one in the other, when we approach the footstool of supreme excellence and perfection.

* Hume ("Treatise of Human Nature") gives his reader free leave to draw this inference, which he is *too modest* himself to name.

† Brown, while insisting upon the fact, that we can conceive of nothing as coming between Almighty Power and the effect, loses sight of the question, whether the human mind has no idea of connection beyond antecedence and sequency. It does, *by its own power*, conceive of power as something more than the juxta-position of events.

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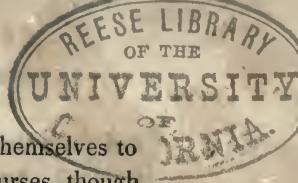
10

of the same thing (as the will) that
it is both free and necessitated
and free.

But if the word *liberty* were to be taken in the vulgar sense of the words *range* or *scope*, it might then be asked, What (with due reverence *) should be thought of the liberty of the First Cause? We must approach this question from beneath. Now, if for a moment it be assumed that *power*, in the highest sense of the word, is the endowment of created minds, we can conceive of it only as related to, *first*, the *actual* existences known to that mind (*its own attributes included*), and, *secondly*, to such *possible* existences as may lie within its faculty of conception, and also within the circle of its agency. And then, if that created mind be thought of as (in its degree) wise and holy, every exercise of its power will be determined *necessarily*, or, which is a far better term, *invariably*, or *certainly*, in *that one manner* which truth and goodness prescribe, *whenever either truth or goodness is interested in the decision*.

But something more than this may be conceived of; and we think that the notion of stern fixedness, or invariable sameness, which is apt to be conjoined in our minds with the idea of unalterable wisdom and rectitude, is happily dispelled when this *something more* is duly taken into the account. A hundred or more angular or curve lines, all of equal length, *yet dissimilar*, may be drawn from the centre to the circumference of a circle. Nor is it an irrational supposition, that a hundred or more courses of conduct, dissimilar, yet equidistant

* A high disadvantage belonging (inevitably) to discussions of this order, is, the implication of the Divine perfections with obscure questions. Every sound mind will take care to hold its religious sentiments safe from the interference of mere abstractions.



as paths from point to point, may present themselves to an intelligence; and that these hundred courses, though *by the hypothesis* they possess precisely equal recommendations, both to the rational and moral faculties, may be not only unlike in themselves, but may lead the being that pursues them to vastly distant or opposite points of his possible destiny.*

Now this supposed range, or scope, or liberty, if so it must be called, removes the idea of unvarying uniformity from the notion of a high degree of wisdom and goodness: it enlarges the conception of supernal existence, and opens before the meditative mind an unbounded field of various opulence. And although, in the case of created minds, this field is narrowed by the limitation both of knowledge and of power,—for a created mind neither knows all *actual* existence nor all *possible*, nor does its power extend even so far as its knowledge,—yet, on the other hand, the range of its agency is enlarged in one direction, as well as confined in another, by the limitation of its knowledge. For though it has not before it *all* really equidistant paths, many that are not so in fact may *seem* so to be; and it may happen that, without fault or culpable folly, it may take the longer for the shorter course, believing the two to be equal. There may be *apparent* equations where there are no *real* ones; and if many of the real are unknown, many unreal may be supposed.

We think that from this source the sphere of the agency of wise and holy beings is incalculably widened;

* See note L L.

and yet without admitting at all the notion of contingent volition. An attentive reference to consciousness will convince any one that it is the law or usage of the mind, on occasions when an alternative must be taken, where there is no perceived reason which should determine the choice, to throw itself back upon the laws of its lower nature; that is, to be guided by the involuntary suggestion that arises at the instant of volition: might we say, as a man whose eyes are bandaged gives his hand to a child to lead him in the path? We have before likened the perpetual flow of ideas through the mind to the operation of the fly-wheel in a machine; and here it is seen to maintain the unceasing velocity of action, on occasions when an impulse from the higher faculties is wanting, and when otherwise the machine must stand still. We may well presume that this fact has its analogy in a higher sphere of beings; and that so an inconceivable diversity, a voluminous variety, is thrown in upon the theatre of celestial life.

And now in reference to the Divine agency, or the exercises of infinite power, let it, with becoming modesty, be affirmed, that the universe of things *possible* being present to the Divine omniscience, there are contained in it innumerable *hypotheses* of being, *strictly equivalent one with another*, so far as benevolence or wisdom are concerned. To advance even a conjecture as to the mode of determination in such instances, would be in the last degree presumptuous and absurd. It is enough to know, that as time, or succession of being, is not the condition of the Divine existence, such determinations are always *actual*, not *future*, and therefore

not either unknown or contingent. Is it allowable to say, that the idea of the exercises of supreme power and wisdom is enlarged and enriched by this doctrine of hypothetical equivalents?

The meditative mind, in looking abroad upon the vastness of the universe, and in observing that the edifice of the material world is broken into innumerable portions, far separated one from another, naturally entertains the supposition that the infinite resources of the Divine ingenuity (if the word may be allowed) are copiously unfolding themselves around us, in all possible modes. And again, when the mind turns from the infinitude of space to the infinitude of duration, and entertains, vaguely, the inconceivable idea of eternity, a parallel supposition arises and flits before the imagination,—that this unbounded ingenuity—this richness of conception, which exhausts all forms of existence, and all combinations of those forms, will, through an endless series of successive creations give expression in turn to each, and run the round of its cycle of wisdom and power, until whatever *may be* has actually seen the light of life. And is it then true that human nature is destined to be the immortal spectator of these never-ending developements?

III. It only remains to speak of the **THIRD CLASS** of causes and effects; or those connections, of which the bond is either ambiguous, or absolutely inscrutable.

To enumerate all the instances of this sort (or all that present themselves in the system known to us) would not be difficult. But it is enough for our immediate purpose to mention, as illustrative of our meaning,

the most conspicuous, namely, the principle of gravitation, and of corpuscular attraction and repulsion; the principle of chemical affinity, that is to say, of attraction as belonging not to all solid masses alike, but to particular bodies; electrical agencies (of both kinds); the principle of vegetable life (unless it be resolvable into chemical or electrical action); the principle of animal life (unless this also may be so resolved); and, lastly, the power of mind over matter and over itself. In all such instances of action, movement, or change of place, or of quality, or of bulk, or of function, we observe the invariable antecedent and consequent; and are able to reason with precision upon the laws, or, as we might say, modes, of the hidden power; but the link or tie is deeply concealed. The reason why *b*, succeeds to *a*, is not to be assigned: the most perfect science pretends to no knowledge of this ultimate connection. And, indeed, in all branches of knowledge, Science is deemed to have fulfilled her task when she has proved herself to have left nothing unknown—except these occult powers.

Metaphysical science has nothing to do with them, except to abstain from assuming the gratuitous hypothesis, that in such inscrutable facts there is no real connection, or nothing beyond actual sequency. We affirm, that the presumption gathered from all parts of science is altogether against such an hypothesis, and, on the contrary, strongly favors the supposition, that the great mechanical laws of the universe, and the chemical

* See note M M.

affinities and aversions of particular bodies, and probably the principles of vegetable and animal life, are *relations*, or rather the consequences of relations; so that each effect is connected with its cause by the same absolute bond which secures the result of a mechanical contrivance, or which makes the two members of an equation inseparable. We venture to say, that the course of modern chemical discovery *tends* towards the belief that chemical action is the necessary consequence of the relation subsisting between the elementary structure of bodies, and that if the occult form of *c* and *d* could be exposed, it would become manifest that their juxtaposition must issue in the compound *e*.*

In regard to the hidden powers of nature, the whole question lies between *contrivance*, or relation, and *power*,—that is, immediate Divine power; not between contrivance, power, and mere juxtaposition, or arbitrary sequency; for as, on the one hand, the testimony of *natural* science goes to establish the general truth, that causation rests upon real relations; and as, on the other, *Divine* science establishes the truth of a first and intelligent Cause, we are free to choose *between the two*, in all cases of a hidden or ambiguous sort, and can never be compelled to take up the hypothesis of contingent or accidental sequency, which is neither natural to the human mind, nor confirmed *in any single instance* by the results of experimental philosophy.

In turning to the world of animal and intellectual life, there is room to ask whether the power of

* See note N N.

mind over matter, and over itself, should be regarded as,

1. The consequence of a relation of parts, or *contiguity* only; or—
2. The direct exertion of Divine power; or—
3. A derived and *separate* (not independent) portion of that essential power.

Without resting at all upon so difficult a theme, we may just say that we should reject the *first* supposition, and prefer the *third* to the *second*. Our business is to affirm, that the determination of such questions is not, in the remotest degree, important to any branch of intellectual, or ethical, or theological philosophy, any more than an analysis of the principle of gravitation is important to mechanical science. The *fact* is enough, that mind has power to move and modify matter, and *to move and to modify itself*. If its possession of the first-named power were questioned, we might establish the fact by striking the sceptic; or, if the second were doubted, we should ask him to propound to us a mathematical theorem, and we would engage, even while assailed by many disturbing causes from without and from within, to hold a steady intellectual flight, in a direct line, from the data to the conclusion, and should allege the true solution of the theorem as a proof incontestible that mind has *power*,—a power *introvertible*, as well as efficient upon matter.

The terms *liberty* and *necessity* may be alleged to have a relation to this ultimate fact of the power of mind over itself. If liberty might be taken in the unintelligible sense of contingency, or freedom from caus-

ation, then we say that this power, as belonging to the human mind, has no liberty; for it always stands under a triple relationship, namely, to its own attributes and conditions, to the world of actual or conceivable existence, and to the interferences of Divine power; and so far from its being insulated from reasons and motives, it is only upon and among reasons and motives that it can work.

But if by liberty be meant *scope* or *range*, then does this power incalculably augment, enlarge, diversify, and ennoble the agency of the being possessing it. Upon this point we have already enlarged. But if liberty means *freedom from restraint*, then the sad truth must be confessed, that this power, *in the human subject*, is largely invaded, and much damaged and obstructed by the moral ruin that has affected the race. Man, in this sense, is free *only in degree*; and it is in contemplation of this lamentable infringement of his native power, that he should thankfully receive the succor and the remedial interference offered to him by Christianity.

The correlative term *necessity*, in like manner, takes its pertinence, or its irrelevance, from the precise sense attached to it when connected with the power of mind. In the sense of *bondage*, *impediment*, or *restraint*, man, as we have just said, is in various degrees necessitated by the prevalence of inordinate desires, and by the force of inveterate habits. But it should be remembered, that this sort of necessity is not held in any, even of the most momentous affairs of life, to absolve the evil-doer from his responsibility to law, or to discharge him from his liability to punishment. Theologians have no need

to resort to metaphysical arguments for the purpose of establishing the truth, that a debauched habit of mind does not exonerate a man from the load of his guilt; or at least they need not do so until the enormous supposition is recognised and acted upon in courts of justice. Who does not see that the acknowledgment of a principle like this would, in a day, dissolve the entire framework of society? And shall it, if inadmissible on earth, be published and received as a maxim of the Divine government? A proclamation so fearful would convert the universe into a prison-house of horrors. He who enters upon a course of vice, *feels* that at every step his moral health and strength are impaired: this alarming consciousness should awaken him to a sense of his danger. But if it does not so awaken him, no means remain (consistently with *any* system of government by laws and sanctions) which can avert from him the terrible consequences of becoming at length the helpless slave of licentious habits. And yet, not even the last stage of thralldom absolutely breaks up the constitution of human nature: man is, to the last (unless frenzied), open to a sense of his ultimate welfare; and the motives thence derived, *if understood*, are always more than adequate to determine the conduct of a rational being. And besides, instances are on record of moral revolutions, even in cases apparently the most hopeless. Man, therefore, though his true liberty is greatly *impaired*, never becomes (in the present life) so necessitated as to render a recovery strictly impracticable.

The delusive influence of the ill-chosen word necessity, as used in this controversy, increases (might we

say?) in geometrical progression at every step, as we ascend from material causes towards the higher stage of intellectual agency. Those who think fit to do so, may very harmlessly, though very ineptly, talk of the *necessity* which binds together the parts of a mathematical proposition; or they may so speak of the connection of causes and effects in the system of animated nature; and they may still advance a step, without being liable to a conviction of absolute error. But as we rise on the scale of life, the *associated ideas* that cling to the term actually intercept from our view the simple matters of which we are speaking; and while, perhaps, our chain of reasoning is in *form* correct, it is in *fact* seductive or false.

To speak of power as latent or inert, is a solecism; at least it is not the notion with which we have to do. Can we, then, conceive of power active, that is to say, of power in the proper and only intelligible sense of the word, as not related to any subject or matter whereupon it works? Or can we conceive of power as an attribute of an intelligent and of a moral being, and yet not related to the knowledge and to the emotions of that being? Or could we deem it a perfection in the constitution of a rational agent, that his power should operate like a vague and brutal violence, taking its course this way and that, with the blind vehemence of a hurricane? Or, is not rather the idea of rational perfection filled up by the supposition of power, related, on the one hand, to its subject, by the bond of uniform and unfailing efficiency; and on the other, to the knowledge and emotions of the agent, by the tie of infallible determination

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or direction? Whatever is deducted from the constancy or invariable sequency of these connections, makes a *proportionate deduction* from the excellence and *true freedom* of the agent. The agent whose power is not thus *necessitated*, in the most absolute sense, is, to the whole extent of the want of necessity, not free. A deficiency of necessity, in the *higher* sense of the word, is an increase of necessity in the *lower*. And here, once again, we must note the synonymous import of the words liberty and necessity, when the highest perfection is spoken of. And it is manifest that this necessity, far from carrying with it any idea of bondage, or confinement, or *fatality*, is the very secret and the indispensable condition of the full and unimpaired liberty of celestial natures.

The controversy comes to a point on this position: nor is it difficult to discern in what way, by the mystifications that belong to theological argument, and by the malignant obscurations that have been shed over it from the hands of those who have labored to subvert religion and morality, and to debauch and vilify man,—a very intelligible matter has been wrapped in dark clouds of difficulty. Let but the difference between mechanical laws and living agencies be confounded, and let the elementary differences that distinguish the several orders of sentient beings be lost sight of, and let the gloomy word necessity be put in the place of the simple words relation and causation; and then the way will be clear for talking of such facts as the fall of bodies to the earth, or the collapse of chemical elements, and of the agency of the highest order of intelligences, who seek their

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happiness at large on all the fields of the universe, under one and the same set of affected phrases. And thus, because mind is furnished with knowledge, and is susceptible of emotion, and is endowed with power, and is thus qualified to maintain and enlarge its well-being through a course of endless advancements; and because this well-being is secured by its invariable connection with an established order of events, therefore (say sophists) it becomes reasonable to speak of the lot of such high intelligences as if it were *overruled* by the same fatality which confines a stone to the spot whereon it has fallen!

For the purpose of banishing for ever these delusions, it would be well to lay aside entirely the word necessity, which is ridiculously superfluous and redundant in some of its applications, and absurd or seductive in others. If, for example, we have occasion to speak of a known relation of equality or proportion, why not be content with the simple assertion, that the predicate is *true* of the subject? or that $a + b$ is equal to c ? Or, if a conclusion has been derived from a somewhat complicated series of proofs, so that a moderate asservation seems to be called for, let the word *certainty* suffice us. Certainty is the knowledge of truth, obtained by labor and research; and when by labor and research we have gained the knowledge of any complex system of relations, it may be granted that there is a propriety in speaking of the *certainty* of those relations: though in fact nothing more is meant than what is affirmed when the relation is expressed in the very simplest and most modest form.

found no data for inferring the one choice rather than the other - nor do they create any certainty of the matter - more than that of the

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If the noble liberty—the range, and scope, and unrestrained capacity of happiness, which is the distinction of rational agents of the higher orders, be the subject of discourse; and if we would express the fact that such beings rule their destinies through the changeful scenes of immortality by their knowledge and virtue, we shall do well to avoid the employment of a phrase which seems to imply that those destinies are *overruled* in some other way than by the combinations of knowledge, virtue, and power.

All that is important to ethics and theology is implied in the knowledge of the introvertible power of mind; and we must here observe, that its existence as a physiological fact—as a fact which forms the *elementary difference* between man and the inferior classes of sentient beings, has been too little insisted upon by ethical and religious controvertists; and though familiarly known to all men, has been (like ten thousand other familiar facts) overlooked by philosophers.

The Arminian divine, inwardly persuaded, he knows not on what ground, that human nature contains *a something* more than the passivity of brute matter, or of animal life, has recourse to the figment of Contingent Volition; and then, to give his unintelligible notion an appearance of consistency, has been led to the enormous error of denying the Divine fore-knowledge. Thus, in his zeal to defend one attribute of Deity he has demolished another. Why will he not be content with the simple principles of human nature, as known to all men, and as recognised in the transactions of every day, and with the plain evidence of the Bible, which always

takes up and supposes the existence of those principles?

His opponent, the Calvinist, spurning the absurdities of Arminian metaphysics, believes that, when he has scattered these sophisms, he has exhausted the subject of human agency, and may triumphantly return from the vanquished field to his own theological position; nor deems it necessary once to lay aside his high lenses, or to look abroad upon human nature as it shews itself to the *naked eye* of common sense. Then he goes to his Bible, cased in metaphysical certainties, and proceeds, without scruple or compunction, to apply the crushing engine of dogmatical exposition to all passages that do not naturally fall in with the abstractions which he has framed to himself. Meanwhile, men of sense are disgusted, and sceptics glory. How shall these evils be remedied?—how, unless by the prevalence of a better—a genuine system of interpretation?

But even without this better exposition, a great and important reform would spontaneously follow from a more vivid persuasion of the *reality* of the great facts affirmed in the Scriptures. Let but the quickening affirmations of the inspired writers be allowed to take effect on the ground of the ordinary motives of human life; let it but be believed that the Son of God has come to inform men (his fellows, by an ineffable condescension,) of a future danger to which all are liable; and to impart to them freely a benefit they could never have obtained by their own efforts; and then it will no more seem pertinent or necessary to adjust the terms of this message of mercy to metaphysical subtilties, than

it does to do the like when a friend snatches a friend from ruin, or when a father bears his children in his arms from a scene of perils. . How much mischief has arisen from the supposition that a *mystery* belongs to the matter of salvation, which waits to be cleared up by philosophy.

Philosophy, it is to be hoped, will at length work its way through its own difficulties. But the result to Christianity of so happy a success, would simply be, to set in a stronger light the enormous folly of obstructing the course of a momentous practical affair by the impertinences of learned disputation.

we dissent to this opinion. we think it absurd. all truth we think coinciding. Our class of truth does not call another class of truth, nor does it confer any other, and welcome any other, as a companion and a help-mate.

NOTES.

NOTE A. p. 18.

THE *devout* EDWARDS.—The *life* of Edwards should be perused by every one who reads his “*Essay on Freedom of Will.*” Let it be said that his style of Christianity might have borne some corrections; and let it also be admitted, that, in his modesty, and his low estimation of himself, and in his love of retirement, his melancholic temperament had an influence. After every deduction of this sort has been made, it must be granted, that this eminent man, whose intellectual superiority might have enabled him to shine in European colleges of learning, displayed a meek greatness of soul which belongs only to those who derive their principles from the Gospel. How refreshing is the contrast of sentiments which strikes us in turning from the private correspondence of men who thought of nothing beyond their personal fame as philosophers or writers, to the correspondence and diary of a man like Edwards! In the one case, the single, paramount motive—literary or philosophic vanity—lurks in every sentence, unblushingly shews itself on many a page, and when most concealed, is concealed by an affectation as loathsome as the fault it hides. But how much of this deformed self-love could the most diligent detractor cull from the private papers or works of the President of the New Jersey College? We question if a single sentence which could be fairly construed to betray the vanity or ambition of superior intelligence is any where to be found in them. Edwards daily contemplated a glory, an ABSOLUTE EXCELLENCE, which at once checked the swellings of pride, and sickened him of the praise which his powers might have won from the world.

Edwards (though, in listening to his own account of himself, one would not think it,) was a *man of genius*—we mean imaginative, and open to all those moving sentiments which raise high souls above the present scene of things. Among the reasons which inclined him to excuse himself from the proffered presidency, he alleges,—First, his own defects, unfitting him for such an undertaking, “many of which are generally known,” says he, “besides others which my own heart is conscious of. I have a constitution in many respects peculiarly unhappy, attended with flaccid solids; vapid, sily, and scarce fluids; and a low tide of spirits, often occasioning a kind of childish weakness, and contemptibleness of speech, presence, and demeanor; with a disagreeable dulness and stiffness, much unfitting me for conversation, but more especially for the government of a college.” This description of his mental conformation is curious, *physiologically*, as an anatomy of a mind so remarkable for its faculty of abstraction. May we not say, that this very poverty of constitution, this sluggishness and aridity, this feeble pulse of life, was *the very secret* of his extraordinary power of analysis? The supposition leads to speculations concerning the *physical* conditions of the mind, which must not here be pursued; but it may be remarked, in passing, that it must be from the copious collection and right use of facts of this sort, that progress will be made (if ever) in the science of mind.

But, notwithstanding the apparent coldness of his temperament, Edwards was manifestly susceptible, and in no common degree, of those emotions which are rarely conjoined with the philosophic faculty. Let an instance be taken from his diary:—“There seemed to be, as it were, a calm, sweet cast, an appearance of divine glory, in almost every thing: God’s excellency, his wisdom, his purity and love, seemed to appear in every thing; in the sun, moon, and stars; in the clouds and blue sky; in the grass, flowers, trees; in the water, and all nature, which used greatly to fix my mind. *I often used to sit and view the moon for continuance*; and, in the day, spent much time in viewing the clouds and sky, to behold the sweet glory of God in these things: in the mean time singing forth, with a low voice, my contemplations of the Creator and Redeemer. And scarce any thing among all the works of nature was so sweet to me as thunder and lightning;

formerly nothing had been so terrible to me. While thus engaged, it always seemed natural to me to sing or chant forth my meditations; or to speak my thoughts in soliloquies with a singing voice."

That Edwards, by constitution of mind, was more than a dry and cold thinker, might be proved by reference to many passages even in his "Essay on Free Will" as well as his less abstruse writings. He was master in fact, of a simple eloquence, of no mean order:—"Holiness, as I then wrote down some of my contemplations on it, appeared to me to be of a sweet, pleasant, charming, serene, calm nature; which brought an inexpressible purity, brightness, peacefulness, and ravishment, to the soul. In other words, that it made the soul like a field or garden of God, with all manner of pleasant flowers; all pleasant, delightful, and undisturbed, enjoying a sweet calm, and the gently vivifying beams of the sun. The soul of a true Christian, as I then wrote my meditations, appeared like such a little white flower as we see in the spring of the year, low and humble, on the ground; opening its bosom to receive the pleasant beams of the sun's glory; rejoicing, as it were, in a calm rapture; diffusing around a sweet fragancy; standing peacefully and lovingly in the midst of other flowers round about; all, in like manner, opening their bosoms to drink in the light of the sun. There was no part of creature holiness that I had so great a sense of its loveliness as humility, brokenness of heart and poverty of spirit: and there was nothing that I so earnestly longed for. My heart panted after this,—to lie low before God; as in the dust, that I might be nothing, and that God might be ALL, that I might become as a little child."

These sentiments were not the exuberances of a youthful melancholic ardor, but gave tone to the character and conduct of the man through life. To accomplish the will of God on earth was the ruling motive of his soul; and to have sought his own glory, he would have thought an enormous departure from true virtue. If his *definition* of true virtue be liable to objection, his *exemplification* of it shewed him to have understood practically the secret of all substantial goodness.

NOTE B. p. 25.

The pendulum-spring of a watch is a very nice instrument, and one in the construction of which three sciences, besides manual skill, are called in to give their aid. In the first place, the due action of the shining thread, which maintains the oscillatory movement of the balance-wheel, depends upon its conformity to the *mathematical* conditions of the spiral curve. Then must be considered the doctrine of elasticity, "*ut tensio, sic vis,*" and the mechanical laws of motion, which are to determine the necessary proportion between the *thickness* of the spring and its *length* and then, too, the very delicate calculation of the *taper*, as connected with the kind of *escapement* with which it is destined to act,—one kind of escapement requiring a spring of equal bulk throughout, while the more accurate kinds demand a diminishing substance from end to end. The third science implied in the proper construction of this little agent, is that which teaches the method of imparting to the rude metal of which it is formed, its elastic property, and of tempering it in the due degree. In fact both chemistry and metallurgy are concerned in this business; and in the manufacture of steel for watch-springs, much of that *peculiar* or *workshop* knowledge is demanded which is not to be found in books. Now, the exact movement of the pendulum-spring is that *ultimate result* which brings to a *point*, if we might so speak, the converging lines of several distinct sciences. Who shall estimate the confusion that must arise from an attempt to treat as one these several calculations and processes, which are *essentially different*, and which must be held apart until they are combined in the various conditions of the spring?

That practical science which relates to THE STRENGTH OF MATERIALS, in like manner combines the principles of several sciences. Let the problem be, to determine the necessary breadth and depth of the girder of a floor, that shall sustain a given weight, the length of the span also being given. Now, these dimensions are not to be found without having recourse, *first*, to the higher mathematics, or these purely *abstract* truths which are independent of all the laws of the actual world, and which would be what they are, although there were no such principle as gravitation, or no material system. In the next place, this law of gravitation must be understood, in order to find the point of the strain, as well as

the true proportion between depth and breadth. And, *lastly*, the *peculiar properties* of the several species of timber must be precisely known, and *known by experiment*. The proportion between depth, breadth, and length, will vary, as the compressibility, cohesive force, toughness, &c. of oak, fir, &c., or of the several kinds of oak or fir vary. British, Riga, Norway, American oak, will give each its precise dimension to the girder; and it is not the *mathematician*, but the *naturalist*, who must inform the practical man on these points. (See Tredgold's "Elementary Principles of Carpentry," section x. on the Nature and Properties of Timber. The same able writer's treatise on the "Strength of Iron" affords a multitude of instances of a similar kind. See also Barlow's "Essay on the Strength and Stress of Timber.")

Now, let it, in these cases, be supposed that the mathematician, dogmatically confident of his demonstrations, were (and this is in fact the fault of the earlier mathematicians, and not seldom of Leibnitz,) to determine the problem above mentioned, *as if it were a pure abstraction*, or, if he referred loosely to certain vulgar facts concerning the strength of timber, were neither to make experiments of this physical kind, nor to swerve at all from his mathematical processes in regard to them:—in this case all his products must be erroneous. Or, though correct *mathematically*, they would be inapplicable to the real world, and useless, or worse than useless, in practice. It is but of late that these cases of COMPLICATED PRINCIPLES have been made matters of science. We must not wonder, therefore, that, within the hazy precincts of intellectual philosophy, distinctions and *separations* of a parallel kind have scarcely at all been regarded. Now, to return to the instance before us, of the "Treatise on Freedom of Will," the argument is, *in the main*, abstract, but not purely so; for besides the admixture of Scripture proofs, the physiology of the human mind is taken up as its *material* or subject, and yet *far too loosely and vaguely* to satisfy those who look at human nature as an object of natural philosophy. Or, to refer allusively to the illustration above given, Edwards is an accomplished *mathematician*; but he thought little, or did not take into his calculations, the difference between *oak* and *fir*. His "Treatise on the Will" is, to a true philosophy of human nature, as the demonstrations of Leibnitz—*Demonstrationes Novæ de Resistentia Solidorum*—are to modern mechanical science.

NOTE C. p. 26.

The ingenious author of "Studies of Nature" toiled vainly to establish his theory of the tides on the principle of the melting of arctic snows and ices: he should have lived before Newton, and might then have enjoyed his century or two of celebrity. He sought for a particular truth among a set of causes in which it was not to be found. Pliny *might* have arrived at the real fact, for he set foot upon the true course, as did Bacon; but St. Pierre could never have reached it. The doctrine of tides furnishes another example of the combination of causes of different orders in a single result. It is asked, why does the Thames at London bridge fill its bed at three o'clock to-day? Shall it be said, because the waters of the ocean obey the law of gravitation, and are heaped into a mighty wave by sun and moon. But this explanation, though the true one, will not adjust itself to the facts; and we must calculate all the local causes, the turns of the river, the form of the bed, the currents of the channel, before we can bring the abstract theory into correspondence with the actual event of high-tide at three o'clock. These essentially different classes of causes must both be calculated, but must not be confounded or confused.

NOTE D. p. 27.

The disposition of the French people, as compared with the English, to ascend *too high* in the discussion of practical questions, is a very remarkable fact. We should not satisfactorily account for it on one ground only. It must not be said of the English, that they are not a philosophical people; yet it is true that, whenever the substantial interests of life are under discussion, they shew a determined dislike to abstract or metaphysical argumentation;—they will listen to nothing that is not unquestionably pertinent and proximate. The good sense, the love of despatch and of perspicuity, which belong to the mercantile character, are here apparent. And may we not also say, that the mingled modesty and pride of the English character have a share in producing the same effect? An Englishman avoids speaking of matters to which he has not given sufficient attention; he will not expose himself to ridicule by venturing beyond his line: he therefore leaves philosophy to philosophers, and talks of politics and commerce only as matters of fact.

But the Frenchman has no such scruples—no such fears: whether artisan, bourgeois, soldier, or noble, he is master of all sciences—a cyclopædist; and is as ready in discourse upon abstract principles as upon the merits of an actress. Then, the French people, at the time of the breaking out of the revolution, had not enjoyed the advantage of possessing any middle ground between the sottish absurdities of their national religion, and the wild theories of their atheistical teachers. They had no alternative but to be devout (in the sense of their priests), or to be mad in speculation. And as they had no reasonable religion whereon common sense might exercise itself, so neither had they any constitution which might save them from the extreme of the old regimen on the one side, or of the republican delirium on the other. Neither in religion nor politics could they choose, except between the faith of dotards or the impudence of charlatans; and if they scorned to doze and dream, must run frantic in extravagance. Moreover, the revolution brought upon the stage of public life multitudes of men whose habits and education had given them no qualification whatever for the transaction of the practical business of government. These, if they would figure at all, must do so as philosophers. For it is a much easier thing to talk profoundly as a metaphysician, than wisely to reform existing institutions, or than to carry forward the every-day business of state. The metaphysical fashion, it is to be feared has not yet wrought all its mischief in France. To some causes of a similar kind may be traced much of that want of good sense which deforms the German philosophy and theology.

NOTE E. p. 27.

There is not merely a natural connection between despotism, and mysticism, and fatalism, and atheism, and pantheism; so that it shall be almost invariably true, that where political systems, like those of Asia, are found, we shall find also, among the learned, some such form of abstruse and absurd philosophy; but it is the scorching heat of despotism which imparts to these doctrines their power of mischief, by bringing them out from cells and colleges, into the markets, and fields, and homes of common life. The combined influence of good government and Christianity, if it does not disperse metaphysical errors altogether, will

unfailingly confine them to the closets of the sophists with whom they originate.

NOTE F. p. 34.

Every one is aware of the beneficial tendency of genuine science; but it is not, perhaps, always duly remembered, that every practical application of the principles of mathematical, mechanical, chemical, or physiological philosophy, is a new affirmation of the Divine benevolence towards man. Shall we say, it is a fresh text, translated from the unwritten Bible of God's creation, corroborating our faith in the paternal care of Him in whom we live, and move and have our being? And this might be said even if these beneficial discoveries were the results of chance. But when they come to us as the product of laborious intellectual operations, they assert the same great truth with a peculiar emphasis, inasmuch as they not merely declare the Divine purpose—that man should be well accommodated, and aided, and comforted, in this his terrene abode; but that he should win every advantage by the exertion of his higher faculties. Each benefit derived from a better knowledge of nature is a premium of mind—a boon given as the reward of intellectual effort: and while it declares in one of its inscriptions that the Maker of the universe is the friend of man, in the other it exhorts man to be his own friend, by the diligent employment of his mental powers.

Every branch of modern science abounds with instances of remote correspondences between the great system of the world, and the welfare of man in the artificial (*the truly natural*) condition to which knowledge raises him. If these correspondences were single or rare, they might be deemed merely fortuitous; like the drifting of a plank athwart the track of one who is swimming from a wreck. But when they meet us on all sides and invariably, we must be resolute in atheism not to confess that they are emanations from one and the same centre of wisdom and goodness. Is it nothing more than a lucky accommodation which makes the polarity of the needle to subserve the purposes of the mariner? Or may it not safely be affirmed, both that the magnetic influence (whatever its primary intention may be) had reference to the business of navigation—a reference incalculably important to the spread and improvement of the human race; and that the

discovery and the application of this influence arrived at the destined moment in the revolution of human affairs, when, in combination with other events, it would produce the greatest effect? Nor should we scruple to affirm, that the relation between the inclination of the earth's axis and the conspicuous star which, without a near rival, attracts even the eye of the vulgar, and shews the north to the wanderer on the wilderness, or on the ocean, is in like manner a beneficent arrangement. Those who would spurn the supposition that the celestial locality of a sun, immeasurably remote from our system, should have reference to the accommodation of the inhabitants of a planet so inconsiderable as our own, forget the style of the Divine works, which is, to secure some great or principal end, compatibly with ten thousand lesser and remote interests. Man, if he would secure the greater, must neglect or sacrifice the less: not so the Omnipotent Contriver. It is a fact full of meaning, that those astronomical phenomena (and so others) which offer themselves as available for the purposes of art; as, for instance, of navigation, or geography; do not fully or effectively yield the aid they promise, until after long and elaborate processes or calculations have disentangled them from variations, disturbing forces, and apparent irregularities. To the rude fact, if so we might designate it, a mass of recondite science must be appended, before it can be brought to bear with precision upon the arts of life. Thus, the polarity of the needle, or the eclipses of Jupiter's moons, are as nothing to the mariner, or the geographer, without the voluminous commentary furnished by the mathematics of astronomy. The fact of the expansive force of steam must employ the intelligence and energy of the mechanicians of an empire, during a century, before the whole of its beneficial powers can be put in activity. Chemical, medical, and botanical science is filled with parallel instances; and they all affirm, in an articulate manner, the twofold purpose of the Creator—to benefit man, and to educate him.

Now, in the metaphysical dogmas of absolute and universal scepticism, and of philosophical fatalism, there is a conspicuous contrariety to the testimony of all other sciences *in both these respects*. For these dogmas, in the first place, represent man to be the helpless victim of an inexorable power, rather than the

child of an indulgent parent; and then, instead of courting and cherishing his energies and his intelligence, they paralyse the one, and astound the other, by proving to him that his toils are idle—his notions of truth absurd or unfounded—his convictions illusory—his deductions fallacious, and his whole nature a paradox. If, then, this order of metaphysics claims respect, *as a science*, it is contradicted by sciences better established than itself. If it be the mere reverie of a debauched intelligence, then we cheerfully allow it all the honor that is usually thought due to meditations of that quality.

NOTE G. p. 37.

The entire mass of intellectual and theological philosophy divides itself into two classes, the one irreconcilably opposed to the other. The first is, in its spirit, and in all its doctrines, consentaneous with human feelings and interests. The second is, both as a whole, and in its several parts, paradoxical. The first is the philosophy of modesty, of inquiry, of induction, and of belief. The second is the philosophy of abstraction, as opposed to induction; and of impudence, as opposed to a respectful attention to nature and to evidence. The first takes natural and mathematical science by the hand, observes the same methods, labors to promote the same ends; and the sisters are never at variance. The second stands, ruffian-like, upon the road of knowledge, and denies progress to the human mind. The first shews an interminable and practicable, though difficult ascent. The second leads to the brink of an abyss, into which reason and hope must together plunge. The first is grave, laborious, and productive. The second ends in a jest, of which man, and the world, and its Maker, are the subject.

The paradoxical philosophy, though always the same in principle, takes its style from the manners of those by whom it is entertained. In Scotland and in England it has ordinarily been decent, specious, veiled:—in France, bold, explicit, shameless. Hobbes, indeed, who first gave to England a philosophy of this order, as he connected himself with the most profligate party that has ever made a figure upon the stage of English affairs, assumed a tone which is not English: as a writer he is not indigenious to

our literature. Hume had a better tact, and knew how to clothe the same inimical philosophy in a garb of elegance and of sanctimonious modesty. If Hume be compared with Diderot, Helvetius, and their school, the difference between England and France, at that time, will present itself to the eye. The sense and substance are the same; but the dialect and the fashion are very dissimilar. It is consolatory to find, that when the doctrines of this anti-human, or unnatural philosophy, are to be prepared for holding intercourse with the lower classes in our own country, and when they are to unclothe themselves, and appear horrid and hirsute, as proper savages, it is necessary to bring them over from France.

The very same distinction runs through theology, and divides in two, some of those religious bodies that, in name and political being, are one. There is a theology which takes up the constitution of human nature, and brings to bear upon it, kindly and consentaneously, the remedial powers of Christianity. And there is a theology which makes a jest of human nature, which insults its woes, denies to it any available aid; and is, if it must be called a *Gospel*, a gospel of hostility and of mockery. The sisterhood and relationship of the sceptical or atheistical philosophy, and of the Antinomian theology, might be traced in a striking similarity of sentiment and expression; and not a few passages might be taken from the pages of the most licentious of the French infidel writers, which, with the substitution of here and there a phrase, would seem to come very consistently from the lips of certain notorious divines. If there be any important difference it is, that the preacher surpasses his brother the atheist both in rancor and in impudence.

NOTE H. p. 38.

By the real sciences, those are intended that rest upon evidence which secures the consent of all who are competent to comprehend it; and which therefore excludes sects and oppositions of opinion. If Christianity be a system of metaphysical deductions, it must, of course, maintain itself among other principles of the same class; and must bring all its positions into accordance with them; or must vanquish them with the weapons of scholas-

tic warfare, and must appeal to abstract truths on every occasion of controversy. But if it be simply and solely a matter of history (as to its truth) and of verbal affirmation (as to its doctrines), then nothing can be more enormous than the attempt to bring the general fact, or the particular affirmations, into collision with the principles of metaphysical science.

Even in those instances in which one science bears manifestly upon another, as, for instance, chemistry upon vegetable and animal physiology; or where a yet unformed science stands between two that are more advanced than itself: as geology stands between mechanical and astronomical science on the one side, and chemistry on the other; the one is not allowed to trample upon the other; nor is it permitted that the infant science should be oppressed or brow-beat by those that are more mature. As, for example:—astronomical and mechanical calculations may seem to demand the belief, that the earth is a hollow sphere; and chemical science may appear to favor the same supposition. Meanwhile, the geologist is allowed to collect his own sort of evidence, bearing upon the matter of fact, and to pursue his own mode of reasoning upon the probable history of the crust of the earth, and to deduce thence his conjectures, without being intimidated by either the astronomical calculation, or the chemical theory: and in whatever result his inductions may issue, that result would never be scouted because not easily reconciled with the doctrine derived from another line of reasoning. The modesty of true philosophy bequeaths such apparent discordances to the sagacity and industry of a future age.

The reason of this procedure is obvious.—An inference derived from an undoubted fact has no retrospective efficiency to invalidate that fact. An inference drawn from one fact may stand opposed to an inference resulting from another. But these facts cannot affect each other circuitously through their inferences, as a medium of communication; for this were to give to them such a retrospective power. The two facts stand independently on their proper evidence, and send forth their branching consequences irrespectively of each other. It might happen that some remote consequence of the truth that 90 is to 115, as 18 to 23, might seem to interfere with a remote consequence from the other truth, that the sum of the squares of the two sides is equal

ters, and phrases, from that time to this. The Reformers did indeed reject both Aristotle and the Pope, as authorities in matters of religion; and they turned with a sincere and manly resolution to the inspired writers, as the only teachers of doctrine. But they did not rid themselves (any more than did the Platonic fathers) of the intellectual habits which their education had given them; and while they looked to the Scriptures alone, and looked to them with all imaginable reverence, their method of interpretation was thoroughly metaphysical;—their rule of doctrinal harmony or consistency was drawn from the logic of the middle ages; and the method of interpreting Scripture, as Bacon taught the world to interpret nature, entered not the mind of one of them.

The Reformers were commanding spirits, and they effected the greatest revolution in human affairs that the world has witnessed. But an absolute pause has since ensued. The church has seen, indeed, very many zealous and accomplished divines; but no commanding spirits, from the age of Luther and Calvin to the present day. Interpretation is now almost what they left it. Criticism has indeed been immensely advanced, and the riches of erudition have been accumulated in vast masses around the sacred text. But every interpreter follows his predecessors in the wheel-way of his denomination; and leaves theology too much what natural philosophy was at the time of the publication of the *Novum Organum*. It is imperfectly or dimly seen, that the Bible is the work of the same Hand that built the world, and must therefore be studied in the same method.

History is never so instructive as when single and special themes are pursued through the course of ages. It is much to be desired that a history of Biblical exposition should be given to the church. Not a history of criticism and erudition, but of principles and theological philosophy. It should have its commencement with the earliest Jewish expositors, among whom would be found the rudiments of all the abuses that have since belonged to this department of intellectual labor.

NOTE K. p. 42.

Hume was far too sagacious not to perceive, what he was far too astute to tell his reader, that his argument against Christian-

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ation.
It is not therefore to be understood that
the same kind of philosophy may be often found
anywhere else in the world.
It is not therefore to be understood that
the same kind of philosophy may be often found



ity, if good for any thing, ought to pass as a plough-share of destruction over the entire field of human affairs. It is amazing that so much importance should have been attached to so puerile a conceit—a conceit which, if divested of its garb of philosophic gravity, is vapid nonsense, that does not recommend itself even by the ingenuity that often makes a foolish sophism amusing. And yet such are the immunities and privileges granted to any sort of sceptical argument, that this same sophism, refuted a hundred times, is still respectfully regarded by writers of repute. The proper answer, or at least a sufficient one, has very recently been given (Edinburgh Rev. No. 104, Art. VI.) to a new expression of Hume's quibble, but given with a reserve in favor of infidelity, and with a closing insinuation against the Christian evidences, for which it would have been far more manly to have substituted a candid avowal of unbelief. The author of the book, to which, in this, and another instance, (Second preliminary Dissertation, prefixed to the 7th ed. of the Encycl. Brit. p. 354) an importance is given that must have been founded on some other reason than its merits, urges the argument against Christianity with all the simplicity of one who has never been reminded, that it presses, with equal force, upon every transaction of common life, and upon all the methods of modern science. The reasoning of Essay III. on "the Fundamental Principle of all Evidence and Expectation," if sound, disperses with a breath (to take one example from a hundred) the modern chemistry; for it not only proves it to be absurd to receive the testimony of experimenters who describe any other combination of substances than those we have personally observed, but it forbids a man to believe even the evidence of his own senses, when a new phenomenon meets him! Is this *philosophy*? if not, what epithet shall we bestow upon it? In every case of a deviation from that order of events which hitherto we have observed, instead of either questioning the evidence of our senses, or resolutely refusing to receive good and abundant testimony, and instead of supposing that a dissolution of the connection of cause and effect has happened, we simply presume that some new and unknown cause has come in to disturb the usual course of events. This presumption is the very instrument of all discovery in experimental philosophy. Every new, or unexpected, or inexplicable appearance, (and such are of

in the course of Creation...

(1) *man's...*

13 The brute creation, man's...
 ...the several species. (1) The...

very frequent occurrence in a course of chemical experiment) suggests the conviction that an unknown cause is present: then follows the hypothesis which is to guide the way in making fresh experiments, with the view of detecting the hidden power. Now this process is not merely abstractedly reasonable, but has been abundantly authenticated by the actual results of such processes.

If such a case may at all be supposed as that adduced by the author of these Essays—namely, the testimony of many credible witnesses to the fact, that a cubic inch of ice remained undissolved when exposed to the heat of a furnace; instead of taking the course which he recommends—that of rejecting, by a violence upon our own convictions, the testimony of a hundred competent and unexceptionable witnesses, we, in the spirit of true philosophy, should first accept the fact *so attested* as indubitable; and should then confidently presume—not that Nature had forgotten her laws in that instance, but that some extraordinary cause was present to intercept the operation of heat upon ice. With the hope of discovering this extraordinary agent, we should rigidly examine all the circumstances of the experiment,—should frame every conceivable hypothesis, and should put each in turn to the test; and if after all we failed in our endeavors, should simply record the fact as unexplained, and bequeath it to the next age, when perhaps a perfected philosophy may clear up this, and many other difficulties.

But now let it be supposed, that the hundred competent persons who have affirmed that, in their presence, ice remained undissolved in a furnace, were to explain the matter, by saying that the water, before its congelation, had been impregnated with a newly-discovered chemical agent, which had the property of converting water into an indissoluble crystal. If this affirmation be also properly attested, then, what inconsistency remains?—none; except on the part of the sceptic, who had declared, in the true style of ignorance, that, “nobody should make him believe what he had not seen with his own eyes.”

It is scarcely necessary to apply the argument to the case of the Christian miracles. The author of these Essays admits, page 268, that our involuntary belief of the uniformity of causation, compels us to suppose that “the admirable appearances of design” exhibited by the material world, have been the production of an

light the same source. So the Bible has its evidence, and we are to begin our study with the

parts of the economy of human life. They are intrinsically inimical to man, and might safely be rejected, unexamined, simply because they stand in contrariety to all the sciences, as well as to the constitution and universal sentiments of human nature.

But a system, such as the idealism of Berkeley, which leaves all relations and sentiments, just what it found them, and is in fact a *pure theory*, without inference, cannot be affirmed to have any intrinsic quality hostile to the principles of morality or religion. Nevertheless, it may happen that, among those who must understand whatever they hear in a gross sense, the doctrine that nothing exists, or can exist, but mind, might produce some dangerous perplexity. This ill consequence is clearly accidental, and an equal inconvenience might happen to result from the best established truths. Or, to take another instance:—an inference unfavorable to revealed religion has been hastily derived by its enemies, from some facts of geological science; and the groundless fears of the friends of religion have encouraged the ill intentions of infidels. But in these cases all the mischief has arisen either from a misunderstanding of the facts, or from an unwarrantable deduction of consequences.

Now the case is parallel in the instance of the doctrine of materialism. It may become pernicious by a popular misinterpretation, or by a malignant and sophistical comment, framed by those who are ever ready to take bad advantage of the ignorance of the multitude. But in its essence, this doctrine, false as it is, stands precisely on a level with its antagonist, idealism, and leaves all questions of morality and religion just what and where they were. The question concerning the materiality or spirituality of mind, resolves itself into a futile inquiry concerning the *inner form* of substances (*Novum Organum*) which is always indifferent, both to theory and to practice. Whether heat be a diffused substance, or a mode of movement; an emanation or a vibration; is unimportant both to science and to art. Such is the question concerning the occult constitution of thought;—a question never to be determined, but one which *might* be determined in this manner or in that, without in the remotest degree affecting (except by vulgar prejudice) the doctrines of the immortality and future responsibility of man—doctrines which rest on far surer grounds than that of metaphysical demonstration.

But would the gentleman say
that the doctrine of *Idolatry* can
really be demonstrated?

NOTE M. p. 44.

The supernatural reaches us in the Scriptures not *supernaturally*, but precisely in the same way in which all other matters, conveyed by document, reach the parties interested. *B* holds a reversionary claim to a title and estate by possession of parchments, the authenticity of which he can satisfactorily establish. *C* holds an interest in the future life, also by writings, the validity of which he can prove. The *subject matter* of the two deeds or testaments affects not at all the mode of conveyance; and if the claims of *B* and *C* are severally called in question, both must defend their pretensions by the same process of argument; or, if any abstract principle can be adduced which would destroy, *a priori*, the heavenly expectations of *C*, it must at the same time annihilate the secular hopes of *B*.

All the difficulty in the argument for Christianity proceeds from the refusal of the opponent to abide by the established conditions of documentary proof. This difficulty has been immeasurably enhanced by that fatal alliance between metaphysics and religion, which theologians have encouraged—"et zelum religionis cæcum et immoderatum."—*Nov. Organum*.

NOTE N. p. 46.

The rude and laborious mechanical or chemical processes which are carried on among a people destitute of physical science, may be regarded as standing parallel with those conventional maxims of morality, and those imperfect social institutions, which exist among the same nations, if not yet visited by revealed religion. Now, previously to the introduction of physical science among such a rude people, the question might be started by them, Whether the new principles may not be expected to impede, baffle, and subvert, the existing arts? To this question it might be replied, That the existing arts are nothing but science in a broken or unconnected form; that is to say, single inferences from single facts, accidentally discovered; and that, therefore, when the entire course of nature, of which these facts are insulated parts, is known, the practical inferences must be more in number, and more consistent one with another. In other words, that the result of an extended knowledge of nature must be beneficial, because even a partial knowledge of it is so.

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The reply would be the same to a question concerning the utility of moral, or, we should say, Divine science. The uninformed sentiments of mankind lead them to establish certain social usages, which are found to be beneficial, and indeed necessary. It may therefore be safely inferred, that a more extended or more exact knowledge of the moral nature of man, such a knowledge as Christianity imparts, will lead to better institutions, and will suggest better rules of conduct. Now, for the same reason that an uninformed people ought to reject a pretended system of physical science which, instead of aiding their agriculture or their manufactures, brought their whole industry to a stand; so might they properly reject a moral philosophy which, instead of favoring the existing good principles of the people, asserted the absurdity of all moral sentiments, and told the multitude that there are no actions that merit either praise or blame. Such a philosophy rests on the principle, that nature and man are at variance; but physical science proves the contrary; and never makes a discovery which does not a-new declare that nature is his friend.

NOTE O. p. 48.

The author would not be thought ignorant of the "Essay on the Equity of Divine Government, and the Sovereignty of Divine Grace," or unwilling to acknowledge the great and perhaps unrivalled merit of the late Dr. Edward Williams: he cordially joins in the praise which a philosophic minority within the religious world has bestowed upon that able and amiable divine. But whatever his merits may be, as a profound and calm thinker, it will hardly be affirmed that he has been much more successful than was his predecessor and father, President Edwards, in his endeavors to destroy the *Biblical difference* between Calvinists and Arminians, by metaphysical distinctions. The Scriptural system of Dr. Williams may be more consistent than the Scriptural system of his opponents: and again, his philosophy is certainly better than theirs. But has he brought philosophy to bear upon the RELIGION of TEXTS, in any such manner as, by its conspicuous success, to recommend that method of argument? Some, whose opinions are entitled to much respect, would reply in the affirmative; and many would reply in the negative, whose

opinions, on matters of abstruse thought, are entitled to very little. The reader may gather the writer's opinion, that the attempt to decide matters of Christian doctrine by abstract demonstration, has not been placed in a decidedly more auspicious light than before, by the "Essay on Equity and Sovereignty." It may, nevertheless, be true, that that Essay occupies a very high place of merit in the circle of modern theological literature.

The author must here beg to be excused from making any explicit reference to some highly reputed modern writers on the Arminian side of the controversy, of whom he could not speak favorably as masters of intellectual science: and it comes not within his province either to praise or blame them as expounders of Scripture.

NOTE P. p. 48.

The limits of a note would be insufficient properly to explain to those who may not hitherto have given attention to the subject, that remarkable condition of all the Divine operations which makes them subserve, *by one and the same constitution of parts, or succession of causes and effects*, two, three, or more, independent purposes. No single term has, as yet, been authenticated by the usage of philosophical writers whereby this admirable complexity and simplicity may be designated. And, indeed, the subject altogether has received less attention than it deserves. Nevertheless every one knows that the material world abounds with instances of this sort,—or, to speak more properly, that the whole system of nature is a complex simplicity,—a machinery which, with one set of powers and parts, and one continuous movement, accomplishes a great variety of ends; and yet in such manner that the entire machinery is specifically proper to each of those purposes.

The same admirable principle presents itself again to notice in that highly complicated system of which man and his agency is the subject; and it can be in no other way than by an illustration of this principle, that the doctrine of Providence can be placed in the light, or freed from urgent difficulties. The Divine operations shew always the same character; and the Bible therefore, because it is the work of God, is in this respect also in analogy with nature and providence.—"Id etiam in omni majore opere

Providentiæ evenire reperitur; ut omnia sine strepitu et sonitu placidè labantur; atque res planè agatur, priusquam homines eam agi putent aut advertent."—BACON.

NOTE Q. p. 49.

It is a matter of some importance to understand that relative imperfection, and consequent *uncertainty*, of intellectual philosophy, in all its branches, which results from the vagueness and variability of its signs or terms. The closeness of the connection between theory and practice, science and art, will be found always to bear proportion, not so much to the comprehensiveness or symmetrical perfection of the former, as to its *precision* and its *fixedness*. But precision and fixedness can be secured only by a rigorously exact system of notation; or, in the experimental sciences, by an invariable and intelligible nomenclature. This high advantage is enjoyed in the most absolute degree by the mathematical sciences: hence it is that the connection or correspondence between the higher mathematics and those arts of life which are dependent upon them; is liable to no hesitation or dispute.

But let it be supposed (if indeed such a supposition can be entertained) that mathematical truths were deprived of their means of definite expression, and could only be made known in the mode of a loose and changeable description. In this case the practical or *available value* of these truths would be so much lowered, that occasions would often arise wherein the vulgar rules—the *nostrums* of workmanlike skill and artisan experience, would be safer guides than those high truths; and it would be better that practical men should grope their way in the clumsy methods of manual dexterity, than trust themselves to the direction of science. This never actually happens, because mathematical science is rigorously exact in its terms, and invariable in its expressions.

Yet this low relative value, or available significance, of scientific principles, is always the disadvantage of intellectual philosophy; and hence it hardly ever comes forward to direct or control the business of life, without bringing with it an equal chance of deranging, confusing, or misdirecting the existing course of practice. Or, to state the same thing in other terms, so as to

place it in direct contrast with mathematical science:—The value of the principles of intellectual philosophy is so much depreciated by the vagueness of its signs, that it can barely maintain equality with (in fact is much inferior to) the vulgar or popular axioms, and maxims, and modes of procedure, which have grown out of the common sense and experience of mankind. In all practical questions, therefore, it is at least as safe to abide by those common principles, as to follow the instructions of science. The practical man, the statesman, the teacher, and the divine, should do what the artisan ought to do, if mathematical science had no precise language, that is—listen much more to experience and common sense than to philosophy.

It follows from the incurable imperfection of intellectual science, that when a pretended demonstration, derived from it, challenges a right to disturb or overrule any existing order of things, which rests upon the basis of experience or known facts, the good sense of mankind should send it home to the closet of the speculatist whence it issued. And now, if it were asked, in what relation the principles of intellectual philosophy stand to the affirmations of our *documentary* religion;—we should find an answer by recurring to the supposition, that the mathematical sciences possessed no definite or invariable signs, and could only express themselves in the language of vague description; and should then, moreover, suppose that a super-human intelligence, which had at command the entire compass of these sciences *in a definite form*, were to confer upon the mechanic arts a centenary of precise, though unconnected rules of practice, drawn from that absolute science. In such a case, it would plainly be the wisdom of artisans and practical men, rigidly to adhere, on all occasions, to the hundred rules. Nor could any thing be more unreasonable than to stand hesitating between one of these *definite rules*, and some vague dogma of that unfixed science, which, having no determinate medium of expression, could reach no certain conclusions, and must always lie open to immense miscalculations. It is unnecessary to apply our illustration to the case of the relation between metaphysical science and Christianity. But if the reader thinks that the disadvantage of the former has here been too strongly stated, his attention is directed to some confessions on this subject drawn from unquestionable authorities.—“At verba

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Content?

ex captu vulgi imponuntur. Itaque mala et inepta verborum impositio, miris modis intellectum obsidit. Neque definitiones aut explicationes, quibus homines docti se munire et vindicare in nonnullis consueverunt, rem ullo modo restituant. Sed verba planè vim faciunt intellectui, et omnia turbant; et homines ad inanes et innumeras controversias et commenta deducunt.”—Again: “Credunt homines rationem suam verbis imperare; sed fit etiam ut verba vim suam super intellectum retorquant et reflectant; quod philosophiam et scientias reddidit sophisticas et inactivas.”—*Nov. Organ.* Aph. 43 et 59.

Locke has enlarged upon the imperfection of words, with great force and fulness, in many parts of his *Essay on Human Understanding*: the reader hardly needs to be referred to the particular passages: he will doubtless call to mind the ninth chapter of the third book. Leibnitz speaks to the same effect. Reid says: “The language of philosophers, with regard to the original faculties of the mind, is so adapted to the prevailing system, that it cannot fit any other; like a coat that fits the man for whom it was made, and shews him to advantage, which yet will sit very awkwardly upon one of a different make, although perhaps as handsome, and as well proportioned. It is hardly possible to make any innovation in our philosophy concerning the mind and its operations, without using new words and phrases, or giving a different meaning to those that are received.”—*Inquiry*, chap. i. sect. 2.

Dugald Stewart professes, more than once, his indistinct hope, that the project of a philosophical language might be realised, in order to obviate the inconveniences that arise from the use of an instrument of thought which was constructed by the vulgar, and with no view to the purposes of science. See *Elements*, chap. iv. sect. 4. See also chap. vii. sect. 2. p. 495. 3d edition.

“And here I cannot help pausing a little,” says the same elegant writer, “to remark *how much more imperfect language is than is commonly supposed, as an organ of mental intercourse.*”—*Philosophical Essays*, p. 207, 3d edition.

But, perhaps, this great and incurable disadvantage has never been more forcibly represented than by a distinguished living writer, who so strongly states the difficulty with which the intellectual and moral philosopher has to contend, that the reader would be almost justified in at once withdrawing his attention

from a science which, by the confession of so competent a master, can never *become scientific*. See the Introduction to the Dissertation on the Progress of Ethical Philosophy, by Sir James Mackintosh, prefixed to the 7th ed. of the Encyc. Brit.

NOTE R. p. 54.

That want of a precise and invariable notation, adverted to in the last note, which has hitherto, and which must, perhaps, always rest as a capital disadvantage upon metaphysical science, and deprive it of almost all *direct utility*, need not impede the progress of the physiology of the human mind; if this latter science were entirely severed from the former. For a knowledge of nature, in any department, may be conveyed in a *descriptive form*, to which an absolute precision of terms is not essential.

A science may properly be said to have passed its period of infancy, or to have reached a degree of maturity, when the existence of sects and oppositions within its precincts is no longer possible;—or when its first principles, or its more important deductions, are no longer liable to be called in question by well-informed men. Thus, it may safely be said, that though mathematical, astronomical, mechanical, and physical science, may hereafter receive important additions, they have attained their maturity, and will not again be utterly subverted. Chemistry is reaching, or has reached, this maturity. Quite so much must not be affirmed of Geology. Political Economy stands perhaps on the same stage of hopeful growth. Far below it rests that system of quackery (founded, nevertheless, on real and important facts) to which the improper term phrenology has been assigned. If the phase *infancy* is thought to be unseemingly applied to a science so ancient as metaphysics, the author can think of none other that would be appropriate, unless the analagous word *dotage* were admitted in lieu of it.

NOTE S. p. 58.

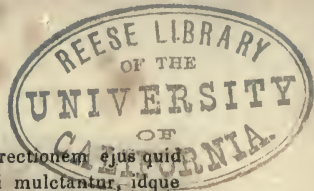
If the author were called upon to justify his assertion, that the modern philosophy of the human mind is, for the most part, a mere system of abstractions, he would think it enough to appeal

to that anxious trimming of phrases, which characterises all the more substantial portions of Brown's Lectures, and which belongs not less to the argument of later writers who have disputed his positions. The assertion is confidently advanced, that no branch of physics, whatever be its subject, demands this solicitous nicety, or will be promoted by the use of it.

NOTE T. p. 61.

The reader need not be reminded, that the application of the word *instinct* comprehensively, and without distinction, to all the actions of the brute orders, is a popular impropriety. One might as well call all the actions of man *rational*, as all those of the inferior tribes *instinctive*. When an animal acts in a manner which differs in no essential circumstance from a corresponding action in man, a delusion must be engendered by applying to the two actions different terms. *A* and *B* are transacting business together, and behave very much in the same manner. But *A* has far more intelligence, and more learning, and more virtue, than *B*. Shall we therefore say that *A* acts and speaks rationally, and *B* instinctively? This were to introduce a distinction which belongs not to the real points of difference. We should confine the word *instinct* to those instances in which a course *rational*, as to its end, is pursued by a voluntary agent, under circumstances which forbid the supposition that it springs from a perception or calculation of the connection of means and end. The instance usually adduced, that of the construction of the honeycomb, is one of the most proper that can be named, especially because it involves some of the highest and most abstruse principles of geometry.

Though man also has his instincts, as they are not of the sort which supply the want of reason (which he possesses), they afford him little aid in interpreting those operations by which, in animals, reason is anticipated or supplanted. Philosophical writers must be understood to use the words *reason* and *instinct* in a popular sense, when attributing the one to man as his prerogative, and the other to the brute as its blind faculty. The terms *reason* and *instinct* thus vaguely used, mean—more reason, and less reason. “*Bruto, quamvis ratione et libertate destituto,*” says



Leibnitz, "pœnas infligimus, cum id ad correctionem ejus quid confere posse judicamus; sic canes et equi mulctantur, idque felici cum successu." But if the brute were altogether destitute of reason and liberty, *in the same sense* in which the bee is destitute of both in building her cells, rewards and punishments, could have no operation or efficiency.

NOTE U. p. 65.

The precise term employed to designate the incessant activity of mind, or the constant succession of thoughts, is of very little or no importance to physiology. Those phrases which have been the subject of so much debate among modern writers, take their sense and propriety from the particular doctrine that is entertained relative to the law or laws that regulate the succession of mental states. The term that is chosen must depend upon the answer given to the question—What is the connecting principle that makes one thought or emotion, rather than another, succeed to the one which last occupied the mind? The fact of an incessant succession of thoughts, is independent of such inquiries; and no one who attentively observes the manners of any active animal, can doubt that this constant movement belongs as well to the brute as to the human mind.

NOTE W. p. 67.

It has been related, that a horse, pinched in shoeing, and turned out to field, has made his way, by leaping several fences, to the farrier's shop, and there presented the uneasy foot to the careless artist, who had so negligently exercised his craft. This, if true, is something more than association of ideas; for that principle would have led the nag any where rather than to the shop where he had recently been so ill treated. Ponies that have been long upon the same farm, not unfrequently acquire so high a degree of dexterity (if the word may be applied to the use of teeth and lips), in opening the fastenings of gates, that it becomes a very difficult matter to confine them to a particular pasture; and the contrivances resorted to for baffling their ingenuity suppose more or less of a corresponding faculty of inven-

tion. A horse shut up loose in a small stable, will with his nose break any glass within his reach; as it seems, for the purpose of admitting fresh air: this, too, implies a process of inference. The horse of the Bedouin, who is a member of his family, a guest at his table, and a party in every occurrence, acquires a degree of intelligence, as well as of docility, which very far surpasses any thing seen elsewhere. But even in England, where the horse is a slave and a captive, and is required to perform a quantity of labor which breaks the spirit; some few individuals display a sagacity that must appear incredible to those who see this noble animal only when performing his task upon the road. A personal knowledge of the sensibilities and mental qualities of the horse would tend to abate the cruel demands made often upon his bodily powers by business or pleasure. The pleasure-loving and the busy should remember, that if a horse is a *machine*, he is a *conscious* machine.

NOTE X. p. 68.

Offence ought not to be taken at the employment of these terms, in speaking of the more intelligent species of animals. The distance which divides man from the brute is indeed great; and that must be a most erroneous philosophy which would reduce it to a mere difference of degree, or shade of superiority. And while we distinctly apprehend the nature of that distinction, and keep in mind the elements which constitute the moral and intellectual dignity of man, no danger can arise from allowing to the inferior orders all the excellence they may fairly challenge. On the contrary, (as the author thinks) those attempts which have so often been made to degrade human nature to the level of the brute, are best met by a strictly conducted comparison, which, after exhibiting with truth and advantage the powers and capabilities of the inferior families of the sentient system, holds forth distinctly the new and higher elements of the human constitution. Thus is human nature seen to raise itself to the summit of a lofty scale, and to take its rank far above the highest of the subordinate species. Shall we say that in this method the paramount dignity of man is enhanced by the display of its *relative* nobility!

"Illud pro certo asserti possit," says Bacon, (*de Augmentis*, lib. ii. c. 2.) "grandia exempla haud optimam aut tutissimam afferre

informationem. Id quod exprimitur non insulsè in pervulgatâ illâ fabulâ de philosopho, qui, cum stellas, sublati oculis, intueretur, incidit in aquam: nam si oculos demississet, stellas illico in aquâ videre potuisset; verum suspiciens in cælum, aquam in stellis videre non potuit. Eodem modo sæpè accidit, ut res minutæ et humilies plus conferunt ad notitiam grandium, quàm grandes ad notitiam minutarum." Good text for a new Essay on the Human Understanding!

NOTE Y. p. 69.

If the phrase *functional equality* needs explanation, it may thus be given.—When the stomach and mouth of the lion or tiger are examined, there is seen an apparatus fitted for the trituration and decomposition of large masses of animal substance—muscle, ligament, and bone: we find accordingly, in the mechanical structure of the mighty eater, the highest degree of muscular power and agility, such as are requisite for the pursuit and conquest of the largest prey. Here is the first set of correspondences. But these organs and instruments would be useless, unless the mental constitution of the animal were in harmony with its bodily mechanism. Fierceness, courage, promptitude, wariness, patience, are the qualities that are the proper concomitants of such a stomach, and of such gastric agents. The animal exhibits a perfect equipoise of organs, functions, and propensities. What were the chylopoetic viscera of the tiger, conjoined with the temper and mental faculty of the ox?

On a like principle, the high dignity and noble destiny of man might, with the strictest reason, be argued in detail from the parts and correspondences of his physical conformation.

NOTE Z. p. 75.

When the composition of forces in circular movements, or the path of projectiles, or the acceleration of falling bodies, or when the diminution of the intensity of heat, according to the distance of its emanation, or when the velocity of sound, and a hundred other laws of the material world, are at once ascertained by experiment, and demonstrated abstractedly by mathematical

science; and when it is found that the theoretic or hypothetical reasoning is borne out by experiment; not only is the certainty of the two methods of investigation established by their exact agreement; but we are furnished with a striking proof of the absolute harmony which reigns through the universe; at least in every instance in which we have the opportunity of bringing independent principles into comparison. Let it be remembered, that no possible constitution of the material world could have made mathematical truths other than they are. Whatever might have been the *mechanical* principles of the universe; whatever the composition or powers of its elements; certain curves could have had no other properties than those they actually possess; and the relation between the square and the cube in numbers must have remained unalterable. Now, when it is found that the material system actually and precisely conforms itself to these unchangeable (shall we say eternal?) principles, we may either suppose that the agreement is the product of the wisdom of the Creator, who has so adjusted the machinery of the universe to those unalterable truths; or we may affirm that it is the result of a necessary relationship; that is to say, that the mechanical or chemical law could be no other than an expression of mathematical principles. The inference would be nearly the same in either case. If what may seem the more religious supposition be adopted, then we may confidently assume that He who has followed the rule of a perfect harmony in one part of his work, has done so also in other parts. Or if we take the latter supposition, that the correspondence between mathematical, mechanical, and chemical principles is nothing more than a *necessary relation*, then we may, with a like confidence, assume that the law of relation runs through the universe; and if, in turning from mathematical and mechanical to metaphysical science, we find an exact correspondence between all truths and facts on the one side, while on the other, nothing presents itself but an inexplicable—an astounding contrariety, nothing but “whimsical inconsequences,” the presumption against the latter will fall little short of a demonstration of its falseness.

There *ought* to be the same sort of concord between the physiology of man and abstract or metaphysical truth, which we find

to exist between mathematics, and mechanics, and optics, and acoustics, and chemistry. But now, let it be supposed for a moment, that a discordancy between these sciences were discovered; what course should then be taken, or how should we decide between abstraction and experiment? We reply, that the abstract science, having the advantage of *a perfect system of notation*, must be allowed to stand its ground in opposition to experiment; for this reason,—that in the investigation of nature by the method of experiment, there must be assumed, in almost every case, a possibility of error, arising either from the faultiness of our method, or its incompleteness; for it may happen that some hidden cause has escaped our observation.

The case is just reversed in the instance of an apparent contrariety between metaphysical science, and the knowledge of human nature as acquired by common observation. For the former, possessing only a vague, variable, and fallacious system of notation, is destitute of demonstrative force; and its conclusions can scarcely ever rise to the level of indisputable truth. On the contrary, the common knowledge of human nature has an advantage even over physical experiment, inasmuch as in its great principles, it rests not on the observations of a few philosophers, but is attested by the consciousness and conduct of all mankind. In a word, mathematical and experimental philosophy stand related to each other, in respect of their certainty, nearly as equations; the difference being against the latter by the amount of a very small deduction for possible error. But no absolute estimate can be formed of the relation between metaphysical science and the experimental knowledge of human nature, because no positive or definite expression can be given of the philosophical value of the former. In any particular instance it is as if, in looking to the data of a problem in arithmetic, the figures expressing one of the quantities were blurred, or partly obliterated, so that it was impossible to decide whether it should be read 901 or ·001.

Note A A. p. 77.

The limits and intention of this Essay forbid that any exemplification should be attempted of that method of combined obser-

*It there need be no 'system of notation'.
Let the principles lie in the mind
unexpressed. Besides the "Knowledge
acquired by observation" must be ex-
pressed in the same "vague" fallacious*

vation and analysis, of which the developement of the faculties during the season of infancy might be the subject. The specimens of this kind that are afforded by Brown (as in Lecture xxiii. vol. i. p. 514), have in them far too much that is metaphysical, and far too little that is physiological. We should suppose that the lecturer constructed his illustrations in his study, rather than drew them from the nursery.

NOTE B B. p. 79.

The transfer or attachment of the irascible feeling to its object takes place much later than its development as a vague emotion. The infant is petulant and irascible, long before it conceives anger against the supposed author of an injury. But the periods of the rise of these and other emotions vary by the difference of many months; and the variation indicates the character, and might sometimes suggest the specific method of education.

NOTE C C. p. 80.

Nearly all the descriptions which President Edwards gives of the process of volition (for example, in the first and second part of his Inquiry), are true only of certain complex instances of determination, wherein antagonist desires are present to the mind. It seemed to him necessary to his argument, to display the mental operation *at large*, in order to exhibit the influence of the predominant desire, and by that means to prove that the volition is ruled by motive, and is not contingent. But volition is *not contingent*, that is to say, is not *uncaused*, even though there be (as often) no predominant desire; or when, after a longer or shorter conflict, the mind decides, not by what seemed the strongest desire, but by a new and unimportant suggestion, springing up at the moment when the bodily powers are standing (if we might so speak) waiting for command.

NOTE D D. p. 81.

Brown, in the Lecture just above referred to, and in other places, talks of the reasoning process as belonging to the very

first exertion of the muscular powers. Does he not in these instances suppose far more than is contained in the phenomena? We should imagine any thing as soon as a reasoning from the past to the future in the mind of a babe. The lecturer's hypothesis on the subject of cause and effect, leads him naturally to impute a mental process where none makes itself evident.

NOTE E E. p. 82.

It is very much the aim of education to cultivate the faculty of continued, or, as it is called, *close* attention. And there can be no doubt that this power is of high importance, and much needed in all the occasions of life. But the power of attending to more objects than one at the same time, and of suddenly directing the whole force of the mind from one object to another, is not less important, though far less cultivated or thought of. It may be added, that the power of complex attention recommends itself by its connection with the moral faculties. The habit of thinking *comprehensively* may be called—a means of virtue.

NOTE F F. p. 86.

In modern times, the business of government in relation to the people is almost confined to the prevention and punishment of crimes. But this was only a branch of the care of the legislator in ancient Greece, in Persia, and in Rome. To protect, and cherish, and reward the virtue of the people (that is to say, the specific national virtue), was the first and principal object of every institution; the punishment of crime was but an incidental affair. A proposition to revive in its completeness this ancient idea of government, would seem in the highest degree romantic or puerile. Yet it is by no means certain that something of the kind might not be attempted. But it is a paternal or *patrician* work so to educate the people, and one that implies a restoration of the long-lost relative sentiments which should connect the higher with the lower classes. High principles and vivid sentiments of public virtue, must, to some extent, prevail among the aristocracy of a country, if the lower orders are to be thought of otherwise than as a hostile power, that must be held at bay by

force and skill. Sad derangement of social order, when the noble and the rich stand related to the people rather as protected proprietors of the national wealth, than as conservators of the common prosperity! It must not be affirmed that England has reached this stage of political dissolution. On the contrary, it may be hoped that a restorative process has, within the last few years, been going on; and that the idea of a true patriotism has been brought out to view, and has received some practical homage among public men.

NOTE G G. p. 87.

While viewing human nature and the history of man as an object of physiology, it would be quite improper to entertain theological distinctions, or to inquire into the cause of those higher and more intimate reformations—reformations of the spirit, which Christianity challenges as its triumphs, and teaches us to ascribe to an emanation of Divine influence. These restorations of the true and original beauty of the human soul, whatever may be their cause, take place in accordance with the constitution of the human mind, not in subversion of its principles of movement, and are at once truly divine and truly natural. But putting these emphatic instances out of the question, it is a common thing for emendations of character, within certain limits, to take place (even after the plastic season of youth is gone by), in consequence of cogitation, and of persevering effort, directed or guided by an abstract idea of excellence.

NOTE H H. p. 88.

The operations of invention and abstraction, and, for the same reason, the moral operation of self-advancement, are open probably to a complete analysis. To analyse them falls not within the intention of this Essay. But the author requests the reader to bear in mind, that no practical inference depends upon such an analysis, so long as the fact that these operations are within the power of human nature, remains unquestionable. It might, to take an illustration, have been said to the author of "Sir Charles Grandison," "Conceive the idea of finished virtue and honor, and em-

body that idea in a fictitious narrative." The imposition of such a task would not have seemed preposterous,—it would have been only to call into exercise an existing faculty. But instead of imposing this literary task, let it have been said to the same person, "Conceive the idea of virtue passing unhurt through scenes of temptation and trial, *and embody the idea in your own conduct and temper.* If motive be wanting, think of the present and the future rewards of goodness." It may be said, that this latter task is one of far greater difficulty than the first. True: but the second, not less than the first, is a reasonable requirement, founded upon the existence of certain faculties in the person to whom the proposition is made. And, moreover, if the second task be more difficult than the first, it stands related to a motive incomparably more powerful: all that is needed for overcoming the greater difficulty, is to bring the infinite motives home upon the mind. Now, as it is not necessary first to analyse the process of invention before we can reasonably demand from a writer a work of fiction, having a given object; so neither is it necessary to effect a corresponding analysis before men can reasonably be required to cultivate virtue. Nor could any result of such an analysis nullify the reasonableness of the demand. If the metaphysician says, I have resolved what you term the process of self-education into a series of physical causes; no sense can be assigned to such an affirmation which would discharge from the natural history of man, the fact, that reformation is a frequent event, or, which would impugn the inference, that it may reasonably be looked for and demanded from mankind. He may as well deny to man the power of locomotion, who denies him *the natural faculties* of virtue.

NOTE I I. p. 89.

The author would not omit the opportunity of recommending to the reader "An Essay on Moral Freedom," by the Rev. Thomas Tully Crybbace, A. M. The fourth and fifth sections of that essay bear upon the subject of the damage or injury of the moral nature of man, for which the Gospel provides a remedy. The work throughout will well repay an attentive perusal.—The same, notwithstanding some imperfections, may be said of a volume

recently published,' "On the Work of the Holy Spirit in Conversion," by the Rev. J. Howard Hinton. In this, and some similar works of the day, a hopeful effort is evidently making to throw off the corruptions of that putrid Christianity, which has too long poisoned all the atmosphere in some quarters of the religious world. It is a circumstance of much significance, that the cleansing energy has sprung up in the nearest vicinity of the evil.

NOTE K K. p. 97.

The correspondences between the astronomical position of the earth, and the structure and physiology of plants, are many and admirable. That quick alternation of temperature which is occasioned by its diurnal rotation, is essential to the *mechanical* contrivance by which the ascent of sap is effected. Then, again this alternate heat and cold, by the chemical change it produces on the atmosphere, and within the plant, is necessary to the respiratory functions of the vegetable system. Again, the alternation of the seasons, resulting from the inclination of the earth's axis to the plane of its orbit, is the very basis of vegetable life. The one system of contrivances supposes the existence of the other, and the wellbeing of the one depends upon its relation to the other. Animal life, in like manner, is one complex mass of relations to the mechanical and chemical laws of the world; and if the human mind were exempt from such relationship, it would not only be an amazing anomaly in the universe, but could hold no intercourse or sociality whatever with the external world.

NOTE L L. p. 111.

"Non tamen inter hæc existimandum, libertatem nostram in indeterminatione, aut indifferentiâ quâdam æquilibrii sitam esse; quasi æqualiter in utramque partem, et adfirmativam, et negativam, ac in plures partes diversas propendere oporteret, cum plura nobis eligenda proponuntur. Hoc æquilibrium usquequaque impossibile est; nam si æqualiter propenderemus in tria eligibilia, A, B, et C, non possemus æqualiter propendere in A et non A.

“Hoc æquilibrium etiam prorsus adversatur experientiæ et ubi nostra intus scrutabimur adtentius, semper aliquam causam, sive rationem, adfuisse deprehendemus quæ nos in eam, quam amplexi sumus, partem inclinavit, quamvis frequenter id, quod nos movet, non percipiamus; planè sicut vix percipimus, quare, portâ aliquâ egredientes, pedem dextrum sinistro, vel sinistram dextro, præposuerimus.”—THEODIC. pars i. § 35.

Leibnitz does not here deny the possible equality of *eligibles*, but the absolute indifference of the mind towards them. The demonstration contained in the first paragraph is, like many such demonstrations, very convincing in *form*, but totally inapplicable to the subject, and therefore of no value. The appeal to consciousness in the second paragraph is pertinent, and it *supposes*, though it does not assert, that mode of determination by the suggestion of the moment, which is referred to in the Essay.

The course of human life is replete with occasions, in which, by the choice of one path where two or more of equal promise present themselves (a choice not determinable by moral considerations), the entire fortune of after-life is made other than it might have been. It is not easy to shew why such occasions should not belong to a future and a more perfect state, as well as to this. In fact, to deny their occurrence demands the supposition of either a state of absolute inertness, or an immediate control of the agency of intelligent beings by the Divine power, or the abstract impossibility of both real and apparent equivalents. So few elements of cogitation relating to the future life are afforded to us in the Scriptures (our only guides), and these elements are so exclusively of a moral order, that we almost unavoidably take up a *very restricted conception* of that future condition of human nature, which is to give a full expansion to its original powers. The great difficulty of conjoining an enlarged conception of the future life, with the idea of freedom from all that is evil, leads the devout mind (and perhaps properly) to confine itself to the elementary and paramount sentiment which is gathered from devotional exercises.

NOTE M M. p. 114.

There is, perhaps, nothing more inconceivable (we do not say that it is incredible) than the doctrine that the production of or-

ganised bodies, vegetable and animal, is a developement of the parts and properties of the microscopic seminal element. Rather than believe this, the mind gladly acquiesces in the belief of an immediate exertion of creative power in each instance. But vegetable and animal *functions* are easily attributed to mechanical and chemical powers in operation upon the organs of life. Yet, perhaps, it is more philosophical to believe that the idea of difficulty or of facility, in the one case or the other, springs altogether from the influence of an *idolum tribus*, "*estque intellectus humanus instar speculi inæqualis*," &c.

The construction of a plant or animal, being assumed as the immediate effect of creative power and intelligence, and the laws of the material world, the properties or powers of heat, and the chemical properties of air, water, earth, &c. being supposed, then the changes that take place in the history of the organised body are all resolvable into so many relations of proportion, or equilibrium, or equivalence, precisely in the same way that the movements of a machine are so resolvable.

NOTE N N. p. 115.

Brown usually misunderstands and misrepresents (not wilfully, but by force of his own conceptions) the sense of his predecessors. A glaring instance occurs in his attempt (Lecture VI.) to convict Locke of a sophism. Nothing can be more superficial than his own sophism on the subject of physical antecedents and consequents. But it is one which runs through his philosophy, and to be effectively exposed must be followed from beginning to end of his four volumes. In illustration of the principle, that a real relation of fitness or equality is the actual connexion between physical events, the reader is referred to the passage in the "*Essay on Human Understanding*," upon which Brown makes his comment.—Book iv. chap. iii. sect. 25, and this compared with "*Novum Organum*," lib. ii. aph. vi. vii. &c.

Without adopting either the mechanical theories once so much in vogue, and now so much contemned; or the chemical hypothesis, to which more respect is paid in our times; it may be assumed, as not altogether improbable, that some such advances will be made in physical science as may confirm the conjectures of Locke,

and, in part, realise the glowing anticipations of Bacon; and, at the same time, expose to greater and greater contempt the modern metaphysical doctrine of causation. It is consolatory to perceive that, while certain modern dialecticians announce confidently, that science must stop short at a point which they have indicated—the professors of natural science adhere to a philosophical modesty—a modesty which is nurse of hope, and mother of invention, and allow it to be possible that our successors may know incomparably more than ourselves. “This may, however, be a rash inference (that because the hidden powers of nature have not hitherto been discovered, they never will); Bacon, after all, maybe in the right, and we may be judging under the influence of the vulgar prejudice, which has convinced men in every age that they had reached the farthest verge of human knowledge. This must be left to the decision of posterity; and we should rejoice to think that judgment will hereafter be given against the opinion, which at this moment appears most probable.”—*Third Dissertation, by Professor Playfair, Ency. Brit. 7th ed. p. 474.*

A noble confession, and worthy of a philosopher! How unlike the cold dogmatism that reigns in the modern science of mind! But the spirit of philosophy is to be looked for only among those whose minds have been trained under the influence of real and substantial sciences.





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