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I.

THE IDEA AND AIMS OF THE PRESBYTERIAN
REVIEW.

THERE has been for some time a conviction, constantly widening and deepening, that a Review is needed that will adequately represent the theology and life of the Presbyterian Church. This need has been felt all the more that in former years our Church derived so much strength and advantage from the Reviews so ably conducted by Drs. Charles Hodge, Albert Barnes, Henry B. Smith, and others. Two years ago, the *Presbyterian Quarterly and Princeton Review*, which had gathered up into itself the various older Presbyterian Quarterlies, was sold out by the proprietors and editors, and the *Princeton Review* appeared in its place, devoting itself chiefly to Philosophy, Science, and Belles-Lettres, and presenting an array of scholarship and talent unprecedented in the history of periodical literature. Yet this very fact called the more attention to its defects in those very respects that made the older Reviews so important to the Presbyterian Church; consequently the desire for a representative Presbyterian Review grew to be so strong and irrepressible, that several efforts have been made during the past year, in various parts of the land, culminating in the present enterprise, which seeks to combine all the varied interests and sections of our Presbyterian Church in order to secure a Review that will truly represent it by a strong, hearty, steady, and thorough advocacy of Presbyterian principles. The managing and associate editors have been requested by a large number of theologians,

II.

HUME, HUXLEY, AND MIRACLES.

THE publication of Professor Huxley's sketch of the life and philosophical opinions of David Hume, has again called the public attention to a thinker who has done more than any other modern, with the exception of Spinoza, to unsettle the belief of mankind in the principles of morals and religion. As Mr. Huxley is himself strenuously engaged in this same endeavor, it is natural that he should avail himself of the acute and strong understanding of the Scotch sophist, and thereby obtain a force and momentum for his own opinions which they might not otherwise possess. He agrees with Hume in the essentials of his system, though dissenting upon some points, such, for example, as the following :

1. Hume regards instinct as something innate and permanent; this, Huxley believes, and with reason, to be an admission that "might be turned to serious account against Hume's own doctrines;" because, "if the existence of instincts be granted, the possibility of the existence of innate ideas, in the most extended sense ever imagined by Descartes, must also be admitted." (Huxley's Hume, pp. 108, 110). 2. Hume, while denying that the proposition that "every event has a cause" is an axiomatic and necessary truth, concedes that the proposition that "the whole is equal to the sum of the parts" is such. Huxley regards this as a "needless admission" (p. 118), and is undoubtedly correct in thinking that such a discrimination between the two propositions is an inconsistency. 3. Hume tacitly agrees, with Locke, in asserting that knowledge is the perception of the relations of ideas to each other (pp. 70, 71). This makes knowledge to be more than mere physical sensation. Huxley does not like this, because it conflicts with the explanation of all knowledge by the molecular motion of matter. 4. Hume, in the person of Cleanthes (probably), constructs an argument for the being

of a God, from cause and effect, and from order and design in the universe. This argument Huxley regards as a failure (p. 151). These are specimens of some of the points of difference, and show that Huxley goes further than Hume in the direction of materialism. Hume is inclined to linger within the limits, or at least upon the borders, of deism; while Huxley feels little restraint of this sort. In short, this little volume, prepared as one of a series of literary portraits for popular distribution, is less reserved and cautious in its scepticism than the *Essays of Hume*, and proves clearly that the materialism of the present moment does not retain so many elements of theism, as did that of the eighteenth century, and that the unbelief of the English atheism of this century, is more positive and unguarded than that of the English deism of the last.

With this notice of the general spirit of Huxley's book, we proceed to consider the subject of *miracles, with special reference to Huxley's account of Hume*. This requires us to examine certain positions of both Hume and Huxley, that prepare the way for their view of the miraculous and the supernatural.

1. In the first place, Hume denies that the human mind is an immaterial substance underlying mental phenomena. "What we call a mind," says Hume, "is nothing but a heap or collection of different perceptions."* Huxley affects to be very candid, and says that Hume "may be right or wrong in this, but the most that he, or any one else, can prove is, that we know nothing more of the mind than that it is a series of perceptions" (p. 61). But afterwards Huxley himself asserts that this collection of perceptions not only "constitutes the mind," but is "a system of effects, the causes of which are changes in the matter of the brain, just as the collection of motions which we call flying, is a system of effects, the causes of which are to be sought in the modes of motion of the matter of the muscles of the wings" (p. 76). This is cruder materialism than anything in Hume; for it is equivalent to saying that the mind is only a collection of *physical sensations*. Hume had not learned the secret of the new physics,

* Treatise on the Understanding, Part IV., Sec. vi.

of explaining all phenomena by molecular motion, and would probably have explained his position that the mind is a collection of "perceptions," rather in the sense in which Locke uses the term, than in that of Haeckel, Maudsley, and Huxley. It is true that his positions, if carried out, must have led him to the advanced position of these materialists, but Hume would have hesitated to say so flatly as Huxley does, that the mind is a collection of mere "sensations." He preferred the term "perceptions." This spurious kind of candor shows itself more than once in the book, and makes the impression upon the reader that he has to do with a somewhat trickish intellect.

But that there is no such thing as an immaterial and spiritual substance, Hume and Huxley are agreed. In Hume's words, there is nothing but "a bundle of different perceptions succeeding one another with inconceivable rapidity."* Hume left the matter here. He does not attempt, in detail and by a theory, to account for this series of phenomena. Huxley and those with whom he agrees in opinion attempt this.

2. And this brings us to the second position that prepares the way for the sceptical theory of miracles. In order to account for all phenomena, both material and mental, a postulate is laid down, viz: that there is but one substance, and this is infinite and eternal. This substance is matter, and matter is full of material forces. Given matter and material force, and everything existing in unlimited space, and occurring in everlasting time, can be explained. Matter in motion will account for everything in the universe. "In matter, there is the promise and potency of every form of life," says Tyndall. This doctrine of one substance is the celebrated postulate, not proven, but assumed, of Spinoza, who is the intellectual father of modern materialism and atheism. To this substance, Spinoza attributes two properties that are incompatible with each other, according to the common understanding, and also according to such philosophic reason as that of Plato, Aristotle, and Kant. By the definition of the original inventor, this universal substance is capable of both thought and extension. These are the two modes of the substance.

* Treatise on the Understanding, Part IV., Sec. vi.

Here, then, is a substance having two diverse sets of properties : a material-immaterial substance. A substance like this, contradicting the common judgment that all substance is necessarily homogeneous and can have only one class of properties, requires to be demonstrated, before it is laid down as the foundation of a system. No demonstration, however, is attempted, but the position is treated as axiomatic, and the attempt is made to explain the phenomena of the universe by it. But since thought and extension are naturally regarded as contraries, and incompatible with each other, the actual result in the history of speculation is to expel one by the other, and the one substance, in the end, is either wholly material or wholly spiritual. The universe is either all matter or all mind. The latter view was that of Berkeley, who while holding the distinction between the infinite and finite mind, maintained that there is no force but spiritual force, and no reality but spirit. There is only one kind of substance, but this substance is immaterial. This view, however, owing to its hyper-spirituality has had little currency, and is favorable, rather than otherwise, to the doctrine of the supernatural and miraculous. Because, upon this theory, mind and not matter, spiritual and not physical force, is sovereign and controlling in the universe.

On the other hand, the *material* property, in this Spinozistic substance composed of double and confused properties, may expel the spiritual. Instead of thought driving out extension, extension may drive out thought. Instead of explaining matter by mind, mind may be explained by matter. This is probably what Spinoza would have done had he entered into further explanation of his system ; and this is what has been done by that class of speculators who have adopted his premise and postulate. Hobbes had already done this before Spinoza's time. He declared "that philosophy has to do only with bodies ; and with him whatever is bodily is substantial ; the two conceptions are identical ; a substance not a body is nothing. All real processes are material motions."*

Cudworth, Henry More, and others combated this theory, affirming the Platonico-Aristotelian distinction between matter

* Ueberweg's History of Philosophy, II. 39.

and mind, and maintaining the reality of unextended incorporeal substance, as well as of extended and corporeal substance. The duality of mind and matter, and the assertion of two substances of diverse properties, incapable of being mixed and confounded in a common base like that of Spinoza's postulate, was a fundamental position in the system of Descartes, from whom Spinoza borrowed his definition of the infinite substance, throwing out Descartes' accompanying definition of a secondary finite substance. Theism, represented by Leibnitz and Kant, has reaffirmed the doctrine of two diverse substances; and pantheism, represented by Schelling in his earlier system, and by Hegel, has followed Spinoza. The new physics, as represented by Haeckel, Huxley, Maudsley, and others, is Spinozistic, and attempts to explain all phenomena by matter and material force. The kingdoms of physical nature and the spheres of intellectual and moral existence are all alike founded in the motion of molecules of matter. The one infinite, extended, material substance, if in motion in one way, will exhibit the phenomena of the mineral kingdom; if in another mode, of vegetation; if in another mode, of animal sensation; if in another way, of human thought and feeling. When, therefore, a man thinks or feels, there is no immaterial substance, no individual spirit distinct and separate from matter, which thinks and feels, but there is only a particular series of movements of certain atoms of the one universal substance. This is all there is when a man loves or hates, blasphemes or prays; when Aristotle reasons or Shakespeare imagines.

We do not intend to examine the arguments that are presented in support of this theory, but to state some objections to it.

1. In the first place, this theory attributes *self-motion* to matter. The theorist postulates an inherent motive force, with his molecule. And he must; because he denies that there is any mental or self-conscious source of motion, any prime mover. One molecule must impinge upon another by its *own* motivity. This contradicts the results of scientific observation and mathematical calculation as recorded in the established and accepted physics. If the new physics is correct, the old physics is exploded. Copernicus, Galileo, Kepler,

Newton, Leibnitz, La Place, and Herschel represent the historical physics; and they all held the doctrine of the *vis inertiae*. This scientific dogma Newton enunciates in the beginning of the Principia as follows: "All matter uniformly remains in statu quo, either of motion or of rest, unless it is made to change its state by external causes." Self-motion is impossible to matter. If matter is in rest, it will never move unless something other than itself moves it; and if it has been set in motion, it will never stop unless something other than itself stops it. It has been a received maxim in physics that the distance between rest and motion in matter is as great as between non-existence and existence, and that matter can no more move itself than nonentity can produce entity. The whole fabric of physical science rests upon this view and definition of matter; and when persons who have so little position in the history of physics as have the Maudsleys, the Huxleys and Tyndalls, and even the Spinozas, if compared with the Galileos, the Keplers and Newtons, the Leibnizes, the La Places and Herschels, ask us to accept their unproven postulate that matter is not characterized by the *vis inertiae*, but by self-motion, we cannot help meeting the request with the stare of surprise. Yet this is the demand they make. "We must get rid," says Maudsley, "of the notion of matter as inert. Matter is not inert."*

The fact is, that the materialist asks mankind to accept a new definition of matter, which shall include in it some of the properties of mind. He begs his opponent to concede that matter can set itself in motion, and does not require a prime mover; that it can change the direction of its self-motion, and does not need a director. Of course, if his opponents will grant him what he asks, it will assist him, though it will not help him out of half of the difficulties of his theory. But why, in the face of all the results of scientific observation; in the face of the mathematics of the Principia, and the calculus of the *Mécanique Céleste*; should we grant that matter is possessed of self-motion? What observer has ever seen the process? What microscope has ever detected a molecule in the act, of absolutely beginning a movement? Lucretius long

* Physiology of Mind, Ch. III.

ago acknowledged that atoms do not come within the domain of sense. They are invisibles. The only possible method, consequently, of demonstrating the truth of the molecular physics is the mathematical method. Le Verrier proved by the calculus the existence of a planet that had never been seen by a human eye. The general system of the material universe required a mass like that of Neptune to explain particular motions and aberrations. And if the molecular physicist could prove the existence of invisible self-moving atoms by the same method, the human mind would have no option, and must accept the fact. But the existing scheme of the universe, the entire astronomy of Kepler and Newton, refutes the dogma. The new physics and mathematical astronomy not only have no connection with each other, but are in flat contradiction. The doctrine of a self-moving matter is utterly incompatible with that of the attraction of cohesion, as Henry More long ago suggested. If matter were self-moved "nothing would hold together; flints, adamant, iron bars, yea, all matter, would fly apart and be dissipated."* Everything would be subject to the caprice of billions of billions of molecules, each of which is self-motion at a point. The reign of law would be impossible. Chance must be the ruler of the material universe, and chaos would come again.

But the new physics does not stop with postulating self-motion in matter; it also postulates *self-direction* and *choice*. Darwin explains the origin of new species by "natural selection" within the sphere of matter. Selection is a choice between one of two, or more. Matter chooses this and rejects that. One molecule decides to move itself in this way, and another in a different way, and the results of the billions of motions in the millions of manners are the varieties of vegetable, animal, and mental life. Darwin confines "selection" to living matter, but Haeckel extends it to dead matter. He maintains that inorganic matter by selection and implied rejection produces organic matter. The so-called "law of natural selection" is absolutely universal. Not only protoplasm, but molecules of quartz and flint, start and direct their own movements. This same notion of a voluntary kind of mat-

* Immortality of the Soul, I. vii.

ter appears also in the frequent phrase, "accidental varieties." These are the unusual varieties which the theorist cannot account for by the common "natural selection." Ordinarily matter selects in that particular manner which yields a species with its varieties, but sometimes it indulges in caprice, and then there is an accident.

The phraseology by which matter is made to possess one of the properties of mind—a phraseology never found in the historical physics—is the common parlance of the new physics. "Life," says Virchow, "is only a complicated kind of mechanics. A part of the sum-total of matter *emerges* from time to time out of the usual course of its motions into special chemico-organic combinations, and, after having for a time continued therein, *returns* again to general modes of inorganic action."* Here are both self-motion and choice. Certain molecules massed together "emerge" out of one kind of motion into a different kind, and then go back again to the first kind. This physics is as fanciful as anything in the mediæval physics. There is but one step from matter that "emerges" and "returns," that "selects" and "rejects," to matter that is filled with "occult qualities" and "vital spirits," with gnomes in the mineral, and sylphs in the gas. Experiment and observation, either with the naked or the armed eye, furnish not a scintilla of proof that matter is self-moving and voluntary in its rudiments, and yet mankind are asked to believe it upon the mere assertion of a theorist, who wants it as a fulcrum over which to pry up all the historical science and the historical religion of mankind. The materialist, with his new definition of matter, will succeed with the mass of men no better than Molière's pretended doctor did with his patron. "There is one thing," said Géronte, "which strikes me as not quite clear: it is the places you give to the liver and the heart. It seems to me that you place them differently from what they are; that the heart is on the left side and the liver on the right side. Yes," says Sganarelle, "it was so formerly, but *we have altered all that*, and we now practise medicine in quite a new way."† Mr. Huxley, when he is reminded that the historical physics

* Quoted by Haeckel, *Creation* I., 18.

† *Le Médecin malgré lui*, II., vi.

teaches the *vis inertiae*, tells us that he has altered all that; but whether he will succeed in persuading the common-sense of man to believe that matter has some of the properties of mind, remains to be seen.

The theory of molecular motion is the same thing essentially with the "fortuitous concourse of atoms", by which the ancient atheists, Leucippus and Democritus, explained all phenomena; and the modern materialist must expect to be asked the same kind of questions by which his predecessors were pestered. We will not renew the old inquiry as to the shape of these molecules—whether spherical, square, or triangular; how many of them, and of what figure, go to produce a sensation, and how many a thought; at what velocity they must move to produce vegetable tissue, and at what velocity to produce animal tissue. There is one feature of the theory, however, that we do not remember to have seen alluded to. It is suggested by the fact that these molecules are related to *space*. Their motions must be in some direction. The points of the compass, consequently, will have to be introduced into the new psychology. Everything depends upon the direction of the molecules, and considering the immense variety of sensations and perceptions that are to be accounted for by molecular motion, it must be that all, and vastly more than all, of the thirty-two points of the mariner's compass will come into use. The students of psychology by the new method will have to learn to "box the compass." Possibly this explains what is meant when we say of a sulky man, that "the wind is east with him." This hitherto has been regarded as metaphorical language, but in the new physics it is strictly scientific.

2. A second objection to the molecular physics is, that, according to it, *matter moves mind* instead of mind moving matter, as is commonly supposed. Professor Huxley states the theory in the following words: "All mental states are effects of physical causes, and, what are called mental faculties and operations, are (properly speaking) cerebral functions allotted to definite, though not yet precisely assignable, parts of the brain." Thought is cerebration. Similarly, Maudsley asserts that "feelings, ideas, and volitions are changes in the nervous system, and instruments may yet be

invented by which such ideas or nerve-changes may be measured.”* The genesis of a thought or a feeling, then, is this : an external object impresses the senses, these irritate the nerves, the nerves affect the substance of the brain and set its molecules in motion ; and this last affection of the brain-substance is thought, or feeling, or conception, or intuition, etc. Mr. Huxley explains clearly by a bell-wire—so clearly, that a wayfaring man, though a fool, need not err. “ The effect of the irritation of a nerve-fibre on the cerebral substance with which it is connected may be compared to the pulling of a long bell-wire. The impulse takes a little time to reach the bell ; the bell rings, and then becomes quiescent until another pull is given. So, in the brain, every sensation is the ring of a cerebral particle ; the effect of a momentary impulse sent along a nerve-fibre ” (p. 87). According to this, when a man has the feeling of shame, for example, the beginning of the process is on the outside of him, and not on the inside. He does not first have the feeling of shame in a certain centre or subject which we call his mind, and which is of an entirely different substance from his nerves and brain, and then this feeling passes from the mind to the body, becoming sensuous after having first been mental, showing itself in nervous and brain affection, and, finally, in that rush of blood to the face which is the corporeal and visible token of shame. This is all wrong, says Mr. Huxley. The first thing in the process is an external impression upon the sense, then an irritation of the nerves, then a stimulation of the brain-fibre, then the flush in the face, and then the feeling of shame. The common opinion is, that the feeling of shame causes the blush. This is an entire mistake, says the materialist ; it is the blush that causes the feeling of shame.

It is difficult to believe that such physics and psychology as this could be seriously defended and taught by a person of reputation in scientific circles. But Mr. Huxley leaves his readers no alternative. In his lecture at Belfast, he proclaims that “ the brain is the organ of sensation, thought, and emotion ; that is to say, some change in the condition of the matter of this organ is the invariable *antecedent* of the state of

* *Physiology of Mind*, p. 61.

consciousness to which each of these terms is applied." This settles the matter. The antecedence in time may be infinitesimal, but it is antecedence. Matter moves of itself, and moves before mind. The physical precedes the mental. The former is the cause, and the latter is the effect.

This is an old doctrine, and it has never been more effectually refuted than in the delicate yet biting irony of Socrates, in the *Phædo*. "When I was young, Cebes, I had a prodigious desire to know that department of philosophy which is called Natural Science; this appeared to me to have lofty aims, as being the science which has to do with the causes of things, and which teaches why a thing is, and is created and destroyed; and I was always agitating myself with the consideration of such questions as these: Is the growth of animals the result of some decay which the hot and cold principles contract, as some have said? Is the blood the element with which we think, or the air, or the fire? or perhaps nothing of this sort—but the brain may be the originating cause of the perceptions of hearing and sight and smell, and memory and opinion may come from them."

Socrates betakes himself to the philosophy of Anaxagoras for light upon these points; but is grievously disappointed. "As I proceeded, I found my philosopher altogether forsaking *mind* or any other principle of order, and having recourse to air and ether and water, and other eccentricities. I might compare him to a person who began by maintaining, generally, that mind is the cause of the actions of Socrates, but who, when he endeavored to explain the causes of my several actions in detail, went on to show that I sit here because my body is made up of bones and muscles; and the bones, as he would say, are hard, and have ligaments which unite them; and the muscles are elastic, and they cover the bones, which have also a covering or environment of flesh and skin which contains them; and as the bones are lifted at their joints by the contraction or relaxation of the muscles, I am able to bend my limbs, and this is why I am sitting here in a curved position—that is what he would say; and he would have a similar explanation of my talking to you, which he would attribute to sound and air and hearing, and he would assign ten thousand other causes of the same sort, forgetting to mention the true

cause, which is, that the Athenians have thought fit to condemn me, and accordingly I have thought it better and more right to remain here and undergo my sentence: for I am inclined to think that these muscles and bones of mine would have gone off to Megara or Bœotia—by the dog of Egypt they would—if they had been guided only by their own idea of what was best, and if I had not chosen as the better and nobler part, instead of playing truant and running away, to undergo any punishment which the State inflicts. There is surely a strange confusion of causes and conditions in all this. It may be said, indeed, that without bones and muscles, and the other parts of the body, I cannot execute my purposes. But to say that I do as I do, because of them, and that this is the way in which mind acts, and not from the choice of the best, is a very careless and idle mode of speaking. I wonder that they cannot distinguish the cause from the condition, which the many, feeling about in the dark, are always mistaking and misnaming.”*

Professor Huxley applies this doctrine that matter moves mind, to the will. Hume had done it before him. Says Hume: “No animal can put external bodies in motion without the sentiment of a *nisus*, or endeavor. This sensation is merely animal.”† Says Huxley, in his comment upon this: “To the argument that we have a right to suppose the relation of cause and effect to contain something more than invariable succession, because when we ourselves act as causes, in volition, we are conscious of exciting power; Hume replies that we know nothing of the feeling we call power, except as effort or resistance; and that we have not the slightest means of knowing whether it has anything to do with the production of bodily motion or mental changes” (p. 125). Hume illustrates this last statement in the following words, which are not quoted by Mr. Huxley: “A man struck suddenly with a palsy in the leg or arm, frequently endeavors, at first, to move them, and employ them in their usual offices. Here he is as

* Phædo, 96-99. Jowett, I. 425-428.

† Hume's Inquiry, Section vii. “The will,” says Haeckel (Creation, I. 237), “is the *habit* of molecular motion. It depends upon the material processes in the nervous system. The will is never free. The will, as well as the other mental activities, in higher animals, differs from that of men, only in quantity, not in quality.”

much conscious of power to command such limbs, as a man in perfect health is conscious of power to actuate any member which remains in its natural state and condition. But consciousness never deceives. Consequently, neither in the one case nor in the other, are we ever conscious of any power.”* According to this, a palsied man “is as much conscious of power” to move his limbs, as a well man is; or, in other words, is conscious of something which he does not possess. The puzzled reader will find, when he examines the context of this singular statement, that Hume only means that the palsied man *understands* as much as the well man, respecting the connection between voluntary action and the movement of the muscles and limbs. “There is no principle [fact] in all nature more mysterious than the union of soul with body. If by consciousness we perceived any power or energy in the will, we must know this power; we must know its connection with the effect; we must know the secret union of soul and body, and the nature of both of these substances.” That is to say, in order to be conscious of a fact, we must comprehend the fact. “Consciousness” is employed loosely in the above statement, to denote any and all forms of mental experience; and under cover of this paltering with words in a double sense, Hume denies that man is conscious of a power to move his limbs. This rather staggers Mr. Huxley, who does not commit himself quite so strongly to this affirmation, but cautiously adds, “that we do not *know*, and cannot know, that volition does cause corporeal motion; while there is a great deal to be said in favor of the view that it is no cause, but merely a concomitant of that motion” (p. 125).

The reply to this assertion is, that the proof that it is the man’s will that moves the man’s arm, is identically the same as that the man exists. The man is immediately conscious that he exists; and he is also immediately conscious that he moves his arm, and that his arm is not moved for him. The evidence is precisely the same in the one instance as in the other; and if the materialist is content with self-consciousness as a proof of personal existence, he ought to be content with it as a proof that the soul moves the body. Neither of these truths can be demonstrated either by a syllogism or by the

* Inquiry, Section vii.

microscope. The only proof of such propositions as that a man is a real person, and that he moves his limbs by his will, is in the self-consciousness. And if such testimony is valid in reference to a man's existence, it is also valid in reference to his agency. A mind as ingenious as that of Hume, were there a sufficient motive for so doing, could fabricate an argument against the reality of personal existence, as well as against the reality of voluntary action. In fact, this has been done in the pantheistic psychology of India and Germany. Hegel, by a ratiocination as subtle as that of Hume, and wire-drawn into a vast scheme compared with which that of Hume is a mere fragment, endeavors to disprove the metaphysical reality of the individual *ego*.

We pass, now, to the materialistic theory of miracles, for which these views of the relation of matter to mind, so carefully thought out by Hume, and reproduced by Huxley and others, are intended to prepare the way.

Of course, if there is no such substance as mind, and the only substance is matter and material force, there can be no personal deity, different from matter and above it. And if there is no such deity, there can be no miracle; because a miracle implies an absolute control over matter, and a suspension of its laws. The doctrine of a miracle stands or falls with that of a personal God. That Hume held on somewhat feebly upon the deistical idea of a First Cause, and even attempted an argument for the divine existence, does not conflict with this assertion. The deist's idea of God contains very few personal elements at the best. Bolingbroke would concede but two attributes to the Supreme Being: adaptive intelligence, and physical omnipotence. The moral attributes have little room or play in deistical theories of the universe. Deism, though nominally asserting the existence of a deity, has little to do with Him, and nothing to say to Him. Bolingbroke and Hume never prayed. And, considering the tenor of Professor Tyndall's speculations respecting the "prayer test," one would be led to query whether he ever ventures upon the experiment.

The first step in the construction of Hume's argument against miracles, is to invalidate the proposition that "every

event has a cause ;” and the second is, to invalidate the testimony upon which miracles are believed. If there be, in reality, no such thing as an efficient cause, then there can be no designing agent ; and if no such agent, then no miracle. And if no testimony whatever is sufficient to prove that the common course of nature has ever been interrupted, the miracle must take its place with the fable and legend.

The connection between cause and effect, Hume thus explains : “ When one particular species of events has always, in all instances, been conjoined with another, we call the one object *cause*, the other *effect*. We suppose that there is some necessary connection between them ; some power in the one by which it infallibly produces the other, and operates with the greatest certainty and strongest necessity.” This is an error, says Hume. There is no such necessary connection between the two events. We have only formed the *habit* of putting the two events together, after having seen them occur together many times in succession. “ The first time,” says Hume, “ a man saw the communication of motion by impulse, as by the shock of two billiard balls, he could not pronounce that the one event was *connected*, but only that it was *conjoined* with the other. After he has observed several instances of this nature, he then pronounces them to be *connected*.”* “ The knowledge of the relation between cause and effect is not, in any instance, attained by reasonings *a priori*, but arises entirely from experience, when we find that any particular objects are constantly conjoined with each other. Adam, though his rational faculties be supposed at the very first entirely perfect, could not have inferred from the fluidity and transparency of water, that it would suffocate him, or from the light and warmth of fire, that it would consume him.”† Here, one kind of knowledge is substituted for another. Experience shows, in a given instance, what particular object is the effect of another particular object ; in other words, *which* is the effect and *which* is the cause. But this is very different from showing that the effect is *necessarily connected* with its cause. Wider experience increases man’s knowledge as to which phenomena are effects, and which are

* Inquiry, Section vii.

† Inquiry, Section iv.

causes; but does not increase his knowledge that effects are necessarily connected with their causes. This latter knowledge is a fixed quantity, and is no more capable of increase or diminution, than is the knowledge that the sum of the parts is equal to the whole. Adam, to use Hume's illustration, having once found by experience that fire produces a painful sensation; having once discovered which is cause and which is effect; was as certain of the necessary connection between the two things, in the first instance of his experience, as in the tenth, or ten-thousandth. Custom makes no difference in the degree of certainty respecting the connection between cause and effect. The habit of seeing gunpowder explode when a match is applied, does not make us *more* and *more* certain that the cause produces the effect. It should, upon Hume's theory. According to him, we ought not to be so certain that the effect follows its cause, in the first instance that we perceive the two related phenomena, as in the last instance that we perceive them. But the fact is, that we are just as certain: no more, and no less.

The reasoning of Hume respecting causation has been replied to so often, and the nature of the reply is so well-known, that we dwell upon it no longer, and dismiss it with a brief reference to the inconsistency with which it is associated in his general scheme of philosophy. We have already noticed that Hume concedes that mathematical propositions are intuitive and necessary truths. "The sciences of geometry, algebra, and arithmetic contain affirmations that are intuitively certain."* Man's assent to the proposition that "the sum of the parts is equal to the whole," Hume did not venture to assert is the result of custom and habit. It would be too much for human credulity to say that we believe that the sum of the parts is equal to the whole, merely because we have in several instances tried the experiment of cutting an apple into pieces, and found upon joining the parts together again that they make up the whole apple. We are as certain of the truth of this proposition, apart from any actual trial and experience, the first time that we hear the terms of it, as we are the thousandth time. Custom does not add a whit to the strength of our conviction. Mathematical axioms, Hume concedes to

* Inquiry, Section iv.

be intuitive and necessary truths. Huxley differs from Hume here, perceiving that this is a fatal admission for strict and consistent materialism. This latter cannot admit any intuitive and necessary truth whatever, because it must explain everything by sensation and molecular motion. Accordingly, Huxley and his compeers explain mathematical as well as moral beliefs by heredity and custom.

But, returning to Hume: What difference is there in the nature of our mental action when we assent to the proposition that "the sum of the parts is equal to the whole," and to the proposition that "every event has a cause"? The appeal must be made to the actual facts of consciousness as every man knows them in himself. The moral maxim respecting causation dawns earlier in human consciousness than does the mathematical axiom. One of the first questions asked by the child is for the cause of what he sees and experiences. Apart from a theory to support, men generally no more think of denying the intuitiveness of the moral than of the mathematical proposition, or of explaining the one rather than the other by custom and habit. The difference in kind, which Hume would find between the two classes of propositions, requires to be justified by stronger reasons than any that he has presented.*

The second step in the construction of Hume's argument against miracles is to invalidate the testimony upon which they are believed.

Hume defines a miracle to be "a transgression of a law of nature by a particular volition of the Deity." The word "suspension" should be substituted for "transgression" in this definition. A miracle never violates a natural law, but only temporarily suspends it. When our Lord raised Lazarus from the dead, He did not reverse the course of nature, or upturn any of its settled order. This would have been violation. One, though by no means the whole, of the effects of His omnipotent power was to stop the putrefaction of the body. Christ suspended in that particular instance the operation of the law of chemical action by which putrefaction goes on, but He did not violate that law. This would

* Kant exposes this inconsistency of Hume. See *Praktische Vernunft*, 169, sq.

have required that He should cause the very same law of chemical action that was putrefying the body, to put a stop to the putrefaction; that is, cause the chemical force itself to do the contrary of what it commonly does. This He did not do. He did not compel chemical action to undo chemical action, but He simply put a stop to chemical action itself in that one corpse, by the exertion of that omnipotence by which He created "all things visible and *invisible*:" the imponderable forces as well as the ponderable elements of matter (Col. i. 16). Our Lord left the general course of nature undisturbed. Another corpse lying beside that of Lazarus would have still continued to putrefy by the law of chemical decomposition, which law had met with no violation or reversal of its action, though it met with a suspension of it in a single case.

But practically it matters little, so far as the question of *power* is concerned, whether the miracle be styled a violation or a suspension of natural law. To suspend would require omnipotence, as much as to violate. Either must be the effect, as Hume says, of "the volition of the Deity."

That a miracle is possible, Hume at first in *words* concedes, but subsequently in *fact* denies. Anything is possible that does not imply a contradiction, and a miracle does not imply a contradiction. "The contrary of every matter of fact is still possible, because it can never imply a contradiction, and is conceivable by the mind. That the sun will not rise to-morrow is no less intelligible a proposition, and implies no more contradiction than that it will rise."* Miracles are not to be objected to, then, upon the ground of their impossibility. They are possible events.

What, then, is the objection to them? Hume's answer is that they contradict the uniform experience of mankind. "It is no miracle that a man in seeming good health should die on a sudden, because such a kind of death, though more unusual than any other, has yet been frequently observed to happen. But it is a miracle that a dead man should come to life, because that has *never* been observed in any age or country. There must, therefore, be an *uniform* experience against any miraculous event, otherwise the event would not

* Inquiry, Section iv.

merit that appellation. And as an uniform experience amounts to a proof, there is here a direct and full *proof*, from the nature of the fact, against the existence of the miracle."*

There are two fallacies in this *quasi* argument. The first is contained in the unproved assertion, that the reanimation of a dead man has "*never* been observed in any age or country," or, that a miracle is contrary to uniform in the sense of *invariable* experience. For, by uniformity, here, must be meant an experience without a single exception. A single instance to the contrary would be fatal to Hume's theory. One miracle would be as good as a hundred, in logical respects. Mill so understands Hume's use of the term "uniform," when he explains it by the term "universal," and defines the universal as that which results from a "complete induction of all the particulars." Now, merely to assume, as is done in this pretended argument introduced by the word "because," that a miracle is contrary to universal experience, is to beg the question. The question in dispute is: *Does* the miracle contradict the experience of every individual without exception that ever lived upon this earth? That it contradicts the experience of Mr. Hume, does not prove that it contradicts the experience of Saul of Tarsus. That no miracles have been witnessed in Scotland, and in the nineteenth century, does not prove that they were not witnessed in Palestine, and in the first century. In order to be warranted in the sweeping assertion that a miracle "*never* has been observed in any age or country," a man must either demonstrate by the *a priori* method that the miracle is not possible, or by an *a posteriori* method that includes the entire history of man from its beginning up to the present moment, that the miracle is not actual. Hume has done neither.

The second fallacy in this semblance of an argument, consists in defining the miracle in such a manner as to include the point to be proved. A miracle, says Hume, is "an event that has never been observed in any age or country." Indeed! One would think that this is the very point in dispute between the parties. To take it out of the dispute, in this cool manner, and put it into the definition of a miracle which is to be accepted by both parties alike, is perhaps ingenious, but hardly

* Inquiry, Section x.

according to the rules of discussion. Mr. Hume certainly presumed very much, either upon the simplicity or the good-nature of his Christian opponents. This circular mode of reasoning, by surreptitiously putting the thing to be proved into a preliminary definition, has recently been repeated by Mr. Spencer in his definition of evolution, as "the development of the homogeneous into the heterogeneous." The question between the creationist and the evolutionist is, whether the homogeneous mineral ever does develop into the heterogeneous vegetable, or the homogeneous vegetable into the heterogeneous animal; and if this definition is accepted, Mr. Spencer may spare himself any further reasoning; and so might Mr. Hume, if his definition of a miracle be allowed.

The question whether a miracle has ever occurred, cannot be decided by definition, and in an *a priori* manner. It is a proposition in history, not in geometry. It is a question of fact, and must be decided by the examination of testimony. The thing itself is possible, as Hume, in words at least, concedes; whether, then, it be actual, depends upon witnesses. Strictly universal experience would involve an experience embracing all the physical phenomena upon earth, from the beginning of human history. It must be wider than the experience of the great majority of men. It must include that of the minority also. The minority, here as in politics, have some rights which the majority are bound to respect. The question of the miracle cannot be decided by a majority vote. The induction of particulars must be exhaustive, in order to demonstrate the incredibility of a miracle. It is not sufficient to cite the experience of the disbeliever and his contemporaries.

When, however, it comes to the subject of testimony for the miracle, Hume retreats to the *a priori* method. He did not, like Baur and Strauss, enter into an acute and learned investigation of the historical data furnished by the New Testament and the literature of the first two centuries, and endeavor to invalidate the testimony. Hume never examined the witnesses themselves. He took the shorter method of *postulating* that "a miracle has never been observed," and of retracting his previous concession that a miracle is possible. When he comes to speak of the subject of testimony for a miracle, he falls back upon the notion of impossibility. "No testi-

mony," he says, "is sufficient to establish a miracle, unless the testimony be of such a kind that its falsehood would be more miraculous than the fact which it endeavors to establish."* This rules out testimony altogether. The real meaning is, that there can be no testimony at all for a miracle. For, there can be no testimony "more miraculous than a miracle." And, if there were, the scepticism that had demanded a yet more miraculous testimony for the miraculous event would require a yet stronger kind of proof for the miraculous testimony itself, and so on indefinitely. In the extract which we have already given upon page 25, Hume frames his statements so as to establish the intrinsic impossibility of a miracle. In the first place, he defines the miracle as an event that never has been observed, and then adds to this the assertion, that any event that has actually been observed evinces *by this very fact* of sensuous observation that it is *not* a miracle. The miracle, consequently, cannot be established by the testimony of the senses. It never has been seen; and, if it could be seen, this would prove that it is not a miracle. Such reasoning is like that of the advocate in defence of his client: first, the defendant never borrowed the kettle; secondly, if he did borrow it, he returned it.

The *a priori* impossibility of the miracle lies under all the ancient and all the modern scepticism. This is the axiom to which all classes of unbelievers, in one form or another, really come back. This is the position of Huxley, as may be seen from his remarks upon Hume's views. The lurking assumption, notwithstanding the verbal concession of the possibility of the miracle, really is that the miracle is impossible. There is no testimony sufficiently strong to justify human belief in the miraculous. Huxley writes as follows: "If a man tells me that he saw a piebald horse in Piccadilly, I believe him without hesitation. If the same person tells me that he observed a zebra there, I might hesitate a little about accepting his testimony. If, however, my informant assured me that he beheld a centaur trotting down that famous thoroughfare, I should emphatically decline to credit his statement; and this even if he were the most saintly of men and ready to suffer martyr-

* Inquiry, Section x.

dom in support of his belief. Indeed, I hardly know what testimony would satisfy me of the existence of a live centaur" (p. 132). He thinks, however, that the testimony of Johannes Müller, the great German anatomist, would stagger him, and "lead to suspension of judgment." And if some competent investigator should write a "careful monograph," giving measurements and diagrams, he might possibly believe in the existence of a centaur.

A man convinced against his will is of the same opinion still, and a sceptic will hold out a long time against very respectable witnesses and testimony. But we think that if five hundred Englishmen at once—a number equal to the "five hundred brethren at once" alluded to by St. Paul—should see a centaur trotting down Piccadilly, and should testify that they did, and their testimony *should go unchallenged by the remainder of the English nation*, as that of the five hundred brethren was by the Jewish people, and Mr. Huxley should refuse to credit them, the common judgment would be that he was not so much a philosopher as he was an obstinate simpleton.* This "scientist," to employ the bad English that now designates a certain class of investigators, thinks that it is a very difficult thing to credit the existence of such a combination of man with brute as the centaur is. But he finds no difficulty in tracing the origin of man back to a brute, and believing that he can be developed from a jelly-fish. If he can swallow this camel, one would think that he need not strain at that gnat.

Indeed, if evolution, in Spencer's definition of it, is the truth, there is no knowing what may happen in the universe, and the materialist must be ready for anything. For, if the homogeneous can be transmuted by a merely *natural* process into the heterogeneous, then evolution may as easily descend as ascend. The animal may return to the vegetable, and the vegetable to the mineral. Man may develop into an ape, and the ape into

* It is not always remembered that the number of witnesses for the reality of miracles is not composed merely of those disciples of Christ who testified formally, but also of that much greater number of Jews who did not dispute this testimony. Silence gives consent. The Jewish nation as a whole, in permitting the oral narratives of the first preachers of the Gospel, and the written narratives of the evangelists, to go uncontradicted, at a time when contradiction would have been fatal to the spread and reception of these narratives, virtually become witnesses to the truth of the Gospel.

amorphous protoplasm, and protoplasm into inorganic matter. This would still be the homogeneous becoming the heterogeneous. It is impossible, upon this theory, to calculate upon fixed and uniform action in the physical world; and Mr. Huxley, if he lives long enough, may see stranger phenomena than a centaur, or even the Gospel miracles. Lucretius objects to the doctrine of creation *ex nihilo* that it introduces confusion into nature. He erroneously supposed the doctrine of creation to be incompatible with the old accepted dictum, "omne animal ex ovo." If fishes and men, he says, are created from nothing, and do not spring from living germs or eggs, then fishes may start out of the ground and men may originate in the sea. Everything might originate out of everything.

Si de nihilo fierent, ex omnibus rebus
Omne genus nasci posset; nil semine egeret:
E mare primum homines, e terra posset oriri
Squamigerum genus, et volucres.*

Now this is exactly what may happen, if the different kingdoms of nature are related to each other in the manner asserted by the new physics. If there are no fixed limits to them, as the historical physics maintains, but all are merged and blended in the manner claimed by evolutionists, then the grain of sand may develop into a sperm cell, and the Nilotic slime into Plato's brain, and back again, with procession and retrocession forevermore. If this is so, the evolutionist ought not to find the biblical miracles so difficult to credit. If this is scientific truth, there are stranger things ahead, in infinite space and everlasting time, than have yet been seen, even in Palestine and by the Jewish people; and there are more things in heaven and earth than have been dreamed of in the materialist's philosophy. Extremes meet. "Nothing," says Pascal, "is more credulous than infidelity." The intellect of Kepler would find it more difficult to accept the physics of Haeckel, than the Gospel narratives.

And this brings us to the true reply to Hume's assertion that the miracle contradicts universal experience: viz, that there is valid testimony that it does not contradict it. Christendom, for eighteen centuries, has had in its possession a mass

* De rerum natura, i, 160-163.

of historical documents and data, which ninety-nine-hundredths of Christendom in all these centuries have regarded as proving that miracles have been wrought in this world, and have been seen by some of its inhabitants. The nature of this evidence is not mathematical, but like that for ordinary events in human history. It is possible to dispute and disbelieve it; as it is possible to dispute and disbelieve the evidence for the assassination of Julius Cæsar. Assent to the testimony for the miracle, like assent to the testimony for events in ancient history generally, cannot be necessitated like assent to a geometrical axiom. The contrary of all historical events, be they ordinary or extraordinary, is possible. But the preponderance of evidence, and the probability, is so great, that the mass of mankind believe the events of both sacred and profane history; both the miracle and the ordinary historical fact.

This reply brings the sceptic out of the province of sophistry, into the province of history, and invites him to examine the witnesses for the miracle, and to prove them to be false witnesses, if he can. This is a different kind of work from specious and artful ratiocination. It prohibits the use of the *a priori* method in the province of history, where it does not belong, and compels the objector to employ the *a posteriori* method, or the induction of facts, in a case where the only question is one of facts. That Hume knew little of such investigation is notorious. Johnson says that Hume acknowledged to a clergyman in the bishopric of Durham that he had never read the New Testament with attention. And what did Hume know of the nature and force of the testimony for the credibility of the New Testament, that comes from a score of writers, Christian, heretical, and sceptical, of the first three centuries, to say nothing of the monumental and other evidence that enters into Christian apologetics?

In proportion as the history and literature contemporaneous with, and immediately succeeding, the advent of Christ is studied, does a man's belief in the credibility of the New Testament increase. But if he neglects this kind of study altogether, and bends his mind to the invention of *a priori* reasons against miracles, he will be able to make an infidel of himself, if not of others. If the witnesses to a fact are not listened to, and their testimony is not examined, of course the fact to which they

testify is liable to be denied, especially if there be any motive for so doing.

And this is the course which infidelity generally has pursued. Hume and Voltaire are examples. Neither of them was a student of Biblical and patristic literature. Both passed a judgment, without an examination of the testimony. We could not say this of the recent German infidelity, as represented by Baur and Strausz. Here, there is scholarship in this direction, unquestionably—a scholarship which has elicited a scholarship in reply, that has strengthened the old defences, and established Christian apologetics upon a yet stronger position. But it is not at all extreme to say, that in respect to apologetic learning, the English deism and the French atheism of the eighteenth century, were characterized by downright ignorance. The biblical and theological articles in Diderot's *Encyclopædia*, and Voltaire's *Dictionary*, are notorious for their superficiality and incorrectness. The blunders of Collins were exposed by Bentley; those of Toland, by Clark and Lardner; and those of Bolingbroke by Bishop Newton.

The same remark is true of the current materialism. Such exclusive attention as Huxley, Maudsley, and Tyndall are bestowing upon matter, leaves them no time, and no inclination, to contemplate mind. "If the soul, my dear Alcibiades, is ever to know herself, must she not look at the soul; and especially at that part of the soul in which her virtue, namely, wisdom, resides, and which is like herself?"* A man who holds one eye to the orifice of a microscope, and keeps the other closely shut, cannot see anything beyond his nose, and his knowledge must be confined to a very small circumference. He may be able to tell us how many scales there are in an inch of a fish's skin, and how many fibres there are in a spot on a butterfly's wing. But such minute physical inquiries as these leave him no time or taste for higher and grander matters. This very book of Huxley, on almost every page, displays ignorance in the nobler departments of human knowledge. His judgments respecting the deeper problems of philosophy and theology are crude and worthless. He misconceives Descartes, and does not understand Kant. He knows absolutely nothing of metaphysics, in

* Plato, *Alcibiades I.* 132.

the sense in which Plato, Aristotle, Descartes, and Kant employed the term. He knows physics, and supposes that this is metaphysics.

The "spurt," to use a boating phrase, which physical science, for the last decade, has taken in the direction of materialism, will come to an end, as in previous instances, because of this ignorance of higher themes. The human mind cannot long be content with the minute observation of the five senses helped by instruments. It will reassert its origin and its dignity, and leaving the things that are seen and temporal, begin again to contemplate the things that are unseen and eternal.

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