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REMOVAL OF INHERITED TENDENCIES TO
DISEASE.

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A LIMITED collection of statistics and the observation of physicians concur in showing that about two thirds of our people inherit a tendency to some disease, or to a defective vitality in some organ of the body. In very many instances the overshadowing heritage is toward an untimely death, while in others it is simply toward some chronic insufficiency which embitters many a year of life.

The number who think themselves doomed to a premature death by some innate blood defect is very great. At this moment hundreds of thousands are ready to interpret every sign of thoracic derangement as the harbinger to the development of that dreaded inheritance—pulmonary consumption. Taking into consideration that, according to the last census, about seventy thousand throughout our land are swept into the grave each year by this disease, cause for alarm seems sufficiently ample. The aggregate of foreboding, of suffering, and of heart-wringing grief at untimely separations through this scourge alone, would be terrible to contemplate were we capable of apprehending it as a whole. Add to this the heritage in numerous instances of a tendency to rheumatism, to gout, to epilepsy, to insanity, to cancer, and the host of those distressed in mind or in body attains a painful magnitude. A subordinate and large group of heritages are yet to be added. Every year thousands are brought into the world with digestive organs so imperfect that the slightest indiscretion precipitates misery; others are tormented for life by the development of an inherited tendency to *migraine*, to neuralgia, or to asthma; and not a few through the same agency lose their sight or their hearing during the prime of life.

AGNOSTICISM AS DEVELOPED IN HUXLEY'S HUME.*

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PROFESSOR HUXLEY is a man of strong intellectual tastes and tendencies. He is evidently an enthusiast in his biological studies. It is not so generally known that he is also a metaphysician. This he has shown in his published address on Descartes and in other papers. He has now come forward to defend the study. (See "Popular Science Monthly," May, 1879.) Kant has made the remark that we can not do without metaphysics, and others have noticed that those who affect to discard them will commonly be found proceeding, without their being aware of it, upon a very wretched metaphysic. The Professor now tells us, "In truth, to attempt to nourish the human intellect upon a diet which contains no metaphysics is about as hopeful as that of certain Eastern sages to nourish their bodies without destroying life." He adds: "By way of escape from the metaphysical will-o'-the-wisps generated in the marshes of literature and theology, the serious student is sometimes bidden to betake himself to the solid ground of physical science. But the fish of immortal memory who threw himself out of the frying-pan into the fire was not more ill advised than the man who seeks sanctuary from philosophical persecution within the walls of the observatory or of the laboratory." He shows that such conceptions as "atoms," and "forces," and as "energy," "vacuum," and "plenum," all carry us, whether we will or no, beyond a physical to a metaphysical sphere.

I rather think that the Professor's metaphysics were derived primarily from David Hartley, but especially from James Mill, reckoned an age or two ago, in England, the chief philosophical authorities by those not trained at the two English universities. Hartley connected metaphysics with physiology; and James Mill, after abandoning the trade of a preacher, adopted the fundamental principles of David Hume, and transmitted them to his son John Stuart Mill, who modified and improved them by independent thought and a larger acquaintance with other systems. Professor Huxley has now, in this work on Hume, given his own philosophy, which is substantially that of Hume and James Mill, with some not very valuable suggestions from Bain, and a criticism now and then derived from Descartes and Kant, of whose profounder principles he has in the mean while no appreciation. It is expounded in the form of an epitome of the system of the Scottish scepter with constantly interspersed criticisms of his own. His style

* "Hume," by Professor Huxley.

is not that usually supposed to be philosophic : it is not calm or serene or dignified ; but it clearly expresses his meaning, and it is graphic, living, and leaping. He shows everywhere great acuteness, and the shrewdness of one who is not to be taken in by show and pretension, or awed by authority. No man is quicker in starting an objection, which, however, may be of a surface character, and not penetrating into the heart of the subject. I can not discover in his speculations the calmness of one who is waiting for light, or the comprehension of one who goes round the object examined and views it on all sides.

Mr. Darwin has elected and proclaimed Professor Huxley as the philosopher of his school, and this when many would place Herbert Spencer above him. I treat and criticise him as such. Most of the members of the school are not professed metaphysicians; but, like the man in the French play who spoke prose all his life without knowing it, there is a metaphysic underlying their reasonings; and this metaphysic, without their being aware, is very much that of Mr. Huxley. I venture not to urge objections to his biology, of which he is a master, and to be reviewed only by a master in his department. But he is not so formidable as a metaphysician, and one with but a sling and stone may cast him down, and the philosophy of his admiring host, by a few facts as clearly revealed to our inner consciousness as the facts of physiology are to the external senses.

I am in this paper to develop first, one by one, the positions of Hume, then the modifications of these by Huxley. In proceeding, I will show how the negative positions of both are to be met. In the close, I will show what kind of knowledge agnosticism admits and what it denies, and estimate the influence it is likely to exercise upon the present age, and especially upon young men liable to be drawn into its vortex :

1. According to Hume, what is commonly called mind starts with *Impressions*. This is a very misleading term. Taken literally, it implies three things : a thing impressing, say a seal; a thing capable of receiving an impression, say wax; and a figure, say of a head, impressed. Applied, it ought to denote an external thing ready to impress itself, a mind to be impressed, and an impression, say a perception, made upon it. The language is unfortunate ; but, carrying out the similitude, we might have a psychology containing much truth : a thing perceived, a perceiving mind, and a perception. But according to Hume, followed by Huxley, we have none of these things. We have in our exercise of what are commonly called the senses no perception of anything, no mind to perceive, and no object to be perceived. We have simply a succession of passing states, and these states of nothing permanent.

This is the avowed doctrine of Hume. Huxley adopts it. He amends it by classifying the IMPRESSIONS into—A. Sensations ; B. Pleasure and Pain ; and C. Relations. Let us confine our attention for the present to the first two, to Impressions, A. Of Sensation, and B.

Of Pleasure and Pain. Let us notice what we have got, as he describes it : "When a red light flashes across the field of vision, there arises in the mind an impression of sensation which we call red. It appears to me that this sensation red is something which may exist altogether independently of any other impression or idea as an individual existence. . . . The whole content of consciousness might be that impression." These Impressions, with the Pleasure and Pain, are represented by him as knowledge ; this without a thing knowing or a thing known. It is such knowledge with which man starts, such knowledge as man can attain, and the foundation of all other knowledge.

He has already laid the foundation of agnostics. He has started with an assumed principle, from which only nescience can follow. These impressions can never by logic or any legitimate process give us the knowledge of things. The addition or multiplication of 0 can give us only 0 ; so the additions or multiplications of impressions, of sensations, of pleasures and pains, can give us only impressions in sensations and in pleasures and pains.

Now, all this is to be met by showing that the mind begins in sense-perception with the knowledge of things. It knows this stone as an existing and resisting object. It knows self as perceiving this object. "The whole content of consciousness" never is a mere impression, say a sensation of red. It is of a thing impressed. If I am asked for my proof, I answer that all this is contained in my very consciousness. I have, in fact, the same evidence of this as I have of the existence of the impression "red." I am conscious of self perceiving a red object. Indeed, any impression I may have is an abstraction taken from the self impressed.

2. Omitting for the present the impressions of Relation, we now view the only other content which he gives the mind, IDEAS, which he defines "copies or reproductions in memory of the foregoing." We are here at the point at which Mr. J. S. Mill was so perplexed. He saw, and acknowledged in his candor, that in memory there is more than a mere copy or a reproduction. There is *the belief that the event remembered has been before us in time past*. We thus get the idea of time always in the concrete ; that is, an event in time, and by abstraction we can separate the time from the events in time. We have got more. We intuitively believe that we are the same persons at this present time as we were when days or years ago we witnessed the event. We can not be made to believe otherwise. In this process we are adding knowledge to knowledge, and this a knowledge of ourselves and of other things. These are all revealed to and attested by consciousness, the organ of things internal. The person who would overlook such important facts as these in the animal structure would be terribly lacerated by our acute zoölogist.

3. The next step in the progress of the mind is the discovery of Relations. Hume's account of the relations which the mind can dis-

cover is taken from Locke and improved, and is very large and comprehensive. He makes them to be eight in number: Resemblance, identity, space and time, quantity, quality, contrariety, cause and effect. He exerts all his ingenuity, I believe fruitlessly, to show that these can not extend our knowledge beyond impressions and ideas, which are mere reproduction of impressions. They are relations of impressions and ideas, and not of things. We meet this skepticism on the part of Hume and agnosticism on the part of Huxley by maintaining that what we perceive originally are things, and what we perceive by the faculty that discovers relations are relations of things. When we classify plants by their resemblances, we classify the plants and not impressions. When we decide that a thing which begins to be must have a cause, we have a reality: first, in the thing that begins to be; which implies, secondly, a reality in the cause which we regard as producing it. It is thus that we argue that the present configuration of the earth, being an objective reality, is the result of agencies which acted thousands or millions of years ago. It is thus we argue that the adaptations we see in the eye must have had a cause in an adapting, that is, a designing power. Professor Huxley's account of the relations which the mind can discover is much more meager than that of Hume. Apparently, following Professor Bain, he makes them consist in coexistence, succession, and similarity. He thus gets rid dexterously of the relations of quantity on which mathematics, with all their certainty, so obnoxious to the skeptic, depends; and of identity, which certifies to the soul's continued and permanent existence; and of causation, which leads us from harmonies and adaptations, from order and design in nature, to rise to a producing power in a designing Mind. The three which he acknowledges—similarity, coexistence, and succession—are all regarded as relations among impressions and ideas, and tell us nothing as to realities.

This is the intellectual furniture of the mind, according to Huxley. Observe what it is: Impressions, Ideas, and Relations among these. He calls these the "Contents of the Mind." It is the most miserably defective account of the mental powers I have met with anywhere; more so than that given even by Condillac and the sensational school of France, who gave to the mind a power of transforming its sensations into a considerable number and variety of elevated ideas.

4. Having thus allotted to the mind so small a content, he finds it the more easy to refer the whole to cerebral and nervous action. "The upshot of all this is, that the collection of perceptions which constitutes the mind is really a system of effects, the causes of which are to be sought in antecedent changes of 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 muscles of the wings. . . . What we call the operations of the mind are functions of the brain, and the materials of consciousness are products

of cerebral activity." The Professor here defends a doctrine from which I rather think Hume would have turned away. With all his skepticism, Hume was fond of dwelling on mental rather than on material operations. Such sentences show that Huxley may be properly called a materialist. He denies, indeed, that he is a materialist. The fact is, that he is an agnostic, believing in neither mind nor matter as substances. But then he makes all agency material. "The roots of psychology lie in the physiology of the nervous system." He gives a physical basis to all mental action—inconsistently, I think, for I can not find that on his principles he is entitled to seek for any basis. Neither reason nor experience sanctions the doctrine that matter can produce mind ; that molecules or masses of matter can think or feel, or discover the distinction between good and evil. At this point Huxley seems to separate from such men as Tyndall and Du Bois-Reymond, who tell us that to bridge the wide gulf that divides mind from matter is altogether beyond human capacity or conception.

5. At this point it will be necessary to refer—I can do so only briefly—to the question so important in philosophy, as to whether the mind discovers some objects and truths at once, and without a process—that is, by intuition. Hamilton, in his famous Note A, appended to his edition of Reid's "Collected Works," has shown that all thinkers, including even skeptics, have been obliged to assume something without proof, and to justify themselves in doing so. In my "Examination of Mr. J. S. Mill's Philosophy" I have shown that, in his "Examination of Hamilton's Philosophy," he has assumed between twenty and thirty such principles. With Locke I hold that the primary mark of these intuitions is self-evidence. We perceive things and truths by simply looking at them. Intuitions are not high *a priori* truths independent of things, but they are involved in the very nature of things, and we perceive this as we look at them. Thus we know, by simply looking at them, that things exist ; that if two straight lines placed alongside proceed an inch without coming nearer each other, they will not approach nearer, though prolonged through all space ; that two things plus two things make four. Truths thus self-evident to our minds become necessary ; we can not be made to judge or decide that they are not true. Necessity is commonly put forward by metaphysicians such as Leibnitz and Kant as the test of such truths. I regard it as the secondary, the primary being self-evidence.

Hume and Huxley have discussed the question of Necessity especially as applied to causation. Hume accounts for it by custom and association of ideas : we are accustomed to see cause and effect together, and when we see the one we are constrained, whether we will or not, to think of and expect the other. But this is not the kind of necessity which metaphysicians appeal to. Necessity as a test of truth is a necessity of cognition, belief, or judgment, arising from our viewing the nature of the object, as, for example, when on contemplating

two straight lines, we perceive, without any mediate proof, that they can not inclose a space. Our commentator on Hume has equally misunderstood the nature of this necessity. He speaks of three kinds of necessity. The first is one merely requiring the consistent use of language: "The necessary truth $A = A$ means that the perception which is called *A* shall always be called *A*." This throws no light on our convictions. The second, "The necessary truth that 'two straight lines can not inclose a space,' means that we have no memory, and can form no expectation of their so doing." The instance he gives is a good example of an intuitive truth seen at once, and necessarily believed; but it surely implies vastly more than merely that we have no memory, and can form no expectation of two straight lines inclosing a space; it means that we perceive that, from the very nature of things, two such lines can not inclose a space. He has a third case of necessity, "The denial of the necessary truth that the thought now in my mind exists, involves the denial of consciousness." This is also an example of a self-evident, necessary truth, but it is so because we have an immediate knowledge of ourselves as existing.

6. Hume's doctrine of causation takes a double form; the one objective, the other subjective. These two are intimately connected, and yet they should be carefully separated. Hume held that objective causation is only invariable antecedence and consequence. This is a doctrine contradicted both by metaphysical and physical science. It seems very clear to me that our intuitions, looking on objects, declare that they have power. This is implied in the axiom that we know objects as having properties; and what are properties but powers? Then modern science has established the doctrine of the conservation of energy; namely, that the sum of energy, actual and potential, in the world is always one and the same. Causes are not causes simply because they are antecedents; they are antecedent of the effects because they have power to produce them.

It would be preposterous in so short a paper as this to dive into all the subtleties of the subjective question as to whether our belief in causation is intuitive, or is derived from a gathered experience. The settlement of this question will depend on the way we settle the one started under the last head, as to whether there are not truths which shine in their own light. If there be such truths, then causation is undoubtedly one of them. When we see a thing produced, a new thing, or a change in an old thing, we look for a producing cause having power in its very nature, and ready to produce the same effect in the same circumstances.

7. By his doctrine, defective as I reckon it, Hume undermined the argument for the Divine existence. There is evidence in his life, in his correspondence, and in his philosophic writings, that, like John Stuart Mill, in a later age, he looked with a feeling of favor upon the seeming evidence for the existence of a designing Mind in the uni-

verse. But neither of these men could find a conclusive argument. Huxley follows them here. The three are to be met in the same way. The philosophy of all of them is erroneous. Man has the capacity to discover that, by the very nature of things, everything that begins to be must have a cause. If a world begins to be, if there be a fitting of things to one another in the world, then there must be an adequate cause in a power and purpose on the part of an intelligent Being. Our agnostics can answer this only by making man incapable of knowing anything of the nature of things.

8. According to the philosophy of Hume, there is and can be no evidence of the immortality of the soul. If mind be the product of matter, specially of the collection of nerves, then, on the dissolution of the body generally, and especially of the brain, there is no proof that the soul survives; indeed, there remain no means, in fact no possibility, of its action. The moral argument so powerfully urged by Kant in favor of a judgment-day and a life to come to satisfy the full demand of the law, is entirely undermined in a philosophy which does not admit of an authoritative and imperative morality, and does not call in a God to make the moral law work out its effects. This skepticism is to be met by showing that mind and matter are made known to us by different organs, the one by the self-consciousness, and the other by the senses; and that they are known as possessing essentially different properties, the one as thinking and feeling, and the other as extended and resisting our energy. That the body dies, is no proof that the soul must also die. If these truths be established, it is seen that the usual arguments for another life retain their force. Believing in God, and in his law, we are convinced that he will call all men to judgment.

9. But it may be urged that, though the philosophic or scientific arguments in behalf of religion fail us, we may resort to revelation. But both Hume and Huxley deprive us of this refuge. Hume does not, like certain bewildered German speculators, deny the possibility of a miracle. His position is, that there is no evidence to support any given miracle. He defines miracles as "a violation of the laws of nature," and labors to show that the testimony in behalf of a miracle is more likely to be false than that the order of nature should be violated. Huxley objects to his definition of a miracle, as many had done before. But he urges the same objection in a somewhat different form: "The more a statement of fact conflicts with previous experiences, the more complete must be the evidence to justify us in believing it" (p. 133). He decides that there is no such evidence as is fitted to sustain an occurrence so contrary to our experience as a miracle. Huxley advances nothing new on this subject, and the defenders of Christianity maintain that they can meet the objections he adopts. They show, first, that they can produce testimony in favor of certain miracles, such as the resurrection of Jesus from the dead, more full and explicit,

than can be advanced in behalf of the assassination of Julius Cæsar, or the best-authenticated occurrences in ancient times. They show, secondly, that there is an accumulation and a combination of evidence in favor of the life and mission of Jesus Christ : in the prophecies uttered ages before ; in the results that followed the propagation of the gospel ; and, above all, in the fitness of Christ's work to remedy the acknowledged evils in the world, and in its adaptation to the felt wants, moral and spiritual, of man. It might be shown that the cumulated evidence in behalf of the Christian revelation is not unlike that brought to prove the uniformity of nature.

10. Professor Huxley has nothing original to advance on the subject of moral good. Neither of them holds the selfish theory of morals. Both hold that man has a native instinct which leads him to sympathize with his neighbor, and to be pleased at seeing him happy. So far both are right; but, on the very same ground on which it is shown that there is a disposition in our nature to promote the pleasure of others, it can be shown that there is a principle in our nature which leads us to approve of what is good and condemn what is evil.

We are now in a position to discover and comprehend what agnosticism is, as expounded by its eminent living philosopher. Notwithstanding the meaning of the term, it is claimed by the whole school that there is knowledge gradually accumulating. According to our professor there are sensations, there are pleasures and pains, and among these are relations of coexistence, of succession, and similarity. By observing these we may form science, which is systematized knowledge. He who is master of the sciences is a learned man, and may be very proud or vain of his acquirements. Professor Huxley, as being acquainted with a number of the sciences, is undoubtedly possessed of much knowledge.

What, then, it may be asked, is defective or fault-worthy in the philosophy of agnostics? Its error lies in its avowed fundamental principle that we know only impressions, or, as Kant expresses it, appearances, and do not know things either mental or material. All that we know are impressions—impressions recalled and impressions correlated. The correlations constitute the various sciences.

There are *savants* who have a large acquaintance with these impressions and their correlations. But all the while they know nothing and never can know, or come nearer knowing, the things thus appearing and thus correlated as appearances—if, indeed, there are any things. It is not positively asserted that there are things, but it is certain, according to Kant, followed by Spencer, that there are, unknown and unknowable by man with his present faculties. It is curious to find the metaphysical Hume and the physical Huxley at one on this point.

In one sense Huxley is entitled to deny that he is a materialist. He believes as little in the existence of matter as he does of mind.

But he does claim that the impressions which we call mental are produced by those we call material, namely, cerebral action. So far he is a materialist, and the undoubted tendency of his philosophy is materialistic—he makes matter the basis even of mental action. He is not like Hume a skeptic, for he does not affirm that there are no things: all that he says is, that if they exist we can not know them; or, rather, that things known to us are merely impressions in the shape of sensations—of sensations remembered and correlated. He is not an atheist, not he; he only says that we have no proof of the existence of God. He is simply an honest agnostic—not believing in mind, or in matter, or in God. What is the tendency of such a system?

1. It makes us feel that we are in a world of illusions. I say illusions, and not deceptions; for, as Nature does not profess or promise anything, it can not be charged with intentional deception. But then we may be deceiving ourselves or deceiving others; and agnostics show that we are doing so. I maintain that it strips us of many of our natural beliefs—beliefs which men have entertained in all ages and countries. The great body of mankind believe that they themselves, and the objects they have to deal with, are more than impressions, and that they are realities in a real world; that there is matter that is solid, that there is mind that thinks and feels, that we all possess a soul, and that our neighbors also have souls. I am prepared to show that these convictions are valid; that we have the same evidence of a self thinking, and of body resisting our activity, as we have of the existence of impressions. But suppose these convictions removed, and how do we feel, and what have we left us?

Will we be apt to set a higher value on life when we know it to be a mere bundle of impressions with unsubstantial ideas growing out of them? Will we take a deeper interest in our neighbors when we have come to believe (theoretically, for to believe this practically is impossible) that they too are a mere congeries of appearances? Will we be disposed to do more for the world when we regard it as a set and series of phantasmagoria bound by rigid uniformities of likeness, co-existence, and succession? Will we be more likely to feel that life is worth living for, and that it is our duty to work for its good, when we contemplate it as in fact a mere series of images which do not reflect any reality? Will not one hindrance to self-indulgence be removed when we are made to acknowledge that sensations and pleasures are realities, and that there are no others? Will not one hindrance to self-murder, which we may be tempted to commit when in trouble, be removed when we are sure that we are merely stopping a series of sensations? Will the regret of the learned murderer be deepened when he is told that he has merely laid an arrest on a few pulsations? Will the seducer be more likely to be kept from gratifying his lust when the highest philosophy teaches him that the soul of his victim is a mere collection of nerves? Is the youth who has run in debt less like-

ly to rob his master when he is assured that both he and his master are mere throbs in the vibrations which constitute life? Agnosticism never can become the creed of the great body of any people; but should it be taught by the science and philosophy of the day, I fear its influence on the youths who might be led, not to amuse themselves with it, but by faith to receive it, would be that they would find some of the hindrances to vice removed, and perhaps some of the incentives to evil encouraged.

2. Thus far as to the influence of the philosophy on common morality. It is allowed that the system undermines all belief in the supernatural. All who know anything of it know this. But some do not realize it. The creed destroys the foundation of all religions, even the rationalistic, not only supernatural but natural theism, not only Christianity but every form of deism. Last century Franklin could say: "Here is my creed: I believe in one God the Creator of the universe; that he governs it by his providence; that he ought to be worshiped; that the most acceptable service we render him is doing good to his other children; that the soul of man is immortal, and will be treated with justice in another world respecting its conduct in this. These I take to be the fundamental points in all sound doctrine" (from letter by Hon. J. Bigelow in "New York Observer," July 3, 1879). But the superstition which clung to Franklin in the eighteenth century is all dissipated by the philosophy of this century.

Shrewd men have long seen and often said that, if Christianity be set aside, deism will soon follow. We see this already realized. Agnostics feel an avowed pleasure in pointing out the positive contradictions involved in every form of natural religion. All who adopt the system should know that they must be prepared to part with all the consolation that can be derived from religion, natural or revealed, and from all the restraints which it lays on evil conduct. Some may be rejoicing in agnosticism because it relieves them from all ghostly terrors; but it does not therefore follow that their happiness will be increased. I am aware that speculative beliefs do not always lead to corresponding practice; but their tendency is to do so, and when they do not it is because they are counteracted by opposing principles good or evil. I am sure that agnosticism, when it has time to work, will be followed by important consequences. I am not to be charged with the fallacy of arguing that, because a system is charged with bad results, it must therefore be false. I am showing that the system is false, and thus leads to prejudicial consequences—false to our nature, false to the ends of our being.