# Chapter VII.

Examination Of Some Opinions Opposed To The Preceding Doctrines.

§ 1. Polemical discussion is foreign to the plan of this work. But an opinion which stands in need of much illustration, can often receive it most effectually, and least tediously, in the form of a defense against objections. And on subjects concerning which speculative minds are still divided, a writer does but half his duty by stating his own doctrine, if he does not also examine, and to the best of his ability judge, those of other thinkers.

In the dissertation which Mr. Herbert Spencer has prefixed to his, in many respects, highly philosophical treatise on the Mind,(91) he criticises some of the doctrines of the two preceding chapters, and propounds a theory of his own on the subject of first principles. Mr. Spencer agrees with me in considering axioms to be "simply our earliest inductions from experience." But he differs from me "widely as to the worth of the test of inconceivableness." He thinks that it is the ultimate test of all beliefs. He arrives at this conclusion by two steps. First, we never can have any stronger ground for believing any thing, than that the belief of it "invariably exists." Whenever any fact or proposition is invariably believed; that is, if I understand Mr. Spencer rightly, believed by all persons, and by one's self at all times; it is entitled to be received as one of the primitive truths, or original premises of our knowledge. Secondly, the criterion by which we decide whether any thing is invariably believed to be true, is our inability to conceive it as false. "The inconceivability of its negation is the test by which we ascertain whether a given belief invariably exists or not." "For our primary beliefs, the fact of invariable existence, tested by an abortive effort to cause their non-existence, is the only reason assignable." He thinks this the sole ground of our belief in our own sensations. If I believe that I feel cold, I only receive this as true because I can not conceive that I am not feeling cold. "While the proposition remains true, the negation of it remains inconceivable." There are numerous other beliefs which Mr. Spencer considers to rest on the same basis; being chiefly those, or a part of those, which the metaphysicians of the Reid and Stewart school consider as truths of immediate intuition. That there exists a material world; that this is the very world which we directly and immediately perceive, and not merely the hidden cause of our perceptions; that Space, Time, Force, Extension, Figure, are not modes of our consciousness, but objective realities; are regarded by Mr. Spencer as truths known by the inconceivableness of their negatives. We can not, he says, by any effort, conceive these objects of thought as mere states of our mind; as not having an existence external to us. Their real existence is, therefore, as certain as our sensations themselves. The truths which are the subject of direct knowledge, being, according to this doctrine, known to be truths only by the inconceivability of their negation; and the truths which are not the object of direct knowledge, being known as inferences from those which are; and those inferences being believed to follow from the premises, only because we can not conceive them not to follow; inconceivability is thus the ultimate ground of all assured beliefs.

Thus far, there is no very wide difference between Mr. Spencer's doctrine and the ordinary one of philosophers of the intuitive school, from Descartes to Dr. Whewell; but at this point Mr. Spencer diverges from them. For he does not, like them, set up the test of inconceivability as infallible. On the contrary, he holds that it may be fallacious, not from any fault in the test itself, but because "men have mistaken for inconceivable things, some things which were not inconceivable." And he himself, in this very book, denies not a few propositions usually regarded as among the most marked examples of truths whose negations are inconceivable. But occasional failure, he says, is incident to all tests. If such failure vitiates "the test of inconceivableness," it "must similarly vitiate all tests whatever. We consider an inference logically drawn from established premises to be true. Yet in millions of cases men have been wrong in the inferences they have thought thus drawn. Do we therefore argue that it is absurd to consider an inference true on no other ground than that it is logically drawn from established premises? No: we say that though men may have taken for logical inferences, inferences that were not logical, there nevertheless *are* logical inferences, and that we are justified in assuming the truth of what seem to us such, until better instructed. Similarly, though men may have thought some things inconceivable which were not so, there may still be inconceivable things; and the

inability to conceive the negation of a thing, may still be our best warrant for believing it.... Though occasionally it may prove an imperfect test, yet, as our most certain beliefs are capable of no better, to doubt any one belief because we have no higher guarantee for it, is really to doubt all beliefs." Mr. Spencer's doctrine, therefore, does not erect the curable, but only the incurable limitations of the human conceptive faculty, into laws of the outward universe.

§ 2. The doctrine, that "a belief which is proved by the inconceivableness of its negation to invariably exist, is true," Mr. Spencer enforces by two arguments, one of which may be distinguished as positive, and the other as negative.

The positive argument is, that every such belief represents the aggregate of all past experience. "Conceding the entire truth of" the "position, that during any phase of human progress, the ability or inability to form a specific conception wholly depends on the experiences men have had; and that, by a widening of their experiences, they may, by and by, be enabled to conceive things before inconceivable to them, it may still be argued that as, at any time, the best warrant men can have for a belief is the perfect agreement of all pre-existing experience in support of it, it follows that, at any time, the inconceivableness of its negation is the deepest test any belief admits of.... Objective facts are ever impressing themselves upon us; our experience is a register of these objective facts; and the inconceivableness of a thing implies that it is wholly at variance with the register. Even were this all, it is not clear how, if every truth is primarily inductive, any better test of truth could exist. But it must be remembered that while many of these facts, impressing themselves upon us, are occasional; while others again are very general; some are universal and unchanging. These universal and unchanging facts are, by the hypothesis, certain to establish beliefs of which the negations are inconceivable; while the others are not certain to do this; and if they do, subsequent facts will reverse their action. Hence if, after an immense accumulation of experiences, there remain beliefs of which the negations are still inconceivable, most, if not all of them, must correspond to universal objective facts. If there be ... certain absolute uniformities in nature; if these uniformities produce, as they must, absolute uniformities in our experience; and if ... these absolute uniformities in our experience disable us from conceiving the negations of them; then answering to each absolute uniformity in nature which we can cognize, there must exist in us a belief of which the negation is inconceivable, and which is absolutely true. In this wide range of cases subjective inconceivableness must correspond to objective impossibility. Further experience will produce correspondence where it may not yet exist; and we may expect the correspondence to become ultimately complete. In nearly all cases this test of inconceivableness must be valid now" (I wish I could think we were so nearly arrived at omniscience); "and where it is not, it still expresses the net result of our experience up to the present time; which is the most that any test can do."

To this I answer, first, that it is by no means true that the inconceivability, by us, of the negative of a proposition proves all, or even any, "pre-existing experience" to be in favor of the affirmative. There may have been no such pre-existing experiences, but only a mistaken supposition of experience. How did the inconceivability of antipodes prove that experience had given any testimony against their possibility? How did the incapacity men felt of conceiving sunset otherwise than as a motion of the sun, represent any "net result" of experience in support of its being the sun and not the earth that moves? It is not experience that is represented, it is only a superficial semblance of experience. The only thing proved with regard to real experience, is the negative fact, that men have *not had* it of the kind which would have made the inconceivable proposition conceivable.

Next: Even if it were true that inconceivableness represents the net result of all past experience, why should we stop at the representative when we can get at the thing represented? If our incapacity to conceive the negation of a given supposition is proof of its truth, because proving that our experience has hitherto been uniform in its favor, the real evidence for the supposition is not the inconceivableness, but the uniformity of experience. Now this, which is the substantial and only proof, is directly accessible. We are not obliged to presume it from an incidental consequence. If all past experience is in favor of a belief, let this be stated, and the belief openly rested on that ground: after which the question arises, what that fact may be worth as

evidence of its truth? For uniformity of experience is evidence in very different degrees: in some cases it is strong evidence, in others weak, in others it scarcely amounts to evidence at all. That all metals sink in water, was a uniform experience, from the origin of the human race to the discovery of potassium in the present century by Sir Humphry Davy. That all swans are white, was a uniform experience down to the discovery of Australia. In the few cases in which uniformity of experience does amount to the strongest possible proof, as with such propositions as these, Two straight lines can not inclose a space, Every event has a cause, it is not because their negations are inconceivable, which is not always the fact; but because the experience, which has been thus uniform, pervades all nature. It will be shown in the following Book that none of the conclusions either of induction or of deduction can be considered certain, except as far as their truth is shown to be inseparably bound up with truths of this class.

I maintain then, first, that uniformity of past experience is very far from being universally a criterion of truth. But secondly, inconceivableness is still further from being a test even of that test. Uniformity of contrary experience is only one of many causes of inconceivability. Tradition handed down from a period of more limited knowledge, is one of the commonest. The mere familiarity of one mode of production of a phenomenon often suffices to make every other mode appear inconceivable. Whatever connects two ideas by a strong association may, and continually does, render their separation in thought impossible; as Mr. Spencer, in other parts of his speculations, frequently recognizes. It was not for want of experience that the Cartesians were unable to conceive that one body could produce motion in another without contact. They had as much experience of other modes of producing motion as they had of that mode. The planets had revolved, and heavy bodies had fallen, every hour of their lives. But they fancied these phenomena to be produced by a hidden machinery which they did not see, because without it they were unable to conceive what they did see. The inconceivableness, instead of representing their experience, dominated and overrode their experience. Without dwelling further on what I have termed the positive argument of Mr. Spencer in support of his criterion of truth, I pass to his negative argument, on which he lays more stress.

§ 3. The negative argument is, that, whether inconceivability be good evidence or bad, no stronger evidence is to be obtained. That what is inconceivable can not be true, is postulated in every act of thought. It is the foundation of all our original premises. Still more it is assumed in all conclusions from those premises. The invariability of belief, tested by the inconceivableness of its negation, "is our sole warrant for every demonstration. Logic is simply a systematization of the process by which we indirectly obtain this warrant for beliefs that do not directly possess it. To gain the strongest conviction possible respecting any complex fact, we either analytically descend from it by successive steps, each of which we unconsciously test by the inconceivableness of its negation, until we reach some axiom or truth which we have similarly tested; or we synthetically ascend from such axiom or truth by such steps. In either case we connect some isolated belief, with a belief which invariably exists, by a series of intermediate beliefs which invariably exist." The following passage sums up the theory: "When we perceive that the negation of the belief is inconceivable, we have all possible warrant for asserting the invariability of its existence: and in asserting this, we express alike our logical justification of it, and the inexorable necessity we are under of holding it.... We have seen that this is the assumption on which every conclusion whatever ultimately rests. We have no other guarantee for the reality of consciousness, of sensations, of personal existence; we have no other guarantee for any axiom; we have no other guarantee for any step in a demonstration. Hence, as being taken for granted in every act of the understanding, it must be regarded as the Universal Postulate." But as this postulate, which we are under an "inexorable necessity" of holding true, is sometimes false; as "beliefs that once were shown by the inconceivableness of their negations to invariably exist, have since been found untrue," and as "beliefs that now possess this character may some day share the same fate;" the canon of belief laid down by Mr. Spencer is, that "the most certain conclusion" is that "which involves the postulate the fewest times." Reasoning, therefore, never ought to prevail against one of the immediate beliefs (the belief in Matter, in the outward reality of Extension, Space, and the like), because each of these involves the postulate only once; while an argument, besides involving it in the premises, involves it again in every step of the ratiocination, no one of the successive acts of inference being recognized as valid except because we can not conceive the conclusion not to follow from the premises.

It will be convenient to take the last part of this argument first. In every reasoning, according to Mr. Spencer, the assumption of the postulate is renewed at every step. At each inference we judge that the conclusion follows from the premises, our sole warrant for that judgment being that we can not conceive it not to follow. Consequently if the postulate is fallible, the conclusions of reasoning are more vitiated by that uncertainty than direct intuitions; and the disproportion is greater, the more numerous the steps of the argument.

To test this doctrine, let us first suppose an argument consisting only of a single step, which would be represented by one syllogism. This argument does rest on an assumption, and we have seen in the preceding chapters what the assumption is. It is, that whatever has a mark, has what it is a mark of. The evidence of this axiom I shall not consider at present;(92) let us suppose it (with Mr. Spencer) to be the inconceivableness of its reverse.

Let us now add a second step to the argument: we require, what? Another assumption? No: the same assumption a second time; and so on to a third, and a fourth. I confess I do not see how, on Mr. Spencer's own principles, the repetition of the assumption at all weakens the force of the argument. If it were necessary the second time to assume some other axiom, the argument would no doubt be weakened, since it would be necessary to its validity that both axioms should be true, and it might happen that one was true and not the other: making two chances of error instead of one. But since it is the *same* axiom, if it is true once it is true every time; and if the argument, being of a hundred links, assumed the axiom a hundred times, these hundred assumptions would make but one chance of error among them all. It is satisfactory that we are not obliged to suppose the deductions of pure mathematics to be among the most uncertain of argumentative processes, which on Mr. Spencer's theory they could hardly fail to be, since they are the longest. But the number of steps in an argument does not subtract from its reliableness, if no new *premises*, of an uncertain character, are taken up by the way.(93)

To speak next of the premises. Our assurance of their truth, whether they be generalities or individual facts, is grounded, in Mr. Spencer's opinion, on the inconceivableness of their being false. It is necessary to advert to a double meaning of the word inconceivable, which Mr. Spencer is aware of, and would sincerely disclaim founding an argument upon, but from which his case derives no little advantage notwithstanding. By inconceivableness is sometimes meant, inability to form or get rid of an *idea*; sometimes, inability to form or get rid of a *belief*. The former meaning is the most conformable to the analogy of language; for a conception always means an idea, and never a belief. The wrong meaning of "inconceivable" is, however, fully as frequent in philosophical discussion as the right meaning, and the intuitive school of metaphysicians could not well do without either. To illustrate the difference, we will take two contrasted examples. The early physical speculators considered antipodes incredible, because inconceivable. But antipodes were not inconceivable in the primitive sense of the word. An idea of them could be formed without difficulty: they could be completely pictured to the mental eye. What was difficult, and, as it then seemed, impossible, was to apprehend them as believable. The idea could be put together, of men sticking on by their feet to the under side of the earth; but the belief *would* follow, that they must fall off. Antipodes were not unimaginable, but they were unbelievable.

On the other hand, when I endeavor to conceive an end to extension, the two ideas refuse to come together. When I attempt to form a conception of the last point of space, I can not help figuring to myself a vast space beyond that last point. The combination is, under the conditions of our experience, unimaginable. This double meaning of inconceivable it is very important to bear in mind, for the argument from inconceivableness almost always turns on the alternate substitution of each of those meanings for the other.

In which of these two senses does Mr. Spencer employ the term, when he makes it a test of the truth of a proposition that its negation is inconceivable? Until Mr. Spencer expressly stated the contrary, I inferred from the course of his argument, that he meant unbelievable. He has, however, in a paper published in the fifth number of the *Fortnightly Review*, disclaimed this meaning, and declared that by an inconceivable proposition he means, now and always, "one of which the terms can not, by any effort, be brought before consciousness in that relation which the proposition asserts between them--a proposition of which the subject and predicate

offer an insurmountable resistance to union in thought." We now, therefore, know positively that Mr. Spencer always endeavors to use the word inconceivable in this, its proper, sense: but it may yet be questioned whether his endeavor is always successful; whether the other, and popular use of the word, does not sometimes creep in with its associations, and prevent him from maintaining a clear separation between the two. When, for example, he says, that when I feel cold, I can not conceive that I am not feeling cold, this expression can not be translated into "I can not conceive myself not feeling cold," for it is evident that I can: the word conceive, therefore, is here used to express the recognition of a matter of fact--the perception of truth or falsehood; which I apprehend to be exactly the meaning of an act of belief, as distinguished from simple conception. Again, Mr. Spencer calls the attempt to conceive something which is inconceivable "an abortive effort to cause the non-existence," not of a conception or mental representation, but of a belief. There is need, therefore, to revise a considerable part of Mr. Spencer's language, if it is to be kept always consistent with his definition of inconceivability. But in truth the point is of little importance; since inconceivability, in Mr. Spencer's theory, is only a test of truth, inasmuch as it is a test of believability. The inconceivableness of a supposition is the extreme case of its unbelievability. This is the very foundation of Mr. Spencer's doctrine. The invariability of the belief is with him the real guarantee. The attempt to conceive the negative is made in order to test the inevitableness of the belief. It should be called, an attempt to *believe* the negative. When Mr. Spencer says that while looking at the sun a man can not conceive that he is looking into darkness, he should have said that a man can not *believe* that he is doing so. For it is surely possible, in broad daylight, to *imagine* one's self looking into darkness.(94) As Mr. Spencer himself says, speaking of the belief of our own existence, "That he *might* not exist, he can conceive well enough; but that he *does* not exist, he finds it impossible to conceive," *i.e.*, to believe. So that the statement resolves itself into this: That I exist, and that I have sensations, I believe, because I can not believe otherwise. And in this case every one will admit that the impossibility is real. Any one's present sensations, or other states of subjective consciousness, that one person inevitably believes. They are facts known *per se*: it is impossible to ascend beyond them. Their negative is really unbelievable, and therefore there is never any question about believing it. Mr. Spencer's theory is not needed for these truths.

But according to Mr. Spencer there are other beliefs, relating to other things than our own subjective feelings, for which we have the same guarantee--which are, in a similar manner, invariable and necessary. With regard to these other beliefs, they can not be necessary, since they do not always exist. There have been, and are, many persons who do not believe the reality of an external world, still less the reality of extension and figure as the forms of that external world; who do not believe that space and time have an existence independent of the mind--nor any other of Mr. Spencer's objective intuitions. The negations of these alleged invariable beliefs are not unbelievable, for they are believed. It may be maintained, without obvious error, that we can not *imagine* tangible objects as mere states of our own and other people's consciousness; that the perception of them irresistibly suggests to us the *idea* of something external to ourselves: and I am not in a condition to say that this is not the fact (though I do not think any one is entitled to affirm it of any person besides himself). But many thinkers have believed, whether they could conceive it or not, that what we represent to ourselves as material objects, are mere modifications of consciousness; complex feelings of touch and of muscular action. Mr. Spencer may think the inference correct from the unimaginable to the unbelievable, because he holds that belief itself is but the persistence of an idea, and that what we can succeed in imagining we can not at the moment help apprehending as believable. But of what consequence is it what we apprehend at the moment, if the moment is in contradiction to the permanent state of our mind? A person who has been frightened when an infant by stories of ghosts, though he disbelieves them in after years (and perhaps never believed them), may be unable all his life to be in a dark place, in circumstances stimulating to the imagination, without mental discomposure. The idea of ghosts, with all its attendant terrors, is irresistibly called up in his mind by the outward circumstances. Mr. Spencer may say, that while he is under the influence of this terror he does not disbelieve in ghosts, but has a temporary and uncontrollable belief in them. Be it so; but allowing it to be so, which would it be truest to say of this man on the whole--that he believes in ghosts, or that he does not believe in them? Assuredly that he does not believe in them. The case is similar with those who disbelieve a material world. Though they can not get rid of the idea; though while looking at a solid object they can not help having the conception, and therefore, according to Mr. Spencer's metaphysics, the momentary belief, of its

externality; even at that moment they would sincerely deny holding that belief: and it would be incorrect to call them other than disbelievers of the doctrine. The belief therefore is not invariable; and the test of inconceivableness fails in the only cases to which there could ever be any occasion to apply it.

That a thing may be perfectly believable, and yet may not have become conceivable, and that we may habitually believe one side of an alternative, and conceive only in the other, is familiarly exemplified in the state of mind of educated persons respecting sunrise and sunset. All educated persons either know by investigation, or believe on the authority of science, that it is the earth and not the sun which moves: but there are probably few who habitually *conceive* the phenomenon otherwise than as the ascent or descent of the sun. Assuredly no one can do so without a prolonged trial; and it is probably not easier now than in the first generation after Copernicus. Mr. Spencer does not say, "In looking at sunrise it is impossible not to conceive that it is the sun which moves, therefore this is what every body believes, and we have all the evidence for it that we can have for any truth." Yet this would be an exact parallel to his doctrine about the belief in matter.

The existence of matter, and other Noumena, as distinguished from the phenomenal world, remains a question of argument, as it was before; and the very general, but neither necessary nor universal, belief in them, stands as a psychological phenomenon to be explained, either on the hypothesis of its truth, or on some other. The belief is not a conclusive proof of its own truth, unless there are no such things as *idola tribûs*; but being a fact, it calls on antagonists to show, from what except the real existence of the thing believed, so general and apparently spontaneous a belief can have originated. And its opponents have never hesitated to accept this challenge.(95) The amount of their success in meeting it will probably determine the ultimate verdict of philosophers on the question.

§ 4. In the revision, or rather reconstruction, of his "Principles of Psychology," as one of the stages or platforms in the imposing structure of his System of Philosophy, Mr. Spencer has resumed what he justly terms(96) the "amicable controversy that has been long pending between us;" expressing at the same time a regret, which I cordially share, that "this lengthened exposition of a single point of difference, unaccompanied by an exposition of the numerous points of concurrence, unavoidably produces an appearance of dissent very far greater than that which exists." I believe, with Mr. Spencer, that the difference between us, if measured by our conclusions, is "superficial rather than substantial;" and the value I attach to so great an amount of agreement, in the field of analytic psychology, with a thinker of his force and depth, is such as I can hardly overstate. But I also agree with him that the difference which exists in our premises is one of "profound importance, philosophically considered;" and not to be dismissed while any part of the case of either of us has not been fully examined and discussed.

In his present statement of the Universal Postulate, Mr. Spencer has exchanged his former expression, "beliefs which invariably exist," for the following: "cognitions of which the predicates invariably exist along with their subjects." And he says that "an abortive effort to conceive the negation of a proposition, shows that the cognition expressed is one of which the predicate invariably exists along with its subject; and the discovery that the predicate invariably exists along with its subject, is the discovery that this cognition is one we are compelled to accept." Both these premises of Mr. Spencer's syllogism I am able to assent to, but in different senses of the middle term. If the invariable existence of the predicate along with its subject, is to be understood in the most obvious meaning, as an existence in actual Nature, or in other words, in our objective, or sensational, experience, I of course admit that this, once ascertained, compels us to accept the proposition: but then I do not admit that the failure of an attempt to conceive the negative, proves the predicate to be always co-existent with the subject in actual Nature. If, on the other hand (which I believe to be Mr. Spencer's meaning) the invariable existence of the predicate along with the subject is to be understood only of our conceptive faculty, *i.e.*, that the one is inseparable from the other in our thoughts; then, indeed, the inability to separate the two ideas proves their inseparable conjunction, here and now, in the mind which has failed in the attempt; but this inseparability in thought does not prove a corresponding inseparability in fact; nor even in the thoughts of other people, or of the same person in a possible future.

"That some propositions have been wrongly accepted as true, because their negations were supposed inconceivable when they were not," does not, in Mr. Spencer's opinion, "disprove the validity of the test;" not only because any test whatever "is liable to yield untrue results, either from incapacity or from carelessness in those who use it," but because the propositions in question "were complex propositions, not to be established by a test applicable to propositions no further decomposable." "A test legitimately applicable to a simple proposition, the subject and predicate of which are in direct relation, can not be legitimately applied to a complex proposition, the subject and predicate of which are indirectly related through the many simple propositions implied." "That things which are equal to the same thing are equal to one another, is a fact which can be known by direct comparison of actual or ideal relations.... But that the square of the hypothenuse of a right-angled triangle equals the sum of the squares of the other two sides, can not be known immediately by comparison of two states of consciousness: here the truth can be reached only mediately, through a series of simple judgments respecting the likenesses or unlikenesses of certain relations." Moreover, even when the proposition admits of being tested by immediate consciousness, people often neglect to do it. A school-boy, in adding up a column of figures, will say "35 and 9 are 46," though this is contrary to the verdict which consciousness gives when 35 and 9 are really called up before it; but this is not done. And not only school-boys, but men and thinkers, do not always "distinctly translate into their equivalent states of consciousness the words they use."

It is but just to give Mr. Spencer's doctrine the benefit of the limitation he claims--viz., that it is only applicable to propositions which are assented to on simple inspection, without any intervening media of proof. But this limitation does not exclude some of the most marked instances of propositions now known to be false or groundless, but whose negative was once found inconceivable: such as, that in sunrise and sunset it is the sun which moves; that gravitation may exist without an intervening medium; and even the case of antipodes. The distinction drawn by Mr. Spencer is real; but, in the case of the propositions classed by him as complex, consciousness, until the media of proof are supplied, gives no verdict at all: it neither declares the equality of the square of the hypothenuse with the sum of the squares of the sides to be inconceivable, nor their inequality to be inconceivable. But in all the three cases which I have just cited, the inconceivability seems to be apprehended directly; no train of argument was needed, as in the case of the square of the hypothenuse, to obtain the verdict of consciousness on the point. Neither is any of the three a case like that of the school-boy's mistake, in which the mind was never really brought into contact with the proposition. They are cases in which one of two opposite predicates, *mero adspectu*, seemed to be incompatible with the subject, and the other, therefore, to be proved always to exist with it.(97)

As now limited by Mr. Spencer, the ultimate cognitions fit to be submitted to his test are only those of so universal and elementary a character as to be represented in the earliest and most unvarying experience, or apparent experience, of all mankind. In such cases the inconceivability of the negative, if real, is accounted for by the experience: and why (I have asked) should the truth be tested by the inconceivability, when we can go further back for proof--namely, to the experience itself? To this Mr. Spencer answers, that the experiences can not be all recalled to mind, and if recalled, would be of unmanageable multitude. To test a proposition by experience seems to him to mean that "before accepting as certain the proposition that any rectilineal figure must have as many angles as it has sides," I have "to think of every triangle, square, pentagon, hexagon, etc., which I have ever seen, and to verify the asserted relation in each case." I can only say, with surprise, that I do not understand this to be the meaning of an appeal to experience. It is enough to know that one has been seeing the fact all one's life, and has never remarked any instance to the contrary, and that other people, with every opportunity of observation, unanimously declare the same thing. It is true, even this experience may be insufficient, and so it might be even if I could recall to mind every instance of it; but its insufficiency, instead of being brought to light, is disguised, if instead of sifting the experience itself, I appeal to a test which bears no relation to the sufficiency of the experience, but, at the most, only to its familiarity. These remarks do not lose their force even if we believe, with Mr. Spencer, that mental tendencies originally derived from experience impress themselves permanently on the cerebral structure and are transmitted by inheritance, so that modes of thinking which are acquired by the race become innate and *a priori* in the individual, thus representing, in Mr. Spencer's opinion, the experience of his progenitors, in addition to his own. All that

would follow from this is, that a conviction might be really innate, *i.e.*, prior to individual experience, and yet not be true, since the inherited tendency to accept it may have been originally the result of other causes than its truth.

Mr. Spencer would have a much stronger case, if he could really show that the evidence of Reasoning rests on the Postulate, or, in other words, that we believe that a conclusion follows from premises only because we can not conceive it not to follow. But this statement seems to me to be of the same kind as one I have previously commented on, viz., that I believe I see light, because I can not, while the sensation remains, conceive that I am looking into darkness. Both these statements seem to me incompatible with the meaning (as very rightly limited by Mr. Spencer) of the verb to conceive. To say that when I apprehend that A is B and that B is C, I can not conceive that A is not C, is to my mind merely to say that I am compelled to *believe* that A is C. If to conceive be taken in its proper meaning, viz., to form a mental representation, I *may* be able to conceive A as not being C. After assenting, with full understanding, to the Copernican proof that it is the earth and not the sun that moves, I not only can conceive, or represent to myself, sunset as a motion of the sun, but almost every one finds this conception of sunset easier to form, than that which they nevertheless know to be the true one.

§ 5. Sir William Hamilton holds as I do, that inconceivability is no criterion of impossibility. "There is no ground for inferring a certain fact to be impossible, merely from our inability to conceive its possibility." "Things there are which *may*, nay *must*, be true, of which the understanding is wholly unable to construe to itself the possibility."(98) Sir William Hamilton is, however, a firm believer in the *a priori* character of many axioms, and of the sciences deduced from them; and is so far from considering those axioms to rest on the evidence of experience, that he declares certain of them to be true even of Noumena--of the Unconditioned--of which it is one of the principal aims of his philosophy to prove that the nature of our faculties debars us from having any knowledge. The axioms to which he attributes this exceptional emancipation from the limits which confine all our other possibilities of knowledge; the chinks through which, as he represents, one ray of light finds its way to us from behind the curtain which veils from us the mysterious world of Things in themselves--are the two principles, which he terms, after the school-men, the Principle of Contradiction, and the Principle of Excluded Middle: the first, that two contradictory propositions can not both be true; the second, that they can not both be false. Armed with these logical weapons, we may boldly face Things in themselves, and tender to them the double alternative, sure that they must absolutely elect one or the other side, though we may be forever precluded from discovering which. To take his favorite example, we can not conceive the infinite divisibility of matter, and we can not conceive a minimum, or end to divisibility: yet one or the other must be true.

As I have hitherto said nothing of the two axioms in question, those of Contradiction and of Excluded Middle, it is not unseasonable to consider them here. The former asserts that an affirmative proposition and the corresponding negative proposition can not both be true; which has generally been held to be intuitively evident. Sir William Hamilton and the Germans consider it to be the statement in words of a form or law of our thinking faculty. Other philosophers, not less deserving of consideration, deem it to be an identical proposition; an assertion involved in the meaning of terms; a mode of defining Negation, and the word Not.

I am able to go one step with these last. An affirmative assertion and its negative are not two independent assertions, connected with each other only as mutually incompatible. That if the negative be true, the affirmative must be false, really is a mere identical proposition; for the negative proposition asserts nothing but the falsity of the affirmative, and has no other sense or meaning whatever. The Principium Contradictionis should therefore put off the ambitious phraseology which gives it the air of a fundamental antithesis pervading nature, and should be enunciated in the simpler form, that the same proposition can not at the same time be false and true. But I can go no further with the Nominalists; for I can not look upon this last as a merely verbal proposition. I consider it to be, like other axioms, one of our first and most familiar generalizations from experience. The original foundation of it I take to be, that Belief and Disbelief are two different mental states, excluding one another. This we know by the simplest observation of our own minds. And if we carry our

observation outward, we also find that light and darkness, sound and silence, motion and quiescence, equality and inequality, preceding and following, succession and simultaneousness, any positive phenomenon whatever and its negative, are distinct phenomena, pointedly contrasted, and the one always absent where the other is present. I consider the maxim in question to be a generalization from all these facts.

In like manner as the Principle of Contradiction (that one of two contradictories must be false) means that an assertion can not be *both* true and false, so the Principle of Excluded Middle, or that one of two contradictories must be true, means that an assertion must be *either* true or false: either the affirmative is true, or otherwise the negative is true, which means that the affirmative is false. I can not help thinking this principle a surprising specimen of a so-called necessity of Thought, since it is not even true, unless with a large qualification. A proposition must be either true or false, *provided* that the predicate be one which can in any intelligible sense be attributed to the subject; (and as this is always assumed to be the case in treatises on logic, the axiom is always laid down there as of absolute truth). "Abracadabra is a second intention" is neither true nor false. Between the true and the false there is a third possibility, the Unmeaning: and this alternative is fatal to Sir William Hamilton's extension of the maxim to Noumena. That Matter must either have a minimum of divisibility or be infinitely divisible, is more than we can ever know. For in the first place, Matter, in any other than the phenomenal sense of the term, may not exist: and it will scarcely be said that a nonentity must be either infinitely or finitely divisible. In the second place, though matter, considered as the occult cause of our sensations, do really exist, yet what we call divisibility may be an attribute only of our sensations of sight and touch, and not of their uncognizable cause. Divisibility may not be predicable at all, in any intelligible sense, of Things in themselves, nor therefore of Matter in itself; and the assumed necessity of being either infinitely or finitely divisible, may be an inapplicable alternative.

On this question I am happy to have the full concurrence of Mr. Herbert Spencer, from whose paper in the *Fortnightly Review* I extract the following passage. The germ of an idea identical with that of Mr. Spencer may be found in the present chapter, on a preceding page; but in Mr. Spencer it is not an undeveloped thought, but a philosophical theory.

"When remembering a certain thing as in a certain place, the place and the thing are mentally represented together; while to think of the non-existence of the thing in that place implies a consciousness in which the place is represented, but not the thing. Similarly, if instead of thinking of an object as colorless, we think of its having color, the change consists in the addition to the concept of an element that was before absent from it--the object can not be thought of first as red and then as not red, without one component of the thought being totally expelled from the mind by another. The law of the Excluded Middle, then, is simply a generalization of the universal experience that some mental states are directly destructive of other states. It formulates a certain absolutely constant law, that the appearance of any positive mode of consciousness can not occur without excluding a correlative negative mode; and that the negative mode can not occur without excluding the correlative positive mode: the antithesis of positive and negative being, indeed, merely an expression of this experience. Hence it follows that if consciousness is not in one of the two modes it must be in the other."(99)

I must here close this supplementary chapter, and with it the Second Book. The theory of Induction, in the most comprehensive sense of the term, will form the subject of the Third.

---

Book III.

OF INDUCTION.

"According to the doctrine now stated, the highest, or rather the only proper object of physics, is to ascertain those established conjunctions of successive events, which constitute the order of the universe; to record the phenomena which it exhibits to our observations, or which it discloses to our experiments; and to refer these phenomena to their general laws."--D. STEWART, *Elements of the Philosophy of the Human Mind*, vol. ii.,