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universe may be reduced to pantheistic unity; that there is not only theism, but pantheism. God is all, and all is God. But, as no one else will believe that the pantheist is God, and as each knows for himself that he is not God, the excess of pantheistic admission is apparent.

The fault is not in the attempt at unification; for this is unavoidable. Atheist, pantheist, and theist, materialist and spiritualist, are alike compelled to it by the very law of thought. The admission is inevitable. The fault lies in the principle and the process of unifying. Is the principle right? Is the process broad enough? Here is the point of divergence. Which is the true course? Which is the false? These questions remain to be considered.

ARTICLE IV.

THE "GENERAL PHILOSOPHY" OF HERBERT SPENCER.

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HERBERT SPENCER defines philosophy as "knowledge of the highest degree of generality."¹ "Knowledge of the lowest kind is un-unified knowledge" [whatever that may be]. "Science is partially unified knowledge. Philosophy is completely unified knowledge."² "Knowledge has obviously not reached its limits, until it has united the past, present, and future histories into a whole."³ "Philosophy, then, has to formulate this passage from the imperceptible into the perceptible, and from the perceptible into the imperceptible."⁴

The system of philosophy which Spencer gives us is, then, an attempt to explain the ultimate *a priori* laws of the universe. By its success or its failure in that attempt must it be judged true or false philosophy.

NOTE. — References, unless otherwise specified, are to Spencer's "First Principles of Philosophy" (2d edition). New York: D. Appleton and Co. 1872.

¹ p. 131.

² p. 134.

³ p. 278.

⁴ 280.

A system of philosophy is a product of thought. But a product implies a producer and a process of production. This process, logically intermediate between producer and produced, has a relation to each. It partakes of, is included in, the nature of the first; it regulates the second.

Philosophy, then, as the product of thought, must involve certain assumptions concerning the existence, the nature, and the laws of thought.

"The fundamental intuitions that are essential to the process of thinking must be temporarily accepted as unquestionable."¹ "Speculators have habitually set out with some professedly simple datum or data, have supposed themselves to assume nothing beyond this datum or these data, and have thereupon proceeded to prove or disprove propositions which were, by implication, already unconsciously asserted along with that which was consciously asserted."²

Spencer, having acknowledged that philosophy must presuppose certain primary data, gives us three *tests* of the validity of such assumptions. Two of the three are simply implied; one only is distinctly stated.

The first of these is Necessity. Such assumptions are "fundamental intuitions, essential to the process of thinking."

The second is Universality. Searching for the truth in religion, in science, and in philosophy, he collects all various opinions of men, and, "after eliminating discordant elements," he accepts, as an indisputable assumption, "the remaining constituent, which holds true throughout its divergent modifications."³

These tests of necessity and universality are united in the statement that the "absolute validity" of realism "will be shown, if we find it to be a necessary product of thought, proceeding according to laws of thought that are universal."⁴

A third test is Consistency. This is the only one distinctly formulated. Yet it is simply a corollary of the test of necessity. A proposition claims admission as a primary datum, yet contradicts primary data already established. If

¹ p. 137.² p. 135.³ pp. 11, 128.⁴ Psych. Vol. ii. p. 445.

its claim be granted, the process of thinking becomes suicidal. But Spencer admits the existence of a legitimate process of thinking, based on "essential intuitions." He must, therefore, admit the involved truth that they *cannot* be mutually inconsistent.

The statement of this test of consistency involves the first contradiction which this system presents to us. "The assumption of the unquestionableness" of these fundamental intuitions must "be *justified* by the results"¹; "by showing their congruity with all other dicta of consciousness."²

But they are assumptions without which "thought is impossible." They are, then, used in their own verification, which is absurd. "Consciousness cannot be proved mendacious in this its primordial act, since, as we see, proof involves a repeated acceptance of this primordial act."³ This last proposition is, of course, the true one; but it contradicts the former assertion that "fundamental intuitions can be justified by the results." "Intelligence cannot prove its own invalidity, because it must postulate its own validity in doing this."⁴

Primary data, then, cannot be verified by a process of reasoning which involves them.

This leads us to allude, incidentally, to a more important contradiction involved here. That the "primordial dicta of consciousness" must be assumed as unquestionable is admitted to be the corner-stone of this, as of all other systems of philosophy. The only guarantee of "absolute validity" is found in the *necessity* of the laws of thought. Mathematical axioms "have not been reached through successive experiences of past cases in which the alleged connection of facts existed. . . . Each one of these truths is reached by an intuition of reason."⁵ Yet one of the conclusions at which this system arrives is, that in a strict sense there is no such thing as a necessary law of thought. "The growth of intelligence is throughout determined by the repetition of experiences."⁶

¹ p. 138.² p. 139.³ p. 141.⁴ Psych. Vol. ii. p. 385.⁵ Psych. Vol. ii. p. 95.⁶ Psych. Vol. i. p. 453.

Instincts are, "under the requisite conditions, established by accumulated experiences."¹ "The actions we call instinctive pass gradually into the actions we call rational."² Even "the inconceivableness of the negation of a mathematical axiom really stands for the infinity of experiences that have developed these [nervous] structures."³

This system, then, assumes and uses necessary laws of thought in order to show that such laws are not necessary, but only the outgrowth of an "accumulation of experiences."⁴ If the conclusion be true, it proves the assumption false. If the assumption be false, the conclusion can never be proved true. "And so the argument reduces to a contradiction."

We have found that Mr. Spencer admits the necessity of postulating primary data, essential to his system, as a product of thought. What are the acknowledged and tacit assumptions which he makes?

He assumes throughout the *existence* of thought. It is the primary fact which renders a product of thought possible.

What does he assume concerning the *nature* of thought?

"There is an evitable implication that manifestations imply something manifested."⁵ Thought, then, is a manifestation of something. Later he calls this mind. Consciousness is admitted throughout to be involved in thought. There is a "consciousness of an inscrutable power manifested to us through all phenomena."⁶ Mind, then, is a power. The very idea of a manifestation, of a process, of a cognition is admitted to involve it. These are phenomena. The phenomena of thought manifest power. Conscious of thought, we are conscious of that power manifested.

"We have," Spencer says, "the distinction of subject and object, ego and non-ego. Each order carries with it the irresistible implication of some power that manifests itself. By the words 'ego' and 'non-ego,' respectively, we mean the power that manifests itself in the faint forms [ideas], and the power that manifests itself in the vivid forms" [sensations].⁷

¹ Psych. Vol. i. p. 439. ² Psych. Vol. i. p. 456. ³ Psych. Vol. ii. p. 419.

⁴ Psych. Vol. i. p. 462. ⁵ p. 144. ⁶ p. 108. ⁷ p. 154

We have here, given in the data of philosophy, two *distinct* powers — one, the conscious power of the ego; the other, the “indefinitely extended region of power beyond.”¹ Again: “Belief in the reality of self is, indeed, a belief which no hypothesis enables us to escape.”² “The existence of the personality of which each is conscious” is to each a “fact beyond all others the most certain.”³

Our consciousness of personality, then, is identical with our consciousness of this power manifested in thought.

Have we not already assumed, as Spencer himself suspects, an “undeveloped system of metaphysics”?⁴

Thought is, by implication, admitted to be mental activity. It is conscious mental activity. It involves consciousness of power manifested in mental activity. It involves consciousness of personal power manifested in mental activity.

But, still further, we think it can be shown that at the outset Mr. Spencer assumes the existence of free-will, and that the argument by which he attempts subsequently to refute the doctrine of free-will contradicts his own primary data.

He assumes the existence of free-will in the reasons which he gives for the distinction between the ego and the non-ego. The states of the ego, in their qualities, in their simultaneous order, and in their successive order, are “*changeable by volition*.” The states of the non-ego are not. This is vaguely admitted in the *First Principles*,⁵ and is explicitly enounced in a subsequent repetition of the argument.⁶ If we have a consciousness of mental states as changeable by volition, and thereby distinguished from the invariableness of the antecedents and consequents in the states of the non-ego, we have a consciousness of free-will. This consciousness of free-will Spencer employs to justify his distinction between subject and object — a distinction which is, of course, fundamental to his system. The argument subsequently presented against free-will contradicts this assumption, and overturns certain other primary data. “As an internal

¹ p. 156.² p. 64.³ p. 65.⁴ p. 144.⁵ p. 153.⁶ *Psych.* Vol. ii. p. 463.

perception the current illusion concerning free-will," we are told, "consists in supposing that at each moment the ego is something more than the aggregate of feelings and ideas, actual and nascent, which then exist."¹ But the belief is an illusion, because no such ego does exist. "It is either present in consciousness, or it is not." If not, then we have no evidence of its existence. "If it is present in consciousness, then, as it is ever present, it can be at each moment nothing more than the *state of consciousness*, simple or compound, passing at that moment."²

But what is this "state of consciousness"? Spencer, when explaining his primary data, tells us, concerning it, that, "as we cannot think of a state, without thinking of *something of which it is a state*, and which is capable of different states, there is involved a foregone conclusion—an undeveloped system of metaphysics. Here, accepting the inevitable implication that the manifestations imply something manifested, our aim must be to avoid any further implications. Though we cannot exclude farther implications from our thoughts, and *cannot carry on our argument* without *tacit recognitions* of them, we can at any rate refuse to recognize them in the terms with which we set out."³ Add to this the passage before quoted, admitting and distinguishing the "power manifested in the ego," and the "power manifested in the non-ego," and have we not a clear statement of the truth that the ego is something more than the "aggregate of feelings and ideas, actual and nascent, which then exist"?

Mr. Spencer, as we have seen, assumes free-will as a primary datum, employed in the distinction of subject and object. He subsequently presents an argument against it, which is based upon a denial of the existence of a mental substance. Yet the existence of a mental substance is also one of his primary data. Are we not justified, then, in considering the existence of this will-power one of those "tacit recognitions" by means of which Mr. Spencer "carries on his argument"?

¹ Psych. Vol. i. p. 500.

² Psych. Vol. i. p. 501.

³ pp. 143, 144.

To sum up, then, the assumptions made concerning the nature of thought. Thought is mental activity, involving the consciousness of a personal will-power. This is the position concerning the nature of thought assumed as the starting-point of the system. Would you compare with it the conclusions to which the system leads? We shall be told that the substance of mind is "the unknowable as manifested to us within the limits of consciousness."¹ The "raw material of consciousness" is "the quick succession of changes in a ganglion."² "Consciousness of muscular tension forms the raw material of primitive thought."³ "Something of the same order as that which we call a nervous shock is the ultimate unit of consciousness."⁴ "The development of consciousness and the increasing tendency toward a linear order in the psychical changes are different aspects of the same progression."⁵ "The passage of an ideal motor-change (nascent molecular motion) into a real one we distinguish as will."⁶ If these conclusions be true they prove the assumption false. If the assumption be false the conclusions can never be proved true. "And so the argument reduces to a contradiction."

We pass now to the "fundamental intuitions, essential to the process of thinking," which are assumed concerning the mode and laws of thought.

Spencer's definition of the mode of thought deserves a moment's notice: "We think in relations." "An idea or unit of knowledge results when a vivid feeling is assimilated to or coheres with one or more of the faint feelings left by such vivid feelings previously experienced."⁷ Was the "previous experience" of those vivid feelings (sensations) a conscious experience? Then they themselves demand explanation as "units of knowledge." Was it unconscious experience? But such vivid feelings are conditional upon consciousness.⁸ "Every sensation, to be known as one,

¹ Psych. Vol. i. p. 162. ² Psych. Vol. i. p. 435. ³ Psych. Vol. ii. p. 242.

⁴ Psych. Vol. i. p. 151. ⁵ Psych. Vol. i. p. 403. ⁶ Psych. Vol. i. p. 496.

⁷ Psych. Vol. i. p. 182.

⁸ Psych. Vol. ii. p. 147.

must be perceived.”¹ If “each particular sensation unites itself with foregoing sensations, from which it does not differ in quality, but only in intensity,”² how can there ever be any first sensation known as a sensation? If we know feelings only by knowing them as “such and such”³ through classification with preceding feelings, how can there ever be any first feeling? If all cognition is recognition,⁴ how can there be a first cognition?

But Spencer goes one step beyond this “seregation” of simple feelings, and asserts that even a *relation* is “thinkable only as of a certain order, as belonging to some *class* of before-known relations.”⁵ But the classification of relations involves relations of a still higher order. Must not they, too, be classified to be known? And these yet higher relations, in their turn, and so on, *ad infinitum*?

If we “think in relations,” we are driven to the absurd conclusion that there never was any first object of thought; for a first object can be related to nothing preceding it. To this objection Spencer answers, that “during the first stage of incipient intelligence there are no cognitions, strictly so called; that these slowly emerge out of the confusion of unfolding consciousness, as fast as the experiences are arranged into groups—as fast as the most frequently repeated sensations and their relations to each other become familiar enough to admit of their recognition, as such or such, whenever they recur.”⁶

But these “frequently repeated sensations” with which we “become familiar” involve consciousness; so that this attempted answer to the objection only proves the validity of that objection, by showing that cognition *must* precede recognition.

Passing, now, to the conditions of thought, we find that Spencer assumes that time and space are “necessary forms of intuition.” But does he not distinctly deny this? Certainly. But we shall see that it is one of those “tacit recognitions”

¹ Psych. Vol. i. p. 475.

² Psych. Vol. i. p. 182.

³ Psych. Vol. i. p. 182.

⁴ p. 79.

⁵ Psych. Vol. ii. p. 114.

⁶ p. 80.

which he "refuses to recognize in the terms with which he sets out."

Let us look at his argument a moment. "If we think in relations, and if relations have certain universal forms [time and space], it is manifest that such universal forms of relations will become universal forms of our consciousness. And if these farther universal forms are thus explicable, it is superfluous, and therefore unphilosophical, to assign them an independent origin."¹ A moment later we learn that by "independent," he means only *original*, independent of experience. "From the fact that in thought," he says, "time is inseparable from sequence, and space from co-existence, we do not infer that time and space are original conditions of consciousness under which sequences and co-existences are known. But we infer that our conceptions of time and space are generated as other abstracts are generated from other concretes; the only difference being that the organization of experience has in these cases been going on throughout the entire evolution of intelligence."² Here we have the same explanation which we have noticed before — that the conditions and laws of thought are only the outgrowth of an "accumulation of experiences." But as a fundamental datum of consciousness we know nothing about the "organization of experience throughout the entire evolution of 'intelligence.'" We know nothing about "inherited tendencies."

The question is an abstract one. *Can* the conception of space be generated by experience? Yes, Spencer tells us, "by the experience of individual positions as ascertained by touch."³ But the cognition of position involves the conception of space as logically antecedent to it. So, too, the experience of touch, by which we ascertain position, involves the consciousness of extension, and therefore of space, in our own bodies. To say that we know our bodies as extended by muscular tension,⁴ only carries us one stage farther back; and the question still remains, How do we obtain the conception of space logically antecedent to the experience of

¹ p. 163.

² p. 164.

³ p. 164.

⁴ *Psych.* Vol. ii. p. 240.

muscular tension? Spencer explains our conceptions of space¹ and of time² by our experience of motion; and he explains our conception of motion by our experiences of time and space.³ We might admit that our first formulated thought of space comes to us on the occasion of experience. But this is very far from proving that the conception of space is not a logically-antecedent condition of that conscious experience.

We have just quoted Spencer's argument designed to prove that our conception of space is the product of experience. All he tells us concerning time is that "a parallel argument leads to parallel conclusions, . . . too obvious to need specifying in detail."⁴ So say we.

But let us see if, in spite of this denial, Spencer does not himself admit space and time as necessary conditions of thought. He *reasons* throughout. Now reason, even in its simplest form of inference, implies memory. Reason *follows* "memories of the like motor-changes before performed under like circumstances."⁵ But "a remembrance implies a consciousness, and a consciousness implies a perceptible duration."⁶ A "perceptible duration," that is, a consciousness of duration, which is a necessary condition to memory, which is a necessary condition to reason.

According to Spencer's definition, all thought, and so all consciousness, being dependent upon classification, is dependent upon memory, and so involves a consciousness of duration. This plainly contradicts the previous statement, that consciousness of time is generated by experience; since it is declared here to be implied in consciousness itself. To say that anything is implied in consciousness itself is to say that it is an element of consciousness, which is to say that we are conscious of it in the act of consciousness. "A parallel argument leads to parallel conclusions concerning space."

Finally, as if to settle the question forever, we are told

¹ p. 164. Psych. Vol. ii. p. 184.

³ Psych. Vol. ii. p. 220.

⁶ Psych. Vol. i. p. 454.

² Psych. Vol. ii. p. 210.

⁴ p. 165.

⁵ Psych. Vol. i. p. 447.

that "the relations of space and time are experienced in every perception and every action of each creature."¹ If so, they were experienced in the first act of consciousness of the first creature. As involved in the first act of consciousness, they cannot be generated by experience. As perceptions they certainly are not generated by unconscious experience, for unconscious experience is a contradiction in terms. They cannot be generated by conscious experience, since they are involved in it; that is, being involved in the first act of consciousness of the first creature, they are necessary conditions or forms of consciousness, and are not hereditary conceptions generated by experience.

Confessedly, then, the very first argument upon which Spencer enters in his system, simply because an argument drawn from consciousness, involves the conceptions of time and space, which are thus assumed as necessary forms of thought. Any attempt to prove them otherwise, assumes them as original in the very process of proof, and is thus rendered futile.

But there are other "tacit recognitions" of necessary forms or laws of thought. The system before us presents a constant alternation of the two processes of induction and deduction, which are without question assumed as valid.

We will notice, briefly, only three of the more important implications here. One is the assumption of the law of cause and effect. "We cannot think at all about the impressions the external world produces on us, without thinking of them as *caused*."² "The very conception of *experience* implies something of which there is experience; implies something which determines particular connections of thought rather than other connections; and so implies this very notion of cause which is said to be derived from experience."³

This mental necessity is assumed throughout. Argument after argument is constructed upon it; and it is only by means of such arguments that we arrive, finally and unexpectedly, at a theory of association worthy of Hume himself.

¹ Psych. Vol. i. p. 467.

² p. 37.

³ Psych. Vol. ii. p. 349.

If the conclusion be true, the assumption is false. If the assumption be false, the conclusion can never be proved true.

Another implication is that every relative must have its correlate, every manifestation its something manifested. The simple avowed datum of personal existence, "surreptitiously brought in a number of unavowed data—existence other than that alleged—quantity, number, limit, difference, likeness, class, attribute."¹ Such a thought would "cease to exist, if severed from its various correlatives."² Notice, however, that it is only to limited existence, knowable under manifestations, that this law applies. Nothing is affirmed or denied here about infinite, unknown, abstract existence.

A third implication is the assumption of the validity of the mathematical axioms. They are employed throughout as unquestionable.

Let us recapitulate the primary data which we have found that Spencer assumes as avowed or tacit recognitions: Thought exists. It is mental activity. Mind is power. It is a conscious power. It is a personal power. It is will-power. All thought is formulated under the conditions of time and space. It is subject to the necessary rules of logic.

These are not by any means all the assumptions which Spencer makes. We shall find others as we progress in his system. They will be examined as they occur. But these are all made at the outset of the system. The subsequent argument is founded upon them. It cannot, therefore, justify them. It cannot disprove them. No new assumptions can be introduced which are inconsistent with them; or else a legitimate process of thought is impossible, and "this and all other like books are worthless."

Those who read the *Psychology*, and see how flatly most of these primary data are there contradicted, will be forcibly reminded of a passage from Spencer's own pen: "It is amusing when, after all, it turns out that the ground on which these philosophers have taken their stand, and from which with such self-complacency they shower their sarcasms,

¹ p. 137.² p. 135.

is nothing but an adversaries' mine, destined to blow the vast fabric of conclusions they have based on it into nonentity." ¹

Having thus considered the primary data which Mr. Spencer assumes, we pass now to the system which he presents. That system, in brief outline, is as follows: He postulates an absolute power. He assumes the law of persistence of force. He derives from this law various corollaries, which, taken together, form the law of evolution — the continuous redistribution of matter and motion. The nebular hypothesis being assumed, by the workings of these laws the solar system is produced, and the earth with solid crust is formed. Solar radiations produce the first germs of vegetal life; from this is produced animal life; from this, psychical life; from this, social life. The same uniform laws will ultimately necessitate the reverse process of dissolution, which will reduce all things back to the primitive nebulous matter.

This system claims to be philosophical, because based upon *a priori* laws. We shall confine our criticism to the examination of the validity of that claim.

The first postulate is that of an absolute power. What is its nature? On what ground can we affirm its existence? We can answer these questions only by an attempt to classify the various contradictions in which Spencer is here involved.

Is this absolute force inconceivable? Spencer answers this question both negatively and affirmatively. Essential elements in the absolute, as eternity, infinity, etc., are utterly inconceivable.² Then the absolute power itself must be inconceivable. This statement, in various periphrases, is repeated over and over again. Many an argument is based upon it; the logical principle being distinctly stated, as follows: "A legitimate conclusion could not be drawn from premises of which one element is inconceivable."³ The words "inconceivable" and "unthinkable" are used interchangeably; and we find the distinction often made between the "verbally intelligible" and the "literally unthinkable."⁴ But, on the other hand, the whole system of evolution is a conclusion

¹ Soc. Stat. p. 112.

² pp. 31, 35, 43, etc.

³ p. 536.

⁴ p. 35.

drawn from premises, the very first of which involves as an element the absolute force. Hypotheses differing from his own are all erroneous, because the absolute is "unthinkable." But the absolute suddenly becomes thinkable for the convenience of the theory of evolution! On Spencer's own definition of thought, too, not simply on ours. "We think in relations"; and so he thinks of the absolute something, under the relation of time, as eternal;¹ under the relation of space as omnipresent;² under the relation of quantity as omnipotent (it is the force manifested through all phenomena);³ under the relation of cause as self-existent.⁴

This absolute force either is, or is not, "unthinkable," "inconceivable." If it is, it cannot be included as a primary datum in a system which is the product of thought; and Spencer must abandon his theory, and in fact all theories, of the universe. If it is not, then, too, must he abandon his theory; for, as we shall see hereafter, the fundamental principle of the instability of the homogeneous depends upon the inconceivability of the infinite.

Let us ask Mr. Spencer a second question. This is an inscrutable force, an infinite power—omnipotent, omnipresent, eternal, self-existent. Does it, or does it not,—as he conceives it, and as he uses it,—does it, or does it not,—include and absorb the *ego*?

Here, again, we find a double answer. That Spencer includes consciousness of personal (and therefore limited) power, among his primary data, has been clearly shown. The assumption with which the system starts gives us one answer to the question. But, it may be asked, "does not this contradict the idea of an infinite power"? We should answer that an essential element of infinite power is the power of voluntary self-limitation, even by creating finite, independent will-power. But we find nothing of this in Spencer. On the contrary, no sooner do we enter upon his system than we discover that by the use of his independent power he has postulated an absolute power, which in the

¹ p. 587.² p. 535.³ p. 192.⁴ p. 36.

very beginning tacitly, and in the course of the argument formally, annihilates that personal power as personal. "The fact beyond all others the most certain"¹ destroyed, what of certainty is left whereon to construct a system? If the absolute power *does* absorb conscious personal power, no system can be true which assumes that conscious personal power as independent at the outset. If the absolute power does *not* absorb conscious personal power, no system can be true which assumes that it does in the very first step it takes. Spencer assumes both of these positions at convenience. The consistent affirmation of either would overthrow his system.

Let us ask a third question. Granted absolute existence, do the laws of the mind authorize us in limiting it in any way? That is, can we affirm that the nature and action of a being or power outside of our minds must be restricted or regulated by the necessities involved in our conceptions of them? Spencer, making no distinction whatever between what transcends the laws of thought and what conflicts with the laws of thought, here, again, takes both sides of the question. "Frame what suppositions we may [concerning matter, space, and time], we find, on tracing out their implications, that they leave us nothing but a choice of opposite absurdities."² Yet these absurd conceptions are "representative of realities."³ That is, inconceivableness does not limit absolute existence.

But wait a minute. Infinite space is inconceivable. Therefore it does not exist. Then the universe is finite. Finite homogeneity is unstable. This is the assumption on which we shall find the instability of the homogeneous to be based. The laws of mind, then, do limit absolute existence. Again, Spencer denies this when he combats the "carpenter theory" of the universe. "And yet this transcendent audacity, which claims to penetrate the secrets of the power manifested to us through all existence,— nay, even to stand behind that power, and note the conditions to its action,—

¹ p. 65.² p. 54.³ p. 66.

this it is which passes current as piety! May we not, without hesitation, affirm that a sincere recognition of the truth that our own and all other existence is a mystery absolutely and forever beyond our comprehension contains more of true religion than all the dogmatic theology ever written?"¹

But let us see how, with the same transcendent audacity, Mr. Spencer himself stands behind that power, and notes the conditions to its actions, when he wishes to explain his own theory of the universe. "That the quantity of force remains always the same is a fundamental cognition."² "That which persists is (not the manifestations, but) the unknown cause of these manifestations."³ What is this but "penetrating the secrets" of the unknown and unknowable power? What warrant has he to affirm that it *must* remain invariable in quantity? The "indestructibility of matter," the "transformation and equivalence of forces," the "direction of motion in line of least resistance," the "continuity of motion," the "rhythm of motion"; in brief, every principle involved in the theory of evolution,—what are these but principles regulating the manifestations—"conditions to the action"—of the unknown power? "Transcendent audacity"! "Volumes might be written on the impiety of the pious"!

Endeavoring to find the nature of this absolute something, we have asked these three questions: Is it inconceivable? Does it absorb the ego? Is it in any way conditioned by the necessary laws of the mind? Spencer's answers to these questions present a tangled mass of fatal contradictions.

Without attempting to reconcile them, we pass on to a fourth question. Whatever be the nature of the absolute, do the laws of the mind authorize us in affirming that the absolute power, or anything else outside of our own minds, has a real, as distinct from an ideal, existence? Both answers, again, are ready for us.

Listen to his negative answer: "Are we to rest wholly in the consciousness of phenomena? The answer of *pure logic* is held to be that by the limits of our intelligence we

¹ p. 112.² p. 186.³ p. 189.

are rigorously confined within the relative, and that anything transcending the relative can be thought of only as a pure negation, or as a non-existence."¹ "Though the reality is asserted to be out of consciousness, yet the *realness* ascribed to it is constantly spoken of as though it were a knowledge possessed apart from consciousness. It seems to be forgotten that the conception of reality can be nothing more than some mode of consciousness, and that the question to be considered is: What is the relation between this mode and other modes? By reality we mean *persistence in consciousness*. . . . Reality, then, as we think it, being nothing more than persistence in consciousness, the result must be the same to us, whether that which we perceive be the unknowable itself, or an *effect invariably wrought in us* by the unknowable."² There is idealism with which Berkeley himself would have willingly agreed.

But listen, now, to the affirmative answer to the question: "Besides that definite consciousness of which logic formulates the laws, there is also an *indefinite consciousness*, which cannot be formulated, . . . thoughts which it is impossible to complete, and yet which are still real in the sense that they are normal affections of the intellect."³

We have here "normal affections of the intellect," which constitute an "indefinite consciousness," and affirm absolute existence, in direct contradiction of "pure logic," itself a "normal affection of the intellect"! "Whence results the disappearance of all thought whatever."

Spencer, then, after avowing the logical necessity of idealism, rejects it as inconvenient; and, conjuring up a new set of normal affections of the intellect, affirms the real existence of an absolute power.

Even after we have laid aside this first statement of idealism, we are still involved in a contradiction, where we must choose between being led back into idealism again and surrendering the theory of evolution.

The absolute power exists. Whence our knowledge of

¹ p. 87.

² pp. 160, 161.

³ p. 88.

this? Is it a dictum of consciousness? Or is it a conclusion derived from dicta of consciousness through a process of reasoning? Spencer clearly affirms both of these positions. "The very demonstration that a definite consciousness of the absolute is impossible to us, unavoidably presupposes an indefinite consciousness of it."¹ "Unless a real non-relative or absolute be postulated, the relative itself becomes absolute, and so brings the argument to a contradiction."² "Our notion of the limited is composed, first, of a consciousness of some kind of being; and this indefinite something constitutes our consciousness of the non-relative or absolute."³

So it would seem that absolute existence is a postulate, the first postulate of all — a primary dictum of consciousness.

But we are told, on the other hand, that "the momentum of thought inevitably carries us beyond conditioned existence to unconditioned existence."⁴ If "momentum of thought" means anything, it means a necessary logical process; and unconditioned existence is *inferred* from conditioned existence; though we have just been told that the *first* element in the consciousness of the limited was a consciousness of the unlimited something.

But again: "The notion of a real existence which generated these impressions becomes nascent."⁵ That is, the notion is reached through an *inference* from effect to cause. The only test of any value given for the distinction between the manifestations of the ego and of the non-ego⁶ is, that the causes of the one class are present to consciousness, while the causes of the other class are not; and the existence of an external cause is therefore inferred, which certainly is not assuming it as a primary dictum of consciousness.

A moment ago, we found ourselves in danger of shipwreck at the start; so in defiance of "pure logic," we threw overboard an admitted idealism. But where has he brought us now?

If he takes the existence of a material world, and the existence of a First Cause as primary data of consciousness,

¹ pp. 88, 89. ² p. 97. ³ pp. 90, 91. ⁴ p. 93. ⁵ p. 93. ⁶ p. 150.

Spencer is a spiritualist, a natural realist, and a theist, and his theory of evolution vanishes. If he simply infers them from manifestations in consciousness, he is a spiritualist, an egoistical idealist, and either a theist or a deist; and again his theory of evolution disappears. While, if his "normal affections of the intellect" can really be self-contradictory, he is a sceptic, an atheist, and must deny the possibility of philosophy. From all these positions he offers us the choice; for he affirms them all!

How shall we explain such confusion? Is it not caused in part by Spencer's "overwhelming bias in favor of a preconceived theory?" He intends to contradict his primary data by merging personal identity into the unknown absolute power. So he uses, very cautiously, the idea of a limited personal identity only as a tacit recognition, although it is an idea which, if clearly formulated, might locate him somewhere in this discussion. He intends to contradict his primary data, again, by identifying the physical and psychical manifestations of this unknown power; and this leads him to that variable use of the term "consciousness," so painfully manifest here, as elsewhere.

He fails, too, for the same reason, to distinguish between manifestations of the unknown power and manifestations of *the manifestations* of the unknown power; that is, he confuses the question of the existence of a material universe producing manifestations in us with the question of a First Cause manifested in that universe itself.

He confuses, or rather he identifies, the acts of pure intellection and of imagination. He uses the phrase "mental image"¹ as synonymous with "conception," while the terms "thinkable," "conceivable," "comprehensible," "knowable," he employs apparently without discrimination.

The way in which he uses this absolute force in his system as thinkable, while he denies throughout that we can "picture it to the mind," is a tacit admission, as well as an apt illustration, of the distinction between pure intellection and imagination.

¹ p. 48.

Balancing contradictory passages, and calculating probabilities, we should say, that logically Spencer was an idealist and a deist; while, as a matter of fact, the rest of his system shows us that though he may be deist, he is not an idealist, but a realist. "Should the idealist be right, the doctrine of evolution is a dream."¹ He affirms the real external existence of a First Cause and a material world. Yet even here, his definition of reality, as "persistence in consciousness," haunts us. If we face it, we are back in all the old confusion again.

We will make no attempt to reconcile these contradictions. We can simply, rejecting all contrary statements, accept his affirmation, that mental necessity authorizes us in postulating an absolute existence. It is the one grand, universal truth. All religions admit it. Their hypotheses — atheism, pantheism, theism, alike are unthinkable. But beneath them all is the one universally-conceded fact, that the universe manifests to us an inscrutable power.

Ultimate scientific truths bring us to the same conclusion. Scientific hypotheses, like those of religion, are symbolic conceptions of the illegitimate order; yet science brings us to the same inscrutable power. "To this an ultimate analysis brings us down, and on this a rational synthesis must be built up."

The existence of an absolute power, an unknown First Cause, is the first postulate of philosophy, and with it is tacitly postulated the existence of a material world.

The existence of this absolute force being affirmed, Spencer derives from it his fundamental principle of the "persistence of force." What is this force which persists? Not manifestations, for they "do not persist; but that which persists is the unknown cause of these manifestations,"² the absolute force then persists. But in what sense are we to take the word "persistence?" "The agency to which manifestations are due can neither come into existence nor cease to exist."³ "That the *quantity* of force remains always the same is the

¹ Psych. Vol. ii. p. 311.

² p. 189.

³ p. 185.

fundamental cognition.”¹ “Asserting the persistence of force is but another mode of asserting an unconditioned reality, without beginning or end.”² Time without limit, and quantity without variation, are then asserted of the absolute force by this law of persistence.

How is this law obtained? “no inductive proof of it is possible.”³ By deduction, then. The argument, as given, is as follows:

“The unknown power, of which neither beginning nor end can be conceived, is present to us as that unshaped material of consciousness which is shaped afresh in every thought. Our inability to conceive its limitation is thus simply the obverse of our inability to put an end to the thinking subject while still continuing to think. To think of something becoming nothing would involve that this substance of consciousness, having just existed under a given form, should next assume no form, or should cease to be consciousness. The truth that force is indestructible is the obverse of the truth that the unknown cause of the changes going on in consciousness is indestructible; so that the persistence of consciousness constitutes at once our immediate experience of the persistence of force, and impresses on us the necessity we are under of asserting its persistence.”⁴ If we understand this argument, it reduces itself to this. The force manifested to us in consciousness persists. We cannot think of it as ceasing to exist, for it still persists while we think of it; thus the persistence of consciousness is our experience of the persistence of force. Our consciousness refuses to let us think of something becoming nothing or of nothing becoming something; so it imposes on us the necessity of asserting that absolute force can neither come into being nor go out of being.

It is hardly necessary to call attention here, to the fact before noticed, that the system of evolution itself destroys all proof of this law upon which it is based. “Inductive proof is impossible;” it can be proved only by deduction—by direct

¹ p. 186.² p. 189.³ p. 189.⁴ p. 191.

inference from the necessary laws of mind. But the system will show that all necessary laws of mind have become such only through a gradual process of inheritance, and were originally inferences generalized from experience, that is, inductive. So the proof of the law is ultimately inductive after all ; that is, proof of it is impossible !

But, disregarding this contradiction, let us study the law and its proof as given. This law can be interpreted in three ways. The first interpretation is this : By persistence of force is meant that the absolute force, *abstractly considered*, is persistent. Is this Spencer's meaning ? If so, have we advanced or are we only beating time ? Eternity and infinity were necessarily involved in our primary conception of the absolute. What does this add to it that was not there before ? Is our conception of eternity any clearer when we assert that it has neither beginning nor end ? Is our conception of infinity any clearer when we assert that it can neither be increased nor diminished ? Moreover Spencer *uses* this law of persistence, not as applying to the absolute force in the abstract, (which would bring him no nearer his evolution), but as applying to the absolute force *as manifested*.

By what right does he take that step ? suppose manifested force, in some mysterious way, withdraws from manifestation—which certainly is no more mysterious than that it should be manifested—suppose it withdraws—the force itself does not necessarily pass into non-being, simply because it becomes formless, for its essential nature, is by Spencer's own definition, the something underlying form. Yet, in such a case, the force, *as manifested*, is not persistent. That force as manifested is persistent, is not, then, a corollary from the law, that force in the abstract is persistent.

This first interpretation of the law we would readily admit, for it adds nothing to previous admissions. But it is not the interpretation which Spencer uses ; therefore, it probably is not the one he intends to state.

The second possible meaning, is this : Force, in its infinite totality, must persist under manifestations. The infinite

force must be all manifested in an infinite universe. In other words, persistence under form is an essential condition of its existence. Is this what Spencer means by the law of persistence of force? It would be a very convenient meaning. It would construct a bridge of necessary law between unknown force and known manifestation. It would give a comprehensive unity to his system of philosophy.

But it probably is not his meaning; neither his statement, nor his use of the law implies it. Yet if this *is* his interpretation of it, we must deny the law of persistence of force. "May it not be that this unknown something, underlying manifestations, can exist only under some one or other particular form?" Certainly, it may be so. "But must it not be so?" By what necessary law of the mind do we affirm this must be? Because we cannot conceive of the substance, apart from the form? True we cannot conceive of a substance, as perceived, apart from form, for manifestation is a condition of perception. But how does this postulate the necessity of absolute existence under form? To conceive our perception of existence and to conceive that existence itself, are two very different operations, as far apart as are imagination and pure thought.

Spencer himself admits, that we have an "indefinite consciousness" of this absolute force, as distinct from the forms of its manifestations. If "indefinite consciousness" means anything else than blank unconsciousness, it means that we can *think* of the absolute force as distinct from its forms. If we can think of it at all as distinct from its forms, we can think of it as existing without necessarily thinking of it as existing under its forms. If we can think of the absolute force as existing apart from its forms, we are under no mental necessity of affirming that form is essential to its existence; and therefore, taken in this sense, there is no *law* of persistence of force.

There is one more possible interpretation of this law, which passes over the question of abstract existence, which passes over the question of the unknown link between form

and substance, and asserts simply this, that force once manifested must persist under manifestation. Spencer's illustrations and use of the law confirm us in the opinion that this is all he means by it. If so, again we deny the law of persistence of force.

The first element in the argument given does not prove it: "The persistence of consciousness constitutes our immediate experience of the persistence of force." This reduces to the simple tautology: "So long as we continue to think, we continue to think; so long as consciousness persists, consciousness persists; so long as force persists under the manifestation of consciousness, force persists under manifestation."

But is it said that we cannot conceive of the annihilation of our consciousness? True; but we can conceive of the annihilation of consciousness in the abstract — of consciousness as existing in other people. Moreover Spencer himself admits, that it is not the particular manifestation which persists, and this appeal to consciousness is (according to him) an appeal to a particular manifestation, not to force itself, as admitting unlimited transformation of manifestation.

Still further, we shall find that, on his own theory of dissolution, consciousness, as such, does not persist. The persistence of consciousness, then, gives us no experience which proves the eternal persistence of manifested force.

Nor does the second element in his argument prove the law in this sense. We admit that we cannot conceive of something becoming nothing, or of nothing becoming something. But that can have no application to the question in hand, until it is first shown that something *does* become nothing when force once manifested ceases to be manifested; when substance once existing under form becomes formless. May it not be so? Certainly it may. Must it not be so? Whence the "must"? Is the form itself substantial, so that to annihilate it makes something nothing? That "indefinite consciousness" of something underlying form was an admission fatal to any claim of mental necessity, on which to base this law. Though we cannot imagine the withdrawal of

manifested force from manifestation, yet we have an indefinite consciousness of it as existing beneath manifestation. We are not, then, as we have seen, justified in affirming that it *cannot* cease its manifestations, and still be force.

Notice that here, as before, while we deny the "must be," we admit the "may be." The question under discussion covers a realm which transcends knowledge. We can affirm or deny nothing concerning it, except under the irresistible compulsion of mental necessity. But we find no such necessity which compels us to affirm a law of persistence in the sense that the unknown and unknowable power *cannot* enter upon a state of manifestation without an increase of substance, or that it *cannot* withdraw from a state of manifestation without a diminution of substance; or that, in the mystery of its nature it *cannot* exist in grand, incomprehensible solitude, without manifestation, without form.

Three interpretations of the law, we have seen, are possible. Does Spencer hold the first? Then we grant the law, but deny the validity of his inferences from it. Does he hold the second or third (which alone could be of any value to his system)? Then we deny that he proves the law, or that it is capable of proof; and again, we deny the validity of his inferences.

The law of persistence of force gone, what becomes of the theory of evolution, based upon it? All the support derived from deductive arguments, being withdrawn, the system becomes simply a progressive induction — valuable so far as it presents us facts — interesting in its inferences from those facts, but worthless as a system of philosophy giving us the necessary laws of the universe; worthless, then, as a presentation of a "completely-unified knowledge." This is all positivism is. This is all positivism can be. Lewes is a more consistent positivist than Spencer, for he denies the possibility of philosophy.

This leads us to what we consider the true interpretation of the "law" of persistence of force.

It holds, as we have admitted, when applied to the absolute

force in the abstract; and, as a law, is proved deductively. It holds also, for all practical purposes, when applied to force as manifested in the perceptible universe. But this, as a law, can never be proved deductively. It is simply a fact of experience. It is a fact of universal experience. We know nothing about any necessity in the case. We simply know the fact. Force once manifested, so far as our experience goes, always does continue under manifestation.

From this truth science takes a legitimate birth. Dealing with facts alone, science has a right to employ this fact as the foundation of its structure. It infers that force manifested yesterday, is manifested to-day, will be manifested to-morrow, and its inference is legitimate for all practical purposes. For all practical purposes, we say; not legitimate as an eternal and necessary law of the universe, for of such a law "no inductive proof is possible." Spencer's theory of evolution, then, based on this assumed "law of persistence of force," is worthless as philosophy. His treatise becomes simply an ingenious and instructive scientific work.

The law of persistence being proved unphilosophical, deductions drawn from it are also unphilosophical. A brief examination of the deductions presented will be sufficient. The first is, that "relations among forces persist."¹ But where are we now? We have passed from the word "force," to the word "forces," an insignificant change in form, a very important one in reality. The "force" was the absolute, incomprehensible something underlying phenomena. "Forces" are knowable manifestations of this unknowable. We find ourselves, by this word "forces" suddenly immersed in the perceptible universe.

A moment ago we were dealing with the absolute, the imperceptible. Our system of evolution promised to explain the transition from this to the perceptible, which explanation alone "constitutes completely unified knowledge." Yet, without explanation, we have passed from force, to force manifested. We have passed from force manifested, to force

¹ p. 193.

under at least two particular manifestations, matter and motion.

Spencer seems to be utterly unconscious of the leap he has made. His theory of evolution, giving us, as we shall soon see, the law of the redistribution of matter and motion, begins with and deals with the perceptible only. It gives us not the slightest hint serving to explain the "passage from the imperceptible to the perceptible." According to his own definition of philosophy, his system omits the one important element in philosophy and so is unphilosophical. Yet we leap the chasm with him, and will follow on into the laws which he gives to regulate these perceptible manifestations.

The "relations among forces persist." That is, among manifestations, like consequents will follow like antecedents. We by no means deny this principle when we deny the law of persistence. If in any particular case force should cease to persist in manifestation, that manifestation could not come under our definition of an antecedent producing a consequent, and so would not invalidate this law, that like causes produce like effects. The very idea of cause, involves the assumption that it is force which persists, and persists under a particular manifestation long enough to produce its effect. To this necessary conception of a cause we apply a necessary law of the mind, and we have the principle which Spencer expresses, by saying, that the "relations among forces persist."

The chapter on the "Transformation and Equivalence of Forces," continues the confusion of the ideas of "force" and of "forces." Facts are produced to show that motion, light, heat, electricity, magnetism, as "forces," are interchangeable. In case of transformation, from definite amounts of one definite amounts of others always arise. We must remember that here, too, this word "forces" is as far removed in its meaning from the word "force," as is the knowable, from the unknowable.

Regarding "forces" as manifestations, it may be, that "physical forces stand not simply in qualitative correlations *with each other*, but also in quantitative correlations."¹

¹ p. 202.

* We gladly welcome all the information that science can give us on this subject. But, only when science succeeds in proving that "no *idea* or *feeling* arises, save as a result of some *physical* force expended in producing it,"¹ will we, if we refuse to accept that proof, confess to an "overwhelming bias in favor of a preconceived theory." Philosophy can never prove it by any corollaries from the law of persistence. While if science ever should prove it, it would commit suicide in the very act of proof; for science, as well as philosophy, is a product of thought. No more than philosophy, can science destroy primary data of consciousness without destroying itself.

Passing on in the principles governing manifestations, we come to the indestructibility of matter. Our conception of matter is defined as one of "co-existent positions that offer resistance,"² "the idea of which, is built out of experience of force."³ "An experience of force." Were we wrong in saying, that logically, Spencer is an idealist? Aside from that, this is perhaps as near as any one will ever come to defining the undefinable.

That the unknown force underlying the manifestation known as matter cannot be destroyed, we have previously admitted. That matter, as a manifestation made up of extension and resistance, can never cease to exist as such manifestation, philosophy, as we have seen, does not prove and science can not prove. As a fact of experience, we have sufficient evidence of the indestructibility of matter, for all practical purposes. As a law, extending through past or future eternity, induction alone can never establish it.

"The conception of motion, involves conceptions of space and time and matter."⁴ To this definition and to the law of the continuity of motion, we make the same objections as to the definition of matter and the law of its indestructibility. Both words represent ultimate ideas, and are above definition.

Both laws, useful as they are in scientific research, useful as they are in regulating the actions of men, nevertheless fall

¹ p. 217.² p. 166.³ p. 167.⁴ p. 168.

short of universal necessity, because incapable of deductive proof. They are valuable in science and in life; they are worthless in the philosophy which would explain the eternal universe.

The "direction of motion," is always in the line of least resistance. This law, assumes the persistence of force under manifestation, as a matter of definition, in the words "direction of motion." That assumption made, the principle is established, as was the principle of the "uniformity of law," by the necessary laws of mind.

Another general law is, that "rhythm," as illustrated in the vibrations of a cord, "is a necessary characteristic of all motion."¹ This law assumes the continuity of motion and the "co-existence of antagonist forces,"² producing equivalent reaction. These assumed, the principle of the rhythm of motion follows, as does the law of the direction of motion, from the necessary laws of mind.

The persistence of relations among forces, the transformation and equivalence of forces, the indestructibility of matter, the direction, continuity and rhythm of motion,—these Spencer employs as corollaries of his assumed law of persistence.

How far has the system brought us now? An unknowable absolute something; an unexplained leap from this to the knowable manifestation; an assumed law, which, if applied to the unknowable in the abstract, is true, but useless in philosophy; which, if applied to the knowable manifestation, may be true as a fact of experience, but is rendered necessary as a law of the universe, by no deductive proof. Corollaries from this assumed law, well illustrated by inductive evidence, valuable in science, but because proved necessary by no deduction, useless in a philosophy which would explain the universe;—these are the principles which underlie that theory of evolution which Herbert Spencer presents as an "*à priori* philosophy!" But these principles are too numerous for him. He would "express the combined consequences of the actions

¹ p. 271.

² p. 271.

thus separately formulated, under one similarly invariable formula,"¹ which is expressed as the "law of the continuous redistribution of matter and motion."²

An unknown something exists under various manifestations. Two, and two only, of these manifestations are selected arbitrarily (with absolute arbitrariness, so far as any *à priori* principles involved are concerned), two of these are selected, and the law of *their* continuous redistribution is the law of the universe!

Why matter and motion any more than mind and heat? Why matter and motion any more than mind and matter and physical forces? We are searching, remember, for an *à priori* law of the universe. Science has no place here, except to furnish illustrations.

"Philosophy, rightly so-called, can come into existence only by explaining the problem of the continuous redistribution of matter and motion."³ From the combination of matter and motion every other form of manifestation, even mind itself, can be evolved! Was there ever a cooler assumption of a whole system as an *à priori* principle? Who is it now that shows "an overwhelming bias in favor of a preconceived theory"?

But what is this law of the continuous redistribution of matter and motion — the law of evolution? It is explained, first, by the illustrations of science, showing, that as motion dissipates matter integrates. That process is evolution. In the process, matter passes from homogeneity to heterogeneity; from the incoherent to the coherent; from the indefinite to the definite; besides this, the retained motion undergoes a parallel transformation.

We will not stop to notice the confusion, here, between motion and force. We simply remark, that, even as a principle of science, the law is by no means proved as yet. There are many missing links still to be filled, before it can be established as a fact. Moreover, even were it fully established by science, "unless we succeed in finding a *rationale* of

¹ p. 276.² p. 277.³ p. 277.

this universal metamorphosis, we obviously fall short of that completely-unified knowledge, constituting philosophy."¹ "It has to be shown that the course *cannot but be* that which we have seen it to be."²

Spencer, thus admitting that his inductive illustrations do not establish the law as a principle of philosophy, proceeds to prove it deductively. We need hardly say that the argument furnished is invalid, because deduced from the law of persistence of force. Yet that this is not its only defect, a brief sketch of it will show.

This "deductive" proof of the law of evolution begins with the affirmation of the "instability of the homogeneous." The principle reduces to this (motion being properly confused with force), apply motion to the homogeneous and you produce the heterogeneous. "Each unit of a homogeneous whole, must be differently affected, from any of the rest, by the action of the rest upon it."³ The same motion will produce different effects upon different parts of an aggregate, "for the quantities of the incident force, to which they are severally subject, are not equal."⁴ This argument disappears, of course, in company with the law of persistence. But there is also a curious contradiction, involved here, to which we have alluded before. It is admitted, that, "if centres of force, absolutely uniform in their powers, were diffused with absolute uniformity through unlimited space, they would remain in equilibrium."⁵

May it not have been so? No, we are told. This "supposition cannot be represented in thought, *since unlimited space is inconceivable*."⁶ "All finite forms of the homogeneous, must inevitably lapse into heterogeneity."⁷

The whole system of evolution is necessarily true, then, only on the supposition that our universe is finite! Yet we have before been told that we cannot conceive of a limited space,⁸ and we are finally told, that, "in any locality, great or small, throughout space there evolution goes on."⁹

¹ p. 397.² p. 398.³ p. 429.⁴ p. 427.⁵ p. 429.⁶ p. 429.⁷ p. 429.⁸ p. 48.⁹ p. 546

Limited and unlimited space are considered equally inconceivable. The law of evolution can hold, only as applied to a finite universe, yet it also "holds uniformly, regardless of the size of the aggregate."¹ In this contradiction, what becomes of the instability of the homogeneous?

The next step in the "deductive" proof of evolution, is, that this process of transforming the homogeneous into the heterogeneous, once begun must continue. "Effects will multiply." This chapter (and the one immediately preceding, as well) is composed mainly of inductive illustration—the deductive argument being introduced only "for symmetry's sake."² The argument is this: "A uniform force, falling on an aggregate made up of unlike parts, must undergo dispersion from each part, as well as qualitative differentiations. The secondary forces so produced, must undergo further transformations," etc.³ This principle of multiplication of effects involves the laws of persistence and instability, as matters of definition. Those assumed, the principle follows as a mere mathematical conclusion.

The next step in the argument is, that this progress in heterogeneity must result in segregation. "Unlike units, or groups of units, of which the aggregate consists, are under the influence of some resultant force acting indiscriminately on them all, separated from each other,—segregated into minor aggregates, each consisting of units that are severally like each other, and unlike those of the other minor aggregates."⁴

"In the action and reaction of force [he means motion] and matter, an unlikeness in either of the factors necessitates an unlikeness in the effects; and in the absence of unlikeness in either of the factors the effects must be alike."⁵ "This incident force will produce like motions in units that are alike, and unlike motions in units that are unlike."⁶ Motions like and unlike in what? In quantity? Yes; that is axiomatic. In direction? If so, what becomes of the law of instability, which started with the principle, that all homoge-

¹ p. 547. ² p. 456. ³ p. 458. ⁴ pp. 461, 462. ⁵ p. 461. ⁶ p. 463.

neous (like) units are differently situated in relation to an incident force? If an incident force produces in like units motion like in quantity and direction, how can it ever make the homogeneous, heterogeneous? Yet only from motion, like in quantity and direction, both, can there follow "local integration" or "segregation." If the law of the instability of the homogeneous holds, segregation can never result, for it contradicts that law.

Further, segregation must, we are told, ultimately result in "equilibration." "All motion is motion under resistance," and must finally come to an end.¹

This argument, too, has its peculiar fallacy. It is given as an *à priori* proof, deduced from the law of persistence. But whence comes the principle that all motion must be motion under resistance? From experience! Based on a fact, inferred from "experience of muscular tension." Equilibration is given us as a law of the universe, "admitting of *à priori* proof!"² That is, a principle established by induction is assumed as if deductively proved.

We have reached an equilibrium. Are we at the end, in eternal, universal quiescence? By no means. Evolution was integration. In integration motion was dissipated. That motion has been lurking in some unknown place called the "environment," awaiting the nod of the system-builder. It comes back now, assails this equilibrium, disturbs its stability and brings on the process of dissolution. "Action and reaction being equal and opposite, the momentum, producing dispersion, must be as great as the momentum acquired by aggregation."³ So the universe is again reduced to the nebulous form, from which it starts anew in the process of evolution. Thus we have "alternate eras of evolution and dissolution" throughout all eternity.

These are the "first principles" of Spencer's philosophy — the fundamental data of consciousness implied — the *à priori* laws of the universe deduced — which make up the mould of "general philosophy," through which each "special philoso-

¹ p. 515.² p. 514.³ p. 535.

phy" is to be run. What shall we say of such "first principles"? What can we say of them, but that, by their very self-contradictions they are condemned? To be self-consistent the evolutionist must deny the possibility of an *a priori* philosophy. If he affirms it, either his philosophy will destroy his evolution, or his evolution will destroy his philosophy. Spencer would save his theory of evolution, and the consequence is, that all his attempts at deductive proof constitute a mass of inconsistencies. They are not the production of a mind which starts from itself and works *outward*, but rather of a mind which, working backward, strives in vain to reconcile the postulates dictated by a predetermined conclusion with the primary postulates of consciousness.

If we were compelled to accept the theory of evolution as philosophy, we would rather go back twenty-four hundred years, and accept it in its simpler form. Spencer adds almost nothing new to the principles of the Ionian mechanist. But the *τὸ ἀπείρον* of Anaximander is more philosophical than the nebulous matter of Spencer. The *νοῦς* of Anaxagoras more consistent with the necessary laws of thought, than Spencer's "unknowable force."

Rather than attend, with Spencer, the "redistribution of matter and motion," we would take our stand with the Grecian evolutionists, and affirm, that "intelligence is of all things, the subtlest and purest, and has entire knowledge of all. It knows all things, both those that are mixed and those that are separated; and the things which ought to be, and the things which were, and those which will be,—all are arranged by *Intelligence*."