As we approach these higher forms of negation, we see the negative acting against itself, and this constitutes a process. The food that life requires, which it negates in the process of digestion, and assimilates, is, in the life process, again negated, eliminated from the organism, and replaced by new elements. A negation is made, and this is again negated. But the higher form of negation appears in the generic; "The species lives and the individual dies." The generic continually transcends the individual—going forth to new individuals and deserting the old—a process of birth and decay, both negative processes. In conscious Spirit both are united in one movement. The generic here enters the individual as pure *ego*—the undetermined possibility of all determinations. Since it is undetermined, it is negative to all special determinations. But this *ego* not only exists as subject, but also as object—a process of self-determination or self-negation. And this negation or particularization continually proceeds from one object to another, and remains conscious under the whole, not dying, as the mere animal does, in the transition from individual to individual. This is the *aperçu* of Immortality.

HERBERT SPENCER.

CHAPTER I.

THE CRISIS IN NATURAL SCIENCE.

During the past twenty years a revolution has been working in physical science. Within the last ten it has come to the surface, and is now rapidly spreading into all departments of mental activity.

Although its centre is to be found in the doctrine of the "Correlation of Forces," it would be a narrow view that counted only the expounders of this doctrine, numerous as they are; the spirit of this movement inspires a heterogeneous multitude—Carpenter, Grove, Mayer, Faraday, Thompson, Tyndall and Helmholtz; Herbert Spencer, Stuart Mill, Buckle, Draper, Lewes, Lecky, Max Müller, Marsh, Liebig, Darwin and Agassiz; these names, selected at random, are suggested on account of the extensive circulation of their books. Every day the press announces some new name in this field of research.

What is the character of the old which is displaced, and of the new which gets established?

By way of preliminary, it must be remarked that there are observable in modern times three general phases of culture, more or less historic.

The first phase is thoroughly dogmatic: it accepts as of like validity metaphysical abstractions, and empirical observations. It has not arrived at such a degree of clearness as to perceive contradictions between form and content. For the most part, it is characterized by a reverence for external authority. With the revival of learning commences the protest of spirit against this phase. Descartes and Lord Bacon begin the contest, and are followed by the many—Locke, Newton, Leibnitz, Clark, and the rest. All are animated with the spirit of that time—to come to the matter in hand without so much mediation. Thought wishes to rid itself of its fetters; religious sentiment, to get rid of forms. This reaction against the former stage, which has been called by Hegel the metaphysical, finds a kind of climax in the intellectual movement just preceding the French revolution. Thought no longer is contented to say "Cogito, ergo sum," abstractly, but applies the doctrine in all directions, "I think; in that deed, I am." "I am a man only in so far as I think. In so far as I think, I am an essence. What I get from others is not mine. What I can comprehend, or dissolve in my reason, that is mine." It looks around and spies institutions—"clothes of spirit," as Herr Teufelsdroeck calls them. "What are you doing here, you sniveling priest?" says Voltaire; "you are imposing delusions

upon society for your own aggrandizement. *I* had no part or lot in making the church; *cogito, ergo sum;* I will only have over me what I put there!"

"I see that all these complications of society are artificial," adds Rousseau; "man has made them; they are not good, and let us tear them down and make anew." These utterances echo all over France and Europe. "The state is merely a machine by which the few exploiter the many"—"off with crowns!" Thereupon they snatch off the crown of poor Louis, and his head follows with it. "Reason" is enthroned and dethroned. Thirty years of war satiates at length this negative second period, and the third phase begins. Its characteristic is to be constructive, not to accept the heritage of the past with passivity, nor wantonly to destroy, but to realize itself in the world of objectivity—the world of laws and institutions.

The first appearance of the second phase of consciousness is characterized by the grossest inconsistencies. It says in general, (see D'Holbach's "Système de la Nature": "The immediate, only, is true; what we know by our senses, alone has reality; all is matter and force." But in this utterance it is unconscious that matter and force are purely general concepts, and not objects of immediate consciousness. What we see and feel is not matter or force in general, but only some special form. The self-refutation of this phase may be exhibited as follows:

I. "What is known is known through the senses: it is matter and force."

II. But by the senses, the particular only is perceived, and this can never be *matter*, but merely a *form*. The general is a mediated result, and not an object of the senses.

III. Hence, in positing matter and force as the content of sensuous knowing, they unwittingly assert mediation to be the content of immediateness.

The decline of this period of science results from the perception of the contradiction involved. Kant was the first to show this; his labors in this field may be summed up thus:

The universal and necessary is not an empirical result. (General laws cannot be sensuously perceived.) The constitution of the mind itself, furnishes the ground for it:—first, we have an *a priori* basis (time and space) necessarily presupposed as the condition of all sensuous perception; and then we have categories presupposed as the basis of every generalization whatever. Utter any general proposition: for example the one above quoted—"all is matter and force"—and you merely posit two categories—Inherence and Causality—as objectively valid. In all universal and necessary propositions we announce only the subjective conditions of experience, and not anything in and for itself true (i. e. applicable to things in themselves).

At once the popular side of this doctrine began to take effect. "We know only phenomena; the true object in itself we do not know."

This doctrine of phenomenal knowing was outgrown in Germany at the commencement of the present century. In 1791—ten years after the publication of the Critique of Pure Reason—the deep spirit of Fichte began to generalize Kant's labors, and soon he announced the legitimate results of the doctrine. Schelling and Hegel completed the work of transforming what Kant had left in a negative state, into an affirmative system of truth. The following is an outline of the refutation of Kantian scepticism:

I. Kant reduces all objective knowledge to phenomenal: we furnish the form of knowing, and hence whatever we announce in general concerning it—and all that we call science has, of course, the form of generality—is merely our subjective forms, and does not belong to the thing in itself.

II. This granted, say the later philosophers, it follows that the subjective swallows up all and becomes itself the universal (subject and object of itself), and hence Reason is the true substance of the universe. Spinoza's *substance* is thus seen to become *subject*. We partake of God as intellectually seeing, and we see only God as object, which Malebranche and Berkeley held with other Platonists.

1. The categories (e. g. Unity, Reality, Causality, Existence, etc.) being merely subjective, or given by the constitution of

the mind itself—for such universals are presupposed by all experience, and hence not derived from it—it follows:

2. If we abstract what we know to be subjective, that we abstract all possibility of a thing in itself, too. For "existence" is a category, and hence if subjective, we may reasonably conclude that nothing objective can have existence.

3. Hence, since one category has no preference over another, and we cannot give one of them objectivity without granting it to all others, it follows that there can be no talk of *noumena*, or of things in themselves, *existing* beyond the reach of the mind, for such talk merely applies what it pronounces to be subjective categories, (existence) while at the same time it denies the validity of their application.

III. But since we remove the supposed "*noumena*," the so-called phenomena are not opposed any longer to a correlate beyond the intelligence, and the *noumenon* proves to be *mind itself.*

An obvious corollary from this is, that by the self-determination of mind in pure thinking we shall find the fundamental laws of all phenomena.

Though the Kantian doctrine soon gave place in Germany to deeper insights, it found its way slowly to other countries. Comte and Sir Wm. Hamilton have made the negative results very widely known—the former, in natural science; the latter, in literature and philosophy. Most of the writers named at the beginning are more or less imbued with Comte's doctrines, while a few follow Hamilton. For rhetorical purposes, the Hamiltonian statement is far superior to all others; for practical purposes, the Comtian. The physicist wishing to give his undivided attention to empirical observation, desires an excuse for neglecting pure thinking; he therefore refers to the well-known result of philosophy, that we cannot know anything of ultimate causes—we are limited to phenomena and laws. Although it must be conceded that this consolation is somewhat similar to that of the ostrich, who cunningly conceals his head in the sand when annoyed by the hunters, yet great benefit has thereby accrued to science through the undivided zeal of the investigators thus consoled.

When, however, a sufficiently large collection has been made, and the laws are sought for in the chaotic mass of observations, then *thought* must be had. Thought is the only crucible capable of dissolving "the many into the one." Tycho Brahe served a good purpose in collecting observations, but a Kepler was required to discern the celestial harmony involved therein.

This discovery of laws and relations, or of relative unities, proceeds to the final stage of science, which is that of the *absolute comprehension.*

Thus modern science, commencing with the close of the metaphysical epoch, has three stages or phases:

I. The first rests on mere isolated facts of experience; accepts the first phase of things, or that which comes directly before it, and hence may be termed the stage of *immediateness.*

II. The second relates its thoughts to one another and compares them; it developes inequalities; tests one through another, and discovers dependencies everywhere; since it learns that the first phase of objects is phenomenal, and depends upon somewhat lying beyond it; since it denies truth to the immediate, it may be termed the stage of *mediation.*

III. A final stage which considers a phenomenon in its totality, and thus seizes it in its *noumenon*, and is the stage of the *comprehension.*

To resume: the *first* is that of sensuous knowing; the *second*, that of reflection (the understanding); the *third*, that of the reason (or the speculative stage).

In the sensuous knowing, we have crude, undigested masses all co-ordinated; each is in and for itself, and perfectly valid without the others. But as soon as reflection enters, dissolution is at work. Each is thought in sharp contrast with the rest; contradictions arise on every hand. The third stage finds its way out of these quarrelsome abstractions, and arrives at a synthetic unity, at a system, wherein the antagonisms are seen to form an organism.

The first stage of the development closes with attempts on all hands to put the re-

sults in an encyclopædiacal form. Humboldt's Cosmos is a good example of this tendency, manifested so widely. Matter, masses, and *functions* are the subjects of investigation.

Reflection investigates *functions* and seizes the abstract category of force, and straightway we are in the second stage. Matter, as such, loses its interest, and "correlation of forces" absorbs all attention.

Force is an arrogant category and will not be co-ordinated with matter; if admitted, we are led to a pure dynamism. This will become evident as follows:

I. Force implies confinement (to give it direction); it demands, likewise, an "occasion," or soliciting force to call it into activity.

II. But it cannot be confined except by force; its occasion must be a force likewise.

III. Thus, since its confinement and "occasion" are forces, force can only act upon forces—upon matter only in so far as that is a force. Its nature requires confinement in order to manifest it, and hence it cannot act or exist except in unity with other forces which likewise have the same dependence upon it that it has upon them. *Hence a force has no independent subsistence, but is only an element of a combination of opposed forces,* which combination is a unity existing in an opposed manner (or composed of forces in a state of tension). This deeper unity which we come upon as the ground of force is properly named *law.*

From this, two corollaries are to be drawn: (1.) That matter is merely a name for various forces, as resistance, attraction and repulsion, etc. (2.) That force is no ultimate category, but, upon reflection, is seen to rest upon law as a deeper category (not law as a mere similarity of phenomena, but as a true unity underlying phenomenal multiplicity).

From the nature of the category of force we see that whoever adopts it as the ultimate, embarks on an ocean of dualism, and instead of "seeing everywhere the one and all" as did Xenophanes, he will see everywhere the self opposed, the contradictory.

The crisis which science has now reached is of this nature. The second stage is at its commencement with the great bulk of scientific men.

To illustrate the self-nugatory character ascribed to this stage we shall adduce some of the most prominent positions of Herbert Spencer, whom we regard as the ablest exponent of this movement. These contradictions are not to be deprecated, as though they indicated a decline of thought; on the contrary, they show an increased activity, (though in the stage of mere reflection,) and give us good omens for the future. The era of stupid mechanical thinkers is over, and we have entered upon the active, *chemical* stage of thought, wherein the thinker is trained to consciousness concerning his abstract categories, which, as Hegel says, "drive him around in their whirling circle."

Now that the body of scientific men are turned in this direction, we behold a vast upheaval towards philosophic thought; and this is entirely unlike the isolated phenomenon (hitherto observed in history) of a single group of men lifted above the surrounding darkness of their age into clearness. We do not have such a phenomenon in our time; it is the spirit of the nineteenth century to move by masses.

CHAPTER II.

THE "FIRST PRINCIPLES" OF THE "UNKNOWABLE."

The *British Quarterly* speaking of Spencer, says: "These 'First Principles' are merely the foundation of a system of Philosophy, bolder, more elaborate and comprehensive, perhaps, than any other which has been hitherto designed in England."

The persistence and sincerity, so generally prevailing among these correlationists, we have occasion to admire in Herbert Spencer. He seems to be always ready to sacrifice his individual interest for truth, and is bold and fearless in uttering what he believes it to be.

For critical consideration no better division can be found than that adopted in the "First Principles" by Mr. Spencer himself, to wit: 1st, the unknowable, 2nd, the know-

able. Accordingly, let us examine first his theory of

THE UNKNOWABLE.

When Mr. Spencer announces the content of the "unknowable" to be "ultimate religious and scientific ideas," we are reminded at once of the old adage in jurisprudence—"*Omnis definitio in jure civili est periculosa*;" the definition is liable to prove self-contradictory in practice. So when we have a content assigned to the unknowable we at once inquire, whence come the distinctions in the unknowable? If unknown they are not distinct to us. When we are told that Time, Space, Force, Matter, God, Creation, etc., are unknowables, we must regard these words as corresponding to no distinct objects, but rather as all of the same import to us. It should be always borne in mind that *all universal negatives are self-contradictory.* Moreover, since all judgments are made by subjective intelligences, it follows that all general assertions concerning the nature of the intellect affect the judgment itself. The naïveté with which certain writers wield these double-edged weapons is a source of solicitude to the spectator.

When one says that he knows that he knows nothing, he asserts knowledge and denies it in the same sentence. If one says "all knowledge is relative," as Spencer does, (p. 68, *et seq.*, of First Principles,) he of course asserts that his knowledge of the fact is relative and not absolute. If a distinct content is asserted of ignorance, the same contradiction occurs.

The perception of this principle by the later German philosophers at once led them out of the Kantian nightmare, into positive truth. The principle may be applied in general to any subjective scepticism. The following is a general scheme that will apply to all particular instances:

I. "We cannot know things in themselves; all our knowledge is subjective; it is confined to our own states and changes."

II. If this is so, then still more is what we name the "objective" only a state or change of us as subjective; it is a mere fiction of the mind so far as it is regarded as a "beyond" or thing in itself.

III. Hence we *do* know the objective; for the scepticism can only legitimately conclude that the objective which we *do* know is of a nature kindred with reason; and that by an *a priori* necessity we can affirm that not only all knowable must have this nature, but also *all possible existence* must.

In this we discover that the mistake on the part of the sceptic consists in taking self-conscious intelligence as something one-sided or subjective, whereas it must be, according to its very definition, subject *and* object in one, and thus universal.

The difficulty underlying this stage of consciousness is that the mind has not been cultivated to a clear separation of the imagination from the thinking. As Sir Wm. Hamilton remarks, (Metaphysics, p. 487,) "Vagueness and confusion are produced by the confounding of objects so different as the images of sense and the unpicturable notions of intelligence."

Indeed the great "law of the conditioned" so much boasted of by that philosopher himself and his disciples, vanishes at once when the mentioned confusion is avoided. Applied to space it results as follows:

I.—*Thought of Space.*

1. Space, if finite, must be limited from without;

2. But such external limitations would require space to exist in;

3. And hence the supposed limits of space that were to make it finite do in fact *continue it.*

It appears, therefore, that space is of such a nature that it can only end in, or be limited by *itself*, and thus is universally *continuous* or *infinite.*

II.—*Imagination of Space.*

If the result attained by pure thought is correct, space is infinite, and if so, it cannot be imagined. If, however, it should be found possible to compass it by imagination, it must be conceded that there really is a contradiction in the intelligence. That the result of such an attempt coincides with our anticipations we have Hamilton's testimony—"imagination sinks exhausted."

Therefore, instead of this result contra-

dicting the first, as Hamilton supposes, it really confirms it.

In fact if the mind is disciplined to separate pure thinking from mere imagining, the infinite is not difficult to think. Spinoza saw and expressed this by making a distinction between "infinitum actu (or rationis)," and "infinitum imaginationis," and his first and second axioms are the immediate results of thought elevated to this clearness. This distinction and his "*omnis determinatio est negatio*," together with the development of the third stage of thinking (according to reason), "*sub quadam specie æternitatis*,"—these distinctions are the priceless legacy of the clearest-minded thinker of modern times; and it behooves the critic of "human knowing" to consider well the results that the "human mind" has produced through those great masters — Plato and Aristotle, Spinoza and Hegel.

Herbert Spencer, however, not only betrays unconsciousness of this distinction, but employs it in far grosser and self-destructive applications. On page 25, ("First Principles,") he says: "When on the sea shore we note how the hulls of distant vessels are hidden below the horizon, and how of still remoter vessels only the uppermost sails are visible, we realize with tolerable clearness the slight curvature of that portion of the sea's surface which lies before us. But when we seek in imagination to follow out this curved surface as it actually exists, slowly bending round until all its meridians meet in a point eight thousand miles below our feet, we find ourselves utterly baffled. We cannot conceive in its real form and magnitude even that small segment of our globe which extends a hundred miles on every side of us, much less the globe as a whole. The piece of rock on which we stand can be mentally represented with something like completeness; we find ourselves able to think of its top, its sides, and its under surface at the same time, or so nearly at the same time that they seem all present in consciousness together; and so we can form what we call a conception of the rock, but to do the like with the earth we find impossible." "We form of the earth not a conception properly so-called, but only a symbolic conception."

Conception here is held to be adequate when it is formed of an object of a given size; when the object is above that size the conception thereof becomes symbolical. Here we do not have the exact limit stated, though we have an example given (a rock) which is conceivable, and another (the earth) which is not.

"We must predicate nothing of objects too great or too multitudinous to be mentally represented, or we must make our predications by means of extremely inadequate representations of such objects, mere symbols of them." (27 page.)

But not only is the earth an indefinitely multiple object, but so is the rock; nay, even the smallest grain of sand. Suppose the rock to be a rod in diameter; microscope magnifying two and a half millions of diameters would make its apparent magnitude as large as the earth. It is thus only a question of relative distance from the person conceiving, and this reduces it to the mere sensuous image of the retina. Remove the earth to the distance of the moon, and our conception of it would, upon these principles, become quite adequate. But if our conception of the moon be held inadequate, then must that of the rock or the grain of sand be equally inadequate.

Whatever occupies space is continuous and discrete; i. e., may be divided into parts. It is hence a question of relativity whether the image or picture of it correspond to it.

The legitimate conclusion is that all our conceptions are symbolic, and if that property invalidates their reliability, it follows that we have no reliable knowledge of things perceived, whether great or small.

Mathematical knowledge is conversant with pure lines, points, and surfaces; hence it must rest on inconceivables.

But Mr. Spencer would by no means concede that we do not know the shape of the earth, its size, and many other inconceivable things about it. Conception is thus no criterion of knowledge, and all built upon this doctrine (i. e. depending upon the conceivability of a somewhat) falls to the ground.

But he applies it to the questions of the divisibility of matter (page 50): "If we say that matter is infinitely divisible, we commit ourselves to a supposition not realizable in thought. We can bisect and rebisect a body, and continually repeating the act until we reduce its parts to a size no longer physically divisible, may then mentally continue the process without limit."

Setting aside conceivability as indifferent to our knowledge or thinking, we have the following solution of this point:

I. That which is extended may be bisected (i. e. has two halves).

II. Thus two extensions arise, which, in turn, have the same property of divisibility that the first one had.

III. Since, then, bisection is a process entirely indifferent to the nature of extension (i. e. does not change an extension into two non-extendeds), it follows that body is infinitely divisible.

We do not have to test this in imagination to verify it; and this very truth must be evident to him who says that the progress must be "continued without limit." For if we examine the general conditions under which any such "infinite progress" is possible, we find them to rest upon the presupposition of a real infinite, thus:

Infinite Progress.

I. Certain attributes are found to belong to an object, and are not affected by a certain process. (For example, divisibility as a process in space does not affect the continuity of space, which makes that process possible. Or again, the process of limiting space does not interfere with its continuity, for space will not permit any limit except space itself.)

II. When the untutored reflection endeavors to apprehend a relation of this nature, it seizes one side of the dualism and is hurled to the other. (It bisects space, and then finds itself before two objects identical in nature with the first; it has effected nothing; it repeats the process, and, by and by getting exhausted, wonders whether it could meet a different result if its powers of endurance were greater. Or else suspecting the true case, says: "no other result would happen if I went on forever.")

III. Pure thought, however, grasps this process as a totality, and sees that it only arises through a self-relation. The "progress" is nothing but a return to itself, the same monotonous round. It would be a similar attempt to seek the end of a circle by travelling round it, and one might make the profound remark: "If my powers were equal to the task, I should doubtless come to the end." This difficulty vanishes as soon as the experience is made that the line returns into itself. "It is the same thing whether said once or repeated forever," says Simplicius, treating of this paradox.

The "Infinite Progress" is the most stubborn fortress of Scepticism. By it our negative writers establish the impotency of Reason for various ulterior purposes. Some wish to use it as a lubricating fluid upon certain religious dogmas that cannot otherwise be swallowed. Others wish to save themselves the trouble of thinking out the solutions to the Problem of Life. But the Sphinx devours him who does not faithfully grapple with, and solve her enigmas.

Mephistopheles (a good authority on this subject) says of Faust, whom he finds grumbling at the littleness of man's mind:

"Verachte nur Vernunft und Wissenchaft,
Des Menschen allerhöchste Kraft!
Und hätt'er sich auch nicht dem Teufel übergeben,
Er müsste doch zu Grunde gehen."

Only prove that there is a large field of the unknowable and one has at once the *vade mecum* for stupidity. Crude reflection can pour in its distinctions into a subject, and save itself from the consequences by pronouncing the basis incomprehensible. It also removes *all* possibility of Theology, or of the Piety of the Intellect, and leaves a very narrow margin for religious sentiment, or the Piety of the Heart.

The stage of Science represented by the French Encyclopædists was immediately hostile to each and every form of religion. This second stage, however, has a choice. It can, like Hamilton or Mansel, let religious belief alone, as pertaining to the

unknown and unknowable—which may be *believed* in as much as one likes; or it may "strip off," as Spencer does, "determinations from a religion," by which it is distinguished from other religions, and show their truth to consist in a common doctrine held by all, to-wit: "The truth of things is unknowable."

Thus the scientific man can baffle all attacks from the religious standpoint; nay, he can even elicit the most unbounded approval, while he saps the entire structure of Christianity.

Says Spencer (p. 46): "Science and Religion agree in this, that the power which the Universe manifests to us is utterly inscrutable." He goes on to show that though this harmony exists, yet it is broken by the inconsistency of Religion: "For every religion, setting out with the tacit assertion of a mystery, forthwith proceeds to give some solution of this mystery, and so asserts that it is not a mystery passing human comprehension." In this confession he admits that all religions agree in professing to *reveal* the solution of the Mystery of the Universe to man; and they agree, moreover, that man, as simply a being of sense and reflection, cannot comprehend the revelation; but that he must first pass through a profound mediation—be *regenerated*, not merely in his heart, but in *intellect* also. The misty limitations ("vagueness and confusion") of the imagination must give way to the purifying dialectic of pure thought before one can see the Eternal Verities.

These revelations profess to make known the nature of the Absolute. They call the Absolute "Him," "Infinite," "Self-created," "Self-existent," "Personal," and ascribe to this "Him" attributes implying profound mediation. All definite forms of religion, all definite theology, must at once be discarded according to Spencer's principle. Self-consciousness, even, is regarded as impossible by him (p. 65): "Clearly a true cognition of self implies a state in which the knowing and known are one, in which subject and object are identified; and this Mr. Mansel rightly holds to be the annihilation of both." He considers it a degradation (p. 109) to apply personality to God: "Is it not possible that there is a mode of being as much transcending intelligence and will as these transcend mechanical motion?" And again (p. 112) he holds that the mere "negation of absolute knowing contains more religion than all dogmatic theology." (P. 121,) "All religions are envelopes of truth, which reveal to the lower and conceal to the higher." (P. 66,) "Objective and subjective things are alike inscrutable in their substance and genesis." "Ultimate religious and scientific ideas (p. 68) alike turn out to be mere symbols of the actual, and not cognitions of it." (P. 69,) "We come to the negative result that the reality existing behind all appearances must ever be unknown."

In these passages we see a dualism posited in this form: "Everything immediate is *phenomenal*, a manifestation of the hidden and inscrutable essence." This essence is the unknown and unknowable; yet it *manifests* itself in the immediate or phenomenal.

The first stage of thought was unconscious that it dealt all the time with a mediated result (a dualism) while it assumed an immediate; that it asserted all truth to lie in the sensuous object, while it named at the same time "*matter* and *force*," categories of reflection.

The second stage has got over *that* difficulty, but has fallen into another. For if the phenomenon *manifested* the essence, it could not be said to be "unknowable, hidden, and inscrutable." But if the essence is *not* manifested by the phenomenon, then we have the so-called phenomenon as a self-existent, and therefore independent of the so-called essence, which stands coördinated to it as another existent, which cannot be known because it does not manifest itself to us. Hence the "phenomenon" is no *phenomenon*, or manifestation of aught but itself, and the "essence" is simply a fiction of the philosopher.

Hence his talk about essence is purely gratuitous, for there is not shown the need of one.

A dialectical consideration of essence and phenomenon will result as follows:

Essence and Phenomenon.

I. If essence is seized as independent or absolute being, it may be taken in two senses:

a. As entirely unaffected by "otherness" (or limitation) and entirely undetermined; and this would be pure nothing, for it cannot distinguish itself or be distinguished from pure nothing.

b. As relating to itself, and hence making itself a duality—becoming its own other; in this case the "other" is a vanishing one, for it is at the same time identical and non-identical — a process in which the essence may be said to appear or become *phenomenal.* The entire process is the absolute or self-related (and hence independent). It is determined, but by itself, and hence not in a finite manner.

II. The Phenomenon is thus seen to arise through the self-determination of essence, and has obviously the following characteristics:

a. It is the "other" of the essence, and yet the own self of the essence existing in this opposed manner, and thus self-nugatory; and this non-abiding character gives it the name of phenomenon (or that which merely *appears,* but is no permanent essence).

b. If this were simply another to the essence, and not the self-opposition of the same, then it would be through itself, and *itself* the essence in its first (or immediate) phase. But this is the essence only as negated, or as returned from the otherness.

c. This self-nugatoriness is seen to arise from the contradiction involved in its being other to itself, i. e. outside of its true being. *Without* this self-nugatoriness it would be an abiding, an essence itself, and hence no phenomenon; *with* this self-nugatoriness the phenomenon simply exhibits or "manifests" the essence; in fact, with the appearance and its negation taken together, we have before us a totality of essence and phenomenon.

III. Therefore: *a.* The phenomenal is such because it is not an abiding somewhat. It is dependent upon other or essence. *b.* Whatever it posesses belongs to that upon which it depends, i. e. belongs to essence. *c.* In the self-nugatoriness of the phenomenal we have the entire essence manifested.

This latter point is the important result, and may be stated in a less strict and more popular form thus: The real world (so-called) is said to be in a state of change—origination and decay. Things pass away and others come in their places. Under this change, however, there is a permanent called Essence.

The imaginative thinking finds it impossible to realize such an abiding as exists through the decay of all external form, and hence pronounces it unknowable. But pure thought seizes it, and finds it a pure self-relation or process of return to itself, which accordingly has duality, thus: *a.* The positing or producing of a somewhat or an immediate, and, *b.* The cancelling of the same. In this duality of beginning and ceasing, this self-relation completes its circle, and is thus, *c.* the entire movement.

All categories of the understanding (cause and effect, matter and form, possibility, etc.) are found to contain this movement when dissolved. And hence they have self-determination for their presupposition and explanation. It is unnecessary to add that unless one gives up trying to *imagine* truth, that this is all very absurd reasoning. (At the end of the sixth book of Plato's Republic, ch. xxi., and in the seventh book, ch. xiii., one may see how clearly this matter was understood two thousand, and more, years ago.)

To manifest or reveal is to make known; and hence to speak of the "manifestation of a hidden and inscrutable essence" is to speak of the making known of an unknowable.

Mr. Spencer goes on; no hypothesis of the universe is possible—creation not conceivable, for that would be something out of nothing—self-existence not conceivable, for that involves unlimited past time.

He holds that "all knowledge is *relative,*" for all explanation is the reducing of a cognition to a more general. He says, (p. 69,) "Of necessity, therefore, explanation must eventually bring us down to the inexplicable—the deepest truth which we

can get at must be unaccountable." This much valued insight has a positive side as well as the negative one usually developed:

I. (*a.*) To explain something we subsume it under a more general.

(*b.*) The "*summum genus*" cannot be subsumed, and

(*c.*) Hence is inexplicable.

II. But those who conclude from this that we base our knowledge ultimately upon faith (from the supposed fact that we cannot prove our premises) forget that—

(*a.*) If the subsuming process ends in an unknown, then all the subsuming has resulted in nothing; for to subsume something under an unknown does not explain it. (Plato's Republic, Book VII, chap. xiii.)

(*b.*) The more general, however, is the more simple, and hence the "*summum genus*" is the purely simple—it is Being. But the simpler the clearer, and the pure simple is the absolutely clear.

(*c.*) At the "*summum genus*" subsumption becomes the principle of identity—being is being; and thus stated we have simple self-relation as the origin of all clearness and knowing whatsoever.

III. Hence it is seen that it is not the mere fact of subsumption that makes something clear, but rather it is the reduction of it to identity.

In pure being as the *summum genus*, the mind contemplates the pure form of knowing—"a is a," or "a subject is a predicate"—(a is b). The pure "is" is the empty form of mental affirmation, the pure copula; and thus in the *summum genus* the mind recognizes the pure form of itself. All objectivity is at this point dissolved into the thinking, and hence the subsumption becomes identity—(being=*ego*, or "*cogito, ergo sum*";) the process turns round and becomes synthetic, ("dialectic" or "genetic," as called by some). From this it is evident that self-consciousness is the basis of all knowledge.

CHAPTER III.

THE "FIRST PRINCIPLES" OF THE "KNOWABLE."

As might be expected from Spencer's treatment of the *unknowable*, the *knowable* will prove a confused affair; especially since to the above-mentioned "inscrutability" of the absolute, he adds the doctrine of an "obscure consciousness of it," holding, in ' , that the knowable is only a relative, and that it cannot be known without at the same time possessing a knowledge of the unknowable.

(P. 82) he says: "A thought involves relation, difference and likeness; whatever does not present each of them does not admit of cognition. And hence we may say that the unconditioned as presenting none of these, is trebly unthinkable." And yet he says, (p. 96): "The relative is itself inconceivable except as related to a real non-relative."

We will leave this infinite self-contradiction thus developed, and turn to the positions established concerning the knowable. They concern the nature of Force, Matter and Motion, and the predicates set up are "persistence," "indestructibility" and similar.

THE KNOWABLE.

Although in the first part "conceivability" was shown to be utterly inadequate as a test of truth; that with it we could not even establish that the earth is round, or that space is infinitely continuous, yet here Mr. Spencer finds that inconceivability is the most convenient of all positive proofs.

The first example to be noticed is his proof of the compressibility of matter (p. 51): "It is an established mechanical truth that if a body moving at a given velocity, strikes an equal body at rest in such wise that the two move on together, their joint velocity will be but half that of the striking body. Now it is a law of which the negative is inconceivable, that in passing from any one degree of magnitude to another all intermediate degrees must be passed through. Or in the case before us, a body moving at velocity 4, cannot, by collision, be reduced to velocity 2, without passing through all velocities between 4 and 2. But were matter truly solid—were its units absolutely incompressible and in unbroken contact—this "law of continuity," as it is called, would be broken in every case of collision. For when, of two such units, one moving at ve-

locity 4 strikes another at rest, the striking unit must have its velocity 4 instantaneously reduced to velocity 2; must pass from velocity 4 to velocity 2 without any lapse of time, and without passing through intermediate velocities; must be moving with velocities 4 and 2 at the same instant, which is impossible." On page 57 he acknowledges that any transition from one rate of motion to another is inconceivable; hence it does not help the matter to "pass through intermediate velocities." It is just as great a contradiction and just as inconceivable that velocity 4 should become velocity 3.9999+, as it is that it should become velocity 2; for no change whatever of the motion can be thought (as he confesses) without having two motions in one time. Motion, in fact, is the synthesis of place and time, and cannot be comprehended except as their unity. The argument here quoted is only adduced by Mr. S. for the purpose of antithesis to other arguments on the other side as weak as itself.

On page 241, Mr. Spencer deals with the question of the destructibility of matter: "The annihilation of matter is unthinkable for the same reason that the creation of matter is unthinkable." (P. 54): "Matter in its ultimate nature is as absolutely incomprehensible as space and time." The nature of matter is unthinkable, its creation or destructibility is unthinkable, and in this style of reasoning we can add that its *indestructibility* is likewise unthinkable; in fact the argument concerning self-existence will apply here. (P. 31): "Self-existence necessarily means existence without a beginning; and to form a conception of self-existence is to form a conception of existence without a beginning. Now by no mental effort can we do this. To conceive existence through infinite past time, implies the conception of infinite past time, which is an impossibility." Thus, too, we might argue in a strain identical; indestructibility implies existence through infinite future time, but by no mental effort can infinite time be conceived. And thus, too, we prove and disprove the persistence of force and motion. When occasion requires, the ever-convenient argument of "inconceivability" enters. It reminds one of Sir Wm. Hamilton's "imbecility" upon which are based "sundry of the most important phenomena of intelligence," among which he mentions the category of causality. If causality is founded upon imbecility, and all experience upon *it*, it follows that all empirical knowledge rests upon imbecility.

On page 247, our author asserts that the first law of motion "is in our day being merged in the more general one, that motion, like matter, is indestructible." It is interesting to observe that this so-called "First law of motion" rests on no better basis than very crude reflection.

"When not influenced by external forces, a moving body will go on in a straight line with a uniform velocity," is Spencer's statement of it.

This abstract, supposed law has necessitated much scaffolding in Natural Philosophy that is otherwise entirely unnecessary; it contradicts the idea of momentum, and is thus refuted:

I. A body set in motion continues in motion after the impulse has ceased from without, for the reason that it retains momentum.

II. Momentum is the product of weight by velocity, and weight is the attraction of the body in question to another body external to it. If all bodies external to the moving body were entirely removed, the latter would have no weight, and hence the product of weight by velocity would be zero.

III. The "external influences" referred to in the so-called "law," mean chiefly attraction. Since no body could have momentum except through weight, another name for attraction, it follows that all free motion has reference to another body, and hence is curvilinear; thus we are rid of that embarrassing "straight line motion" which gives so much trouble in mechanics. It has all to be reduced back again through various processes to curvilinear movement.

We come, finally, to consider the central point of this system:

THE CORRELATION OF FORCES.

Speaking of persistence of force, Mr. Spencer concedes (p. 252) that this doc-

trine is not demonstrable from experience. He says (p. 254): "Clearly the persistence of force is an ultimate truth of which no inductive proof is possible." (P. 255): "By the persistence of force we really mean the persistence of some power which transcends our knowledge and conception." (P. 257): "The indestructibility of matter and the continuity of motion we saw to be really corollaries from the impossibility of establishing in thought a relation between something and nothing." (Thus what was established as a mental impotence is now made to have objective validity.) "Our inability to conceive matter and motion destroyed is our inability to suppress consciousness itself." (P. 258): "Whoever alleges that the inability to conceive a beginning or end of the universe is a *negative* result of our mental structure, cannot deny that our consciousness of the universe as persistent is a positive result of our mental structure. And this persistence of the universe is the persistence of that unknown cause, power, or force, which is manifested to us through all phenomena." This "positive result of our mental structure" is said to rest on our "inability to conceive the limitation of consciousness" which is "simply the obverse of our inability to put an end to the thinking subject while still continuing to think." (P. 257): "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."

It will be observed here that he is endeavoring te solve the First Antinomy of Kant, and that his argument in this place differs from Kant's proof of the "Antithesis" in this, that while Kant proves that "The world [or universe] has no beginning," etc., by the impossibility of the origination of anything in a "void time," that Mr. Spencer proves the same thing by asserting it to be a "positive result of our mental structure," and then proceeds to show that this is a sort of "inability" which has a subjective explanation; it is, according to him, merely the "substance of consciousness" objectified and regarded as the law of reality.

But how is it with the "Thesis" to that Antinomy, "The world *has* a beginning in time?" Kant proves this apagogically by showing the absurdity of an "infinite series already elapsed." That our author did not escape the contradiction has already been shown in our remarks upon the "indestructibility of matter." While he was treating of the unknowable it was his special province to prove that self-existence is unthinkable. (P. 31): He says it means "existence without a beginning," and "to conceive existence through infinite past time, implies the conception of infinite past time, which is an impossibility." Thus we have the Thesis of the Antinomy supported in his doctrine of the "unknowable," and the antithesis of the same proved in the doctrine of the knowable.

We shall next find him involved with Kant's Third Antinomy.

The doctrine of the correlation is stated in the following passages:

(P. 280): "Those modes of the unknowable, which we call motion, heat, light, chemical affinity, etc., are alike transformable into each other, and into those modes of the unknowable which we distinguish as sensation, emotion, thought: these, in their turns, being directly or indirectly re-transformable into the original shapes. That no idea or feeling arises, save as a result of some physical force expended in producing it, is fast becoming a common-place of science; and whoever duly weighs the evidence, will see that nothing but an overwhelming bias in favor of a preconceived theory can explain its non-acceptance. How this metamorphosis takes place—how a force existing as motion, heat, or light, can become a mode of consciousness—how it is possible for aërial vibrations to generate the sensation we call sound, or for the forces liberated by chemical changes in the brain to give rise to emotion—these are mysteries which it is impossible to fathom." (P. 284): "Each manifestation of force can be interpreted only as the effect of some antecedent force;

no matter whether it be an inorganic action, an animal movement, a thought, or a feeling. Either this must be conceded, or else it must be asserted that our successive states of consciousness are self-created." "Either mental energies as well as bodily ones are quantitatively correlated to certain energies expended in their production, and to certain other energies they initiate; or else nothing must become something and something, nothing. Since persistence of force, being a *datum* of consciousness, cannot be denied, its unavoidable corollary must be accepted."

On p. 294 he supports the doctrine that "motion takes the direction of the least resistance," mentally as well as physically.

Here are some of the inferences to be drawn from the passages quoted:

1. Every act is determined from without, and hence does not belong to the subject in which it manifests itself.

2. To change the course of a force, is to make another direction "that of the least resistance," or to remove or diminish a resistance.

3. But to change a resistance requires force, which (in motion) must act in "the direction of the least resistance," and hence it is entirely determined from without, and governed by the disposition of the forces it meets.

4. Hence, of *will*, it is an absurdity to talk; *freedom* or *moral agency* is an impossible phantom.

5. That there is self-determination in self-consciousness—that it is "self-created"—is to Mr. Spencer the absurd alternative which at once turns the scale in favor of the doctrine that mental phenomena are the productions of external forces.

After this, what are we to say of the following? (P. 501): "Notwithstanding all evidence to the contrary, there will probably have arisen in not a few minds the conviction that the solutions which have been given, along with those to be derived from them, are essentially materialistic. Let none persist in these misconceptions." (P. 502): "Their implications are no more materialistic than they are spiritualistic, and no more spiritualistic than they are materialistic."

If we hold these positions by the side of Kant's Third Antinomy, we shall see that they all belong to the proof of the "Antithesis," viz: "There is no freedom, but everything in the world happens according to the laws of nature." The "Thesis," viz: "That a causality of freedom is necessary to account fully for the phenomena of the world," he has not anywhere supported. We find, in fact, only those thinkers who have in some measure mastered the third phase of culture in thought, standing upon the basis presented by Kant in the Thesis. The chief point in the Thesis may be stated as follows: 1. If everything that happens presupposes a previous condition, (which the law of causality states,) 2. This previous condition cannot be a permanent (or have been always in existence); for, if so, its consequence, or the effect, would have always existed. Thus the previous condition must be a thing which has happened. 3. With this the whole law of causality collapses; for (*a*) since each cause is an effect, (*b*) its determining power escapes into a higher member of the series, and, (*c*) unless the law changes, wholly vanishes; there result an indefinite series of effects with no cause; each member of the series is a dependent, has its being in another, which again has its being in another, and hence cannot support the subsequent term.

Hence it is evident that this Antinomy consists, first: in the setting up of the law of causality as having absolute validity, which is the antithesis. Secondly, the experience is made that such absolute law of causality is a self-nugatory one, and thus it is to be inferred that causality, to be at all, presupposes an origination in a "self-moved," as Plato calls it. Aristotle (Metaphysics, xi. 6–7, and ix. 8) exhibits this ultimate as the "self-active," and the Scholastics take the same, under the designation "*actus purus*," for the definition of God.

The Antinomy thus reduced gives:

I. Thesis: Self-determination must lie at the basis of all causality, otherwise causality cannot be at all.

II. Antithesis: If there is self-determination, "the unity of experience (which leads us to look for a cause) is destroyed, and hence no such case could arise in experience."

In comparing the two proofs it is at once seen that they are of different degrees of universality. The argument of the Thesis is based upon the nature of the thing itself, i. e. a pure thought; while that of the Antithesis loses sight of the idea of "*efficient*" cause, and seeks mere continuity in the sequence of time, and thus exhibits itself as the second stage of thought, which leans on the staff of fancy, i. e. mere *representative* thinking. This "unity of experience," as Kant calls it, is the same thing, stated in other words, that Spencer refers to as the "positive result of our mental structure." In one sense those are true antinomies—those of Kant, Hamilton, *et al.*—viz. in this: that the "*representative*" stage of thinking finds itself unable to shake off the sensuous picture, and think "*sub quadam specie æternitatis.*" To the mind disciplined to the third stage of thought, these are no antinomies; Spinoza, Leibnitz, Plato and Aristotle are not confused by them. The Thesis, properly stated, is a true universal, and exhibits its own truth, as that upon which the law of causality rests; and hence the antithesis itself—less universal—resting upon the law of causality, is based upon the Thesis. Moreover, the Thesis does not deny an infinite succession in time and space, it only states that there must be an efficient cause—just what the law of causalty states, but shows, in addition, that this efficient cause must be a "self-determined."

On page 282 we learn that, "The solar heat is the final source of the force manifested by society." "It (the force of society) is based on animal and vegetable products, and these in turn are dependent on the light and heat of the sun."

As an episode in this somewhat abstract discussion, it may be diverting to notice the question of priority of discovery, touched upon in the following note (p. 454): "Until I recently consulted his 'Outlines of Astronomy' on another question, I was not aware that, so far back as 1833, Sir John Herschel had enunciated the doctrine that 'the sun's rays are the ultimate source of almost every motion which takes place on the surface of the earth.' He expressly includes all geologic, meteorologic, and vital actions; as also those which we produce by the combustion of coal. The late George Stephenson appears to have been wrongly credited with this last idea."

In order to add to the thorough discussion of this important question, we wish to suggest the claims of Thomas Carlyle, who, as far back as 1830, wrote the following passage in his *Sartor Resartus* (Am. ed. pp. 55-6): "Well sang the Hebrew Psalmist: 'If I take the wings of the morning, and dwell in the uttermost parts of the Universe, God is there.' Thou, too, O cultivated reader, who too probably art no psalmist, but a prosaist, knowing God only by tradition, knowest thou any corner of the world where at least force is not? The drop which thou shakest from thy wet hand, rests not where it falls, but to-morrow thou findest it swept away; already, on the wings of the north wind, it is nearing the tropic of Cancer. How it came to evaporate and not lie motionless? Thinkest thou there is aught motionless, without force, and dead?

"As I rode through the Schwartzwald, I said to myself: That little fire which glows starlike across the dark-growing (nachtende) moor, where the sooty smith bends over his anvil, and thou hopest to replace thy lost horseshoe—is it a detached, separated speck, cut off from the whole universe, or indissolubly joined to the whole? Thou fool, that smithy-fire was primarily kindled at the sun; is fed by air that circulates from beyond Noah's deluge, from beyond the Dog star; it is a little ganglion, or nervous centre in the great vital system of immensity."

We have, finally, to consider the correlation theory in connection with equilibrium.

I. Motion results from destroyed equilibrium. The whole totality does not correspond to itself, its ideal and real contradict each other. The movement is the restoring of the equilibrium, or the bringing

into unity of the ideal and real. To illustrate: a spring (made of steel, rubber, or any elastic material) has a certain form in which it may exist without tension; this may be called the ideal shape, or simply the ideal. If the spring is forced to assume another shape, its real shape becomes different from the ideal; its equilibrium is destroyed, and force is manifested as a tendency to restore the equilibrium (or unity of the ideal and real). Generalize this: all forces have the same nature; (*a*) *expansive* forces arise from the ideal existing without—a gas, steam, for example, ideally takes up a more extended space than it has really; it expands to fill it. Or (*b*) contractive forces: the multiplicity ideally exists within; e. g. attraction of gravitation; matter trying to find the centre of the earth, its ideal. The will acts in this way: The ideal is changed first, and draws the real after it. I first destroy, in thought and will, the identity of ideal and real; the tension resulting is force. Thinking, since it deals with the universal (or the potential *and* the actual) is an original source of force, and, as will result in the sequel from a reverse analysis (see below, V. 3, *c*) the *only* source of force.

II. Persistence of force requires an unrestorable equilibrium; in moving to restore one equilibrium, it must destroy another—its equivalent.

III. But this contradicts the above developed conception of force as follows: (*a*) Since force results from destroyed equilibrium, it follows (*b*) that it requires as much force to destroy the equilibrium as is developed in the restoring of it (and this notion is the basis of the correlation theory). But (*c*) if the first equilibrium (already destroyed) can only be restored by the destroying of another equal to the same, it has already formed an equilibrium with the second, and the occasion of the motion is removed.

If two forces are equal and opposed, which will give way?

By this dialectic consideration of force, we learn the insufficiency of the theory of correlation as the ultimate truth. Instead of being "the sole truth, which transcends experience by underlying it" (p. 258), we are obliged to confess that this "persistence of force" rests on the category of causality; its thin disguise consists in the substitution of other words for the metaphysical expression, "Every effect must be equal to its cause." And this, when tortured in the crucible, confesses that the only efficient cause is "*causi sui*;" hence the effect is equal to its cause, because it is the cause.

And the correlation theory results in showing that force cannot be, unless self-originated.

That self-determination is the inevitable result, no matter what hypothesis be assumed, is also evident. Taking all counter-hypotheses and generalizing them, we have this analysis:

I. Any and every being is determined from without through another. (This theorem includes all anti-self-determination doctrines.)

II. It results from this that any and every being is dependent upon another and is a finite one; it cannot be isolated without destroying it. Hence it results that every being is an element of a whole that includes *it* as a subordinate moment.

III. Dependent being, as a subordinate element, cannot be said to support any thing attached to it, for its own support is not in itself but in another, namely, the whole that includes it. From this it results that no dependent being can depend upon another dependent being, but rather upon the including whole.

The including whole is therefore not a dependent; since it is for itself, and each element is determined through it, and for it, it may be called the *negative* unity (or the unity which negates the independence of the elements).

Remark.—A chain of dependent beings collapses into one dependent being. Dependence is not converted into independence by simple multiplication. All dependence is thus an element of an independent whole.

IV. What is the *character* of this independent whole, this *negative unity*? "Character" means determination, and we are prepared to say that its determination cannot be through another, for then it would

be a dependent, and we should be referred again to the whole, including it. Its determination by which the multiplicity of elements arises is hence its own self-determination. Thus all finitude and dependence presupposes as its condition, self-determination.

V. Self-determination more closely examined exhibits some remarkable results, (which will throw light on the discussion of "Essence and Phenomena" above):

(1.) It is "*causa sui*;" active and passive; existing dually as determining and determined; this self-diremption produces a distinction in itself which is again cancelled.

(2.) As determiner (or active, or cause), it is the pure universal—the *possibility of any* determinations. But as *determined* (passive or effect) it is the special, the particular, the one-sided reality that enters into change.

(3.) But it is "negative unity" of these two sides, and hence an individual. The pure universal whose negative relation to itself as determiner makes the particular, completes itself to individuality through this act.

(*a.*) Since its pure universality is the substrate of its determination, and at the same time a self-related activity (or negativity), it at once becomes its own object.

(*b.*) Its activity (limiting or determining) — a pure negativity — turned to itself as object, dissolves the particular in the universal, and thus continually realizes its subjectivity.

(*c.*) Hence these two sides of the negative unity are more properly subject and object, and since they are identical (*causa sui*) we may name the result "self-consciousness."

The absolute truth of all truths, then, is that self-consciousness is the form of the Total. God is a Person, or rather *the* Person. Through His self-consciousness (thought of Himself) he makes Himself an object to Himself (Nature), and in the same act cancels it again into His own image (finite spirit), and thus comprehends Himself in this self-revelation.

Two remarks must be made here: (1.) This is not "Pantheism;" for it results that God is a Person; and secondly Nature is a self-cancelling side in the process; thirdly, the so-called "finite spirit," or man, is immortal, since otherwise he would not be the last link of the chain; but such he is, because he can develop out of his sensuous life to pure thought, unconditioned by time and space, and hence he can surpass any *fixed* "higher intelligence," no matter how high created.

(2.) It is the result that all profound thinkers have arrived at.

Aristotle (Metaphysics XI. 6 & 7) carries this whole question of motion back to its presupposition in a mode of treatment, "*sub quadam specie æternitatis.*" He concludes thus: "The thinking, however, of that which is purely for itself, is a thinking of that which is most excellent in and for itself.

"The thinking thinks itself, however, through participation in that which is thought by it; it becomes this object in its own activity, in such a manner that the subject and object are identical. For the apprehending of thought and essence is what constitutes reason. The activity of thinking produces that which is perceived; so that the activity is rather that which Reason seems to have of a divine nature; speculation [pure thinking] is the most excellent employment; if, then, God is always engaged in this, as we are at times, He is admirable, and if in a higher degree, more admirable. But He *is* in this pure thinking, and life too belongs to Him; for the activity of thought is life. He is this activity. The activity, returning into itself, is the most excellent and eternal life. We say, therefore, that God is an eternal and the best living being. So that life and duration are uninterrupted and eternal; for this is God."

When one gets rid of those "images of sense" called by Spencer "conceivables," and arrives at the "unpicturable notions of intelligence," he will find it easy to reduce the vexed antinomies of force, matter, motion, time, space and causality; arriving at the fundamental principle — self-determination—he will be able to make a science of Biology. The organic realm will not yield to dualistic Reflection.

Goethe is the great pioneer of the school of physicists that will spring out of the present activity of Reflection when it shall have arrived at a perception of its method.

Resumé.—Mr. Spencer's results, so far as philosophy is concerned, may be briefly summed up under four general heads: 1. Psychology. 2. Ontology. 3. Theology. 4. Cosmology.

PSYCHOLOGY.

(1.) Conception is a mere picture in the mind; therefore what cannot be pictured cannot be conceived; therefore the Infinite, the Absolute, God, Essence, Matter, Motion, Force—anything, in short, that involves mediation—cannot be conceived; hence they are unknowable.

(2.) Consciousness is self-knowing; but that subject and object are one, is impossible. We can neither know ourselves nor any real being.

(3.) All reasoning or explaining is the subsuming of a somewhat under a more general category; hence the highest category is unsubsumed, and hence inexplicable.

(4.) Our intellectual faculties may be improved to a certain extent, and beyond this, no amount of training can avail anything. (Biology, vol. I, p. 188.)

(5.) The "substance of consciousness" is the basis of our ideas of persistence of Force, Matter, etc.

(6.) All knowing is relative; our knowledge of this fact, however, is not relative but absolute.

ONTOLOGY.

(1.) All that we know is phenomenal. The reality passes all understanding. In the phenomenon the essence is "manifested," but still it is not revealed thereby; it remains hidden behind it, inscrutable to our perception.

(2.) And yet, since all our knowledge is relative, we have an obscure knowledge of the hidden and inscrutable essence of the correlate of our knowledge of phenomena. We know that it exists.

(3.) Though what is inconceivable is for that reason unknowable, yet we know that persistence belongs to force, motion and matter; it is a positive result of our "mental structure," although we cannot conceive either destructibility or indestructibility.

(4.) Though self-consciousness is an impossibility, yet it sometimes occurs, since the "substance of consciousness" is the object of consciousness when it decides upon the persistence of the Universe, and of Force, Matter, etc.

THEOLOGY.

The Supreme Being is unknown and unknowable; unrevealed and unrevealable, either naturally or supernaturally; for to reveal, requires that some one shall comprehend what is revealed. The sole doctrine of Religion of great value is the doctrine that God transcends the human intellect. When Religion professes to reveal Him to man and declare His attributes, then it is irreligious. Though God is the unknown, yet personality, reason, consciousness, etc., are degrading when applied to Him. The "Thirty-nine Articles" should be condensed into one, thus: There is an Unknown which I know that I cannot know."

"Religions are envelopes of truth which reveal to the lower, and conceal to the higher." "They are modes of manifestation of the unknowable."

COSMOLOGY.

"Evolution is a change from an indefinite, incoherent homogeneity, to a definite, coherent heterogeneity; through continuous differentiations and integrations." This is the law of the Universe. All progresses to an equilibration—to a moving equilibrium.