SOME PROBLEMS OF PHILOSOPHY

ARCHIBALD ALEXANDER
PROFESSOR OF PHILOSOPHY IN
COLUMBIA COLLEGE

NEW YORK
CHARLES SCRIBNER'S SONS
1886

The Riverside Press, Cambridge:
Electrotyped and Printed by H. O. Houghton & Co.

CONTENTS.

SOME PROBLEMS OF PHILOSOPHY.

I.

The Difficulties of Philosophy.

To enumerate all of the difficulties of Philosophy which have thus far not been wholly removed would be to give a synopsis of a philosophical system. It is possible, however, to classify the problems and the difficulties which lie in the way of those who study Philosophy, and the recognition of obstacles is usually the first step toward their removal.

The most apparent difficulties of philosophical investigation are what may be called popular difficulties. They are seldom real. They are usually fictitious, cre-

ated by ignorant or superficial persons. They are intended to excite prejudice against philosophical science by emphasizing its inutility, its absurdity, sometimes its mischievous character. Those who raise these difficulties ordinarily talk about "Metaphysics" as if it were all of Philosophy. Some of them imagine that each man has his own system, which is as good as the system of any other man. They will expound their views about the idleness of "metaphysical study" as lightly as they will tell an after-dinner story. It is not uncommon to hear them scoff at the study of Logic, and in this is often to be found an explanation of their position. It is not worth while for me to criticise such views. A man who has not learned the alphabet is usually deficient in a knowledge of grammar. A surgeon who does not know anatomy is not likely to inspire confidence. The philosophical dilettante who plunges into the solution of problems of great importance without scientific preparation may

be left to the task of "drawing out leviathan with a hook," and one need not be disturbed if his unsuccessful efforts lead him to the conclusion that "metaphysics" is obscure, useless, and irreligious.

The inductive branches of Philosophy, such as Psychology, for example, present a great many difficulties which are common to all branches of science — difficulties of observation or experiment, of the interpretation of facts, of the confirming of hypotheses, of the establishment of laws. It is not necessary that these common but not insuperable difficulties should be extensively noticed. It may be pointed out, however, that the difficulties of mental science are increased by the necessity of employing a subjective, as well as an objective method. Self-consciousness cannot be aided in its observation by any instruments, and it is extremely liable to make mistakes, because its testimony cannot be *directly* corroborated. Beyond this peculiarity, there is nothing which distinguishes

the general difficulties of inductive philosophy from those of the natural sciences.

But all the inductive sciences lead ultimately to Metaphysics. I do not mean "Metaphysics" in a popular sense, but in the Aristotelian sense, as the Science of Being, and we have a class of difficulties presented which cannot be satisfactorily removed by induction. We are brought at once to the region of speculation. Such problems are essentially metaphysical, and the question as to the possibility of Metaphysics is suggested. The mental sciences, whether they be inductive or not, as soon as they border upon Metaphysics present difficulties, often of the most perplexing kind, and in the mysterious country lying between Theology and Philosophy many a hopeful, speculative mind has been lost in doubt or extravagant theory. There are difficulties which may be regarded as fundamental, and in accordance with what has been said we may classify them as: —

1. Purely metaphysical.

2. Arising from the relations of the mental sciences to one another.

3. Arising from the relations of Theology to Philosophy.

As examples of the first set of difficulties may be named such problems as that of Substance, of Space and Time, of Cause and Effect, of the ultimate nature of matter. These are usually suggested by investigation in the natural sciences. The solution of these problems, the removal of such difficulties, is not essential to the progress of the inductive science, in relation to which the question may be raised. Chemistry can proceed independently of any metaphysical answer to the question what is substance. The investigator of Physics does not suspend his experiments until the metaphysician has explained the nature of causation. Even the biologist is undisturbed in his investigations of phenomena, although always confronted by the unanswered question "What is Life." While every inductive science presents

problems of this kind, none furnishes a means of solution. Induction is accomplished by means of experience, and experience does not extend beyond the wide field of phenomena. But while this is so, it cannot be denied that these ultimate questions are presented. If an answer is possible, it must be metaphysical, and the problem of the possibility of Metaphysics is raised. Men are not content with the mere facts of experience. The History of Philosophy shows a continuous series of thinkers endeavoring to explain the nature of Being as distinguished from the manifold and changing world of appearances, and too often the result has been disastrous failure. This history of failures has led some to the conclusion that failure is the inevitable consequence of metaphysical inquiry. It may be well to notice this view, together with the views of some representative philosophers concerning metaphysical problems in general. To use a familiar method of classification, metaphys-

ics may be considered in three different ways :—

1. Skeptically.
2. Dogmatically.
3. Critically.

It was at one time supposed that the method of experience might accomplish a solution of metaphysical problems. This supposition was shown by David Hume to be without foundation. If experience be the true method, then Metaphysics as a science is impossible. The empirical method is that of the skeptic.

The skeptic denies that metaphysical problems can be solved. What was formerly called Skepticism or Nescience is now known as Agnosticism. The position is briefly this. Science is limited to phenomena or appearances. When it attempts to go beyond the phenomena, it is dealing with what is unknown ; it ceases to be science. If we ask, then, what is the nature of matter or mind, no answer can be given. If we ask what is the nature of causation,

we get no answer except that science gives no account of a *connection* between a cause and its effect. This view was well represented by Auguste Comte, who felt the force of Hume's doctrine. The age of Metaphysics, he held, is past. Science must concern itself with the data of the senses and with these alone. It is not denied by the skeptic that the difficulties exist; it is maintained, however, that they are insuperable.

Dogmatism is a very comprehensive term, and most of the great systems of ancient and mediæval times were dogmatic. It answers without much hesitation the questions of Metaphysics. It defines Being, Substance, Causation, Space and Time, but its definitions are not very valuable. They put into other terms the ideas to be explained, but do not go much further.

The dogmatist affirms with some reason that as we have these clear, distinct, and comparatively adequate ideas we must regard them as real, or he asserts that while

our senses do not give us metaphysical truth, we reach by intuition that which is inaccessible to sense. But to the attacks of the skeptic the dogmatist can offer no resistance except a general denial.

The critical philosopher admits the validity of the skeptic's conclusions, but denies the truth of his premises. Given a great body of knowledge, subtract from this knowledge all the ideas of experience. If there is no remainder the empirical position is valid and the result is skepticism. But if there be a remainder, what then? How shall we account for this remainder, especially if it be found to consist not of merely accidental ideas, but of ideas without which sensible experience can have no meaning? It is this condition of things which suggests the value of analysis.

One of the most difficult things to determine is, how far shall analysis be carried in dealing with metaphysical matters? It is held by some that analysis must be confined within very narrow limits. Descartes,

however, in his "Rules of Method," insisted on the separation of ideas into the least complex parts. Suppose the advisability of analyzing such a term as knowledge be questioned. I may say I *know* that tree. One school of modern philosophy holds that scientific thought must begin with such knowledge . . . with a "knowledge of things." It is asserted that any position which falls short of this can never be maintained without skepticism. But it is by no means certain that we begin with a "knowledge of things." We must analyze this knowledge, find in the case of the "tree" what elements of sensation compose the knowledge of the thing, and whether there be a non-sensational element. In such a case analysis is imperative; if appeal be made to an intuition of the thing, the intuition must be analyzed. Analysis should be arrested only in the presence of ultimate ideas. It is, for example, impossible to resolve our *sensation* of a single sound into any simpler psycho-

logical elements. Knowledge as a purely subjective affection is entirely simple. We may show by what processes it is brought about with reference to the nervous system and its environment, but analysis can go no farther. I need not say that in the "Critique of Pure Reason" the analytic method is illustrated very fully. This method is essential if we would establish a sound system of Metaphysics. Nor need I dwell upon the importance of synthesis as a supplement to the analytic method. Knowledge comes to the mind synthetically, and after analyzing it, it is necessary that the process should be explained by means of which it assumes a synthetic form. It will be shown in another section how analysis may be pursued even after *metaphysical* principles have been reached by analytical processes. What I would here insist upon is the supreme necessity of thorough analysis before a metaphysical principle can be established.

In proportion as the difficulties of pure

Metaphysics are recognized, are not cast aside by the skeptic nor overlooked by the dogmatist, the other branches of Philosophy will be progressive. Psychology should be especially benefited, for more than half the differences between different schools of Psychology are differences with respect to metaphysical doctrines which should not impede the tranquil progress of the inductive science of mind.

But in the second place, difficulties of some importance are caused by the relation of the several mental sciences to one another. The conclusions of the psychologist often conflict with those of the moralist, and certain metaphysical principles are at variance with the principles of Ethics. Processes of logic are confused by minute psychological analysis, and one is sometimes tempted to regard the mental sciences as independent rather than as branches of one philosophical tree. Such difficulties are exemplified in the great problems of Ethics, owing to the conflict between man's

natural inclination and the moral ideal, or between the determination of the will and the essential feeling of responsibility. One of the most perplexing questions is that as to which of the mental sciences should be the foundation of the other. Must Psychology be made to conform to the principles of an already established system of Metaphysics? Must we wait until we have a perfect Psychology before we can lay down principles of Ethics? Probably nothing has so impeded the advance of philosophical inquiry as the exaggerated importance attached to the relationship between the mental sciences. The inductive inquiry into the facts of the mind has been hindered by being pursued in a narrow metaphysical channel. Weak systems of Metaphysics have been built upon an exclusively psychological foundation. Psychological doctrines have been warped and twisted for the sake of supporting some favorite ethical principle, and often moral systems have been propounded which might

have been made for inanimate objects, so little have they been in agreement with the minds of living beings. Some of the more important of these difficulties I shall consider in another place. In general it may be said that induction is a failure if it is carried on so as to support a special theory. The theory may be the only way of interpreting facts already observed, but it exists for the facts, and not the facts for the theory. As Bacon said: "Nature to be commanded must be obeyed." The apparent conflict between some principles of Ethics and of Psychology has sometimes led philosophers to draw a distinction between theoretical and practical science. This has the advantage of giving the moralist a chance to advance independently by treating Ethics as the science of Conduct, and by setting aside as irrelevant what is called the Metaphysics of Ethics. An objection to this radical distinction is that the problem is suggested, what is the relation between the theoretical and the practical?

Considering the important part played by the emotions and the will in the sphere of moral action, it seems proper that a close connection should be shown to exist between the laws of thinking and feeling and the laws of action. It is undoubtedly true that much light has been shed on Psychology by investigations in Ethics, but the relation between the two sciences is one of the most difficult points to settle. The metaphysical discussions as to the nature of the concept or notion, and the psychological discussions as to the nature of the understanding, have had a most important effect on Logic and have greatly increased its difficulties. One may take as an example the questions raised by John Stuart Mill's doctrine of reasoning. In this case the general character and value of the syllogism were brought into question. The theory that all the more complex mental actions were the result of the Association of Ideas would entirely revolutionize the procedure of Deductive Logic;

so that Logic, which was once regarded as an almost finished and formal science, has been brought, by controversies in Metaphysics and Psychology, into a more conspicuous position. A work like the "Principles of Logic," by Mr. Bradley, for example, shows how serious are the difficulties which meet one on the very threshold of the subject — difficulties as to the concept, the judgment, and the syllogism. But there are still further the difficulties arising from the relation of Ethics to what is secondarily a branch of Philosophy. I mean the science of Casuistry. Even after one has established a theoretical code for the guidance of moral agents, it is found that the line which divides right action from wrong is not always invariable.

It is hardly necessary to add that the relations of the human mind to the material world, the intimate connection between nervous and cerebral action and sensation and thought, the imminent importance of the theory of development, have put Psy-

chology in an uncertain position; and all the difficulties connected with a state of transition in this important science confront the inquirer of the present day.

Then there are the difficulties which arise from the relations existing between Theology and Philosophy. I am not referring to the so-called conflict between Science and Religion, but to certain scientific or speculative difficulties with which Philosophy is concerned and which are intimately connected with Theology. Religion is in the habit of asking almost too much help from Philosophy, and one may say in passing that the supernatural character of Religion separates it on most important questions from Philosophy, but there are many questions raised by Theology which can only be answered by Philosophy.

The most lively disputes that the intellectual world has seen have been on that common ground occupied by theologians and philosophers. The whole character of Ethics has been changed by the pressure of

theological schools. No sooner is a belief expressed by the theologian as to the problems concerning God, the world, and man, than philosophers, both friendly and hostile, take the field and the fight begins. How far the methods of Science can be applied to the doctrines of Theology is still an open question.

I have thus far gone rapidly over some of the points at which difficulties arise, preparatory to passing to a specific discussion of them. To many the idea of dwelling on the difficulties of Philosophy is repugnant. It is natural for men to say, why should you emphasize the obstacles in our way? it is better to point out paths upon which one may advance with ease and freedom. The answer is very simple. The way to reach a safe position is to examine as many difficlties as may present themselves, not as an end in itself, but as a step preparatory to removing them. Many of them cannot be removed, and if such be the case, it is well to know it and frankly to

confess it. Next to success in overcoming a difficulty is honesty in recognizing one, and those ages in which obstacles have been fairly met have been the most fertile in philosophical thought. It is well to avoid the extreme of throwing aside all fundamental problems of Philosophy and saying that they are insoluble. But it is equally necessary to avoid the other extreme of resting satisfied with half-supported statements, and of relying on traditional opinions which modern investigation has shown to be untenable. We are no longer living in a time when Philosophy is regarded as a species of mental calisthenics, when Logic is thought to be a kind of higher grammar, and Psychology a useful discipline to the mind of "the youth," teaching him introspection. Philosophy, by virtue of recent discoveries as well as by the strong impetus of development inherent in it, is now in correlation with the whole field of science. It seems to me of some importance that the respectable idea

should be banished, that a year's study of a text-book of "Mental Philosophy" is all that is necessary to put a man *en rapport* with the state of thought in the present. There is too much amateur philosophizing in our society, and not enough scientific philosophy. The presentation of difficulties, indeed a negative attitude toward many unsettled questions, serves a double purpose; it calls the attention of the ignorant to the fact that Philosophy is not to be mastered in a year, and it stimulates those who will pursue only the path of patient scientific labor.

The advantages of thus emphasizing difficulties, even if they cannot be removed, are shown conspicuously in the History of Philosophy. Almost all the great systems of the past have arisen under the stimulus of questionings, doubt, and negation. The philosophy of the Socratic age owed much to the restless disputation of the Sophists. The Patristic philosophy was primarily called into existence by the

negations of the opponents of Christianity. Both Bacon and Descartes built their constructive work on the ruins left by their doubts and denials. The principal systems of our own day owe their character in great measure to the destructive skepticism of Hume. In the development of human thought, negative philosophy has its place. Viewed alone, skepticism is not an admirable attitude. It suggests despair to many of its devotees; its ethics have no ray of light. It either will not look for God, or if it looks, it looks in vain. It fails to explain human knowledge, human life, or human destiny. But in spite of the graves which it has left along the path of philosophical progress, it is but right to say that skepticism has its important use in awakening men from intellectual torpor and stimulating them to activity in science.

It is with the object in view of pointing out a few of the difficult points of philosophical inquiry that I have put together

the fragments of discussion which follow, at the risk of illustrating the old saying, "Plus negare potest asinus quam probare philosophus."

II.

The Problem of the Ultimate Nature of Matter.

If we avoid speculation and confine ourselves to scientific inquiry, the philosophical meaning of our problem is very simple. The question what is matter, may mean in general one of two things, — either a description of material phenomena or an analysis of the continuous substance which may underlie those phenomena. In the former case we may proceed indefinitely in telling in succession not merely of the color, resistance, sound, taste, and smell of material objects, but also of the various forms, the physical and chemical properties, which science reveals to us. In the latter case we must pass to some extent beyond these appearances and seek to discover what is the ultimate nature of that, of which those phenomena are the manifestation to sense.

A treatment of this subject in a few words is to some extent inadequate, but answers to the following questions may lead to a proper view of the problem before us : —

1. Is the solution to be found in terms of Metaphysics ?

2. Is the solution to be found by physical experiment ?

3. Is the solution to be found by any logical process ?

4. Is the solution to be found in establishing an hypothesis of the ultimate nature of matter consistent with material phenomena ?

In case that each of the first three solutions should be found to be impossible, it is reasonable (without the formal fallacy of "composition") to conclude that, taken together, they do not bring us any nearer to the end which we have in view. It is obvious that the fourth possible solution suggested is to some extent a combination of that which is metaphysical and that which is physical. If, therefore, we conclude that

no purely logical process will lead us to a satisfactory conclusion, I hope to show that the fourth of the above solutions suggested, not being essentially related to the third, is representative of whatever may be of value in a combination of the first and second.

1. Is the solution of the problem to be found in terms of Metaphysics? I am disposed to think that this question may be asked with greater hopes of an affirmative answer than the other three. In seeking a metaphysical, by which I mean an ontological, explanation of matter, we leave behind us the material phenomena, and ask whether there is anything either known or unknown which we may call matter, which is not phenomenal? If it be said that there is an intuition of matter, it must be asked what knowledge is given in such an intuition. The answer must be, the knowledge in the intuition is either phenomenal or not phenomenal, or it is both. If it be said that it is phenomenal, the solution is

not metaphysical. If it be said that it is not phenomenal, then the matter of the intuition is not phenomenal, and so must be known or unknown ; if it is unknown, there is no solution of our problem ; if it is known, what is that knowledge? We have concluded that it cannot be a knowledge of phenomena, so that it must be a knowledge of something behind or beneath the phenomena. The Agnostic asserts that this something is an unknowable force, but as has been often pointed out, if the substratum of phenomena be an unknown force, then in so far as it is held to be a force it ceases to be unknown. It is known to be a force, and in so far as phenomena are known, the force is known. If, therefore, this unknowable force be held to be an universal principle, all our knowledge must be a knowledge of that which is unknowable. If we deny that the phenomena are related to the unknowable force, we deny that the unknowable force is an universal principle. If we affirm that the phenomena are mani-

festations of an universal principle, then we affirm that we do not know whether this unknowable force is manifested in the phenomena, known or not, and we must affirm that Agnosticism is absurd, or that it has no reason for postulating the existence of anything except the phenomena themselves.

It follows from what has just been said that if the agnostic position be given up and the proposition be advanced that there is a knowledge of both phenomena and that which is manifested by its phenomena, we have the alternative presented of describing, or predicating something about that which is not phenomenal, or of holding that this ultimate thing is known by the phenomena alone. The result is that if we even begin to make any assertion, such as the ultimate exists, or has force, or is permanent, we must, in so far as material substance is concerned, express existence, or force, or permanency, in terms of that which is phenomenal. If the second

alternative be presented, that the substance is known only by the phenomena, the hypothesis of a material substance disappears, and we know only that which is phenomenal.

It is necessary also to notice the fundamental position of Kant, that we know only phenomena but do not know that of which they are phenomena. It may in this case be said that matter is known only in terms of mind. If we accept the view that Kant maintained, that there was a material world behind these modifications, it must be answered that he asserted that this material *noumenon* is unknown. If we accept the view that matter is known only as a modification of mind, then there is no way of solving the problem which we are considering. It need hardly be added that any doctrine which, like that of Locke and Berkeley, expresses a denial of any material substance except the collocation or combination of qualities (*i. e.* phenomena), does not raise the question as to the ultimate

nature of anything beyond the phenomena themselves.

It must be admitted, then, that a metaphysical solution of our problem is not to be obtained. Matter is simply what is known by the senses, and there can be no such thing as material substance in ontological terms.

Assuming that the position just reached is untenable, it may be well for me to refrain from drawing a general conclusion until some other questions be answered.

2. Is the solution to be found by means of physical experiment? Here we have all the data from which our conclusion is to be drawn, lying in the world of phenomena. We distinguish the phenomena, which chemistry erroneously calls substances, as solid, liquid, or gaseous. The solid and liquid substances are visible and tangible; they may or may not affect the senses of smell and taste. The gaseous substance as a vapor may or may not be visible or odorous; it is seldom tangible. It is in

some cases inodorous, intangible, and invisible. In such cases we know it by the causes which have produced it, or by both causes and effects. The fact that a gas is not known to the senses directly does not make it a metaphysical substance, no matter what the term metaphysical substance may mean (unless indeed the conclusions of Locke and Berkeley be regarded as valid). It is not so much a question at this point whether an experiment or a series of experiments will in the future solve our problem as to the ultimate nature of matter, as it is a question whether experiment has reached such a conclusion. There is no man of reputation in the scientific world who has ventured to conclude what matter is. Suppose that it be said, "Matter in its ultimate form is what is visible and tangible." Then does oxygen cease to be matter? Suppose that heat be generated from the treatment of visible and tangible objects, is heat the essence of matter? In the transformation of one

mode of material existence into another mode, can it be asserted that one mode is more ultimate than another? Let me advance a step farther. Suppose that we maintain that our experimental knowledge of matter is ultimately a knowledge of motion, then it must be asked what is meant by motion. Motion must be known or unknown to our senses. To each sense it is a different appearance. The flash of light seems to be the essence of matter, for it is a mode of motion; but the sounds of the ear must then be of the essence of matter, and the imperishable truth begins to rise dimly from our discussion, that the universe of which we are sensible is a succession or a combination of a great variety, which does not lead to the solution of our problem. We may produce new phenomena by physical or chemical experiments, but with each new transformation of one chemical or physical phenomenon or a combination of phenomena, the appearance of something different beyond that

with which we set out throws no light on the problem, and in so far as analysis aids us, it is quite apparent that, even were the recognized substances which chemistry describes, or the recognized forces of electricity, heat, light, or sound with which the science of physics deals, to be made simpler than they are now supposed to be, the further we should be led away from the problem which we are considering.

It may be urged that one fact is demonstrated by each new experiment, and that is the fact that whatever is material occupies space, and that extension (the occupation of space) is the essence of all that is material. In other words, we ask, would there be any matter without the existence, space? I admit at once that such a case is altogether inconceivable. It is not to solve our problem to advance such a proposition. It is proper to inquire whether space would be if there were no mind, just as it is proper to inquire whether there would be no matter if there were no space;

and this view of our subject is not far removed from the negative conclusions which I am soon about to draw. It might be suggested that if space be a form of intuition, the dependence of matter on space could no longer be asserted.

3. Is a solution possible by purely logical process? Matter in logic is a general name, or concept, or idea applicable equally to every material thing. If the solution of our problem is to be found in an analysis of the being of matter in a logical sense, we have no need to consider the term matter and the ultimate nature of what that term implies, in the nominalistic sense. If matter be a mere name predicable of any one or all of material phenomena, its ultimate, *i. e.* non-phenomenal, nature must be merely verbal — a phenomenon of language. If the conceptualist doctrine be accepted, matter is only a general thought which, when analyzed, brings one simply to individual phenomena. These phenomena do not furnish a solution, and if we

analyze the concept we simply analyze a product of thought and our problem disappears. There may be said to be two kinds of logical realism : the one expressed by the phrase *universalia ante rem,* the other by the phrase *universalia in re.* The former is Platonic : the latter is Aristotelian. The logical meaning of matter in the Platonic realism is ideal, but what is real in this sense is not known by the senses. It is certain that Plato denied that sensible objects were known by the Reason, and if the idea of matter is the universal idea of all material things, then matter as an idea, *i. e.* as the universal, is not material because it is not known by anything but the reason. In fact, the "Matter" of the Platonic philosophy, in so far as we have to consider our main problem, lies beyond our reach, for it is ultimate, and, logically, is therefore beyond analysis. The universal idea of the Aristotelian logic (I am, of course, not speaking of Aristotle's doctrine as to the physical structure of mat-

ter) cannot be made an object of our present investigation. The idea of matter is that which makes material things what they are. Without it there would be no individual material things ; without the individual things, universal matter would not be. In the former case we have simply a phenomenal problem before us, in the other case there is nothing to investigate.

4. Is the solution of our problem to be found in the establishment of a hypothesis to agree with material phenomena? The most important hypotheses are :

1. The Atomic.

2. The Dynamic.

1. The Atomic. If matter consists ultimately of atoms, these atoms must be either extended or not. If they are extended, they must be infinitely divisible or not. If they are infinitely divisible, they are not atoms. If they are not infinitely divisible, then we must ask whether they are knowable as atoms or not. If they are knowable as atoms, each part of the knowl-

edge of them in order to refer to matter must be sensible knowledge. Atoms are thus either non-existent if they be incapable of infinite division (which is inconceivable), or they are phenomena, and our problem is still unsolved. If they are not extended they must be either knowable or unknowable. But if they are not extended their being is inconceivable, and hence it cannot be said that they are known or unknown.

2. The Dynamic. Each material phenomenon may be regarded as a manifestation of force. If there be a manifestation of force in the material phenomena known, such a manifestation must be directly or indirectly known. It is plain that force cannot be known by one sense nor by a plurality of senses. Sensible phenomena, as Hume showed, do not give us a knowledge of force, because they do not give us a knowledge of causality; when it is said that the only way in which matter can be considered in physics is as a collection or

succession of centres of force, it is not explained what force is. And in this case it must be told, not what the ultimate nature of matter is, but what the ultimate nature of force is. If we explain the ultimate nature of force in terms of matter, we are following a vicious circle and return to our original problem. If we explain the ultimate nature of force in terms of that which is non-material, we deny the ultimate existence of matter and our problem disappears. It might be added that the cause of this difficulty is, that the idea of force is less ultimate than the idea of matter, unless matter be regarded as a modification of mind. If the question then be raised, what is the cause, or the ultimate nature of this modification, our problem disappears.

Direct knowledge of force is impossible in so far as the senses are concerned. Without any suggestion as to the metaphysical meaning of the term, it may be concluded that if the essence of matter be

force, there is no direct knowledge of such an essence. If the knowledge of matter as force be an indirect knowledge gained by inference from facts already known, it is necessary that the following truths should be set forth. The perception of color, of heat, or of sound is not a perception of force. If we regard such phenomena as manifestations of force, we are obliged to refer to the law of causation and to say that these phenomena are effects of some cause or causes. It is impossible, so far as we know, to separate the fact of force and the fact of causality. One is not found without the other. Wherever there is an effect there is a manifestation of force. Wherever there is a cause there is an exercise of force.

When therefore we attempt to explain matter by referring to force, we are obliged to explain force by referring to causality; and in explaining causality we cannot refer to material phenomena, but are obliged to fall back on the *a priori* law of causality which is not given by experience.

III.

The Problem of the Origin of Organic Being.

ORGANIC existence is existence which has life. If organic existence is, its origin must be either inorganic or organic. If it is organic, there is no problem as to the origin of organic things except the problem of the origin of all existence. If it is inorganic, there are only two ways of discovering whether or not that which is organic has come from that which is inorganic. One of these ways is that of experience. If experience shows that an organism has come from that which is inorganic, then it must be shown by experience what the difference is between the organic and the inorganic. If it be said that what is organic has life, it must be asked in what respect does that which has life differ from that which has not? Set-

ting aside the question whether there is a difference in degree of development or a difference in kind between the plant and the animal, one may examine the proposition that the plant is distinct from that which is inorganic. Empirically considered, the plant or the lowest organism must differ from that which is organic either in structure or in function, or in both. The distinction cannot depend on structure alone, if we adhere to the method of experience. The analysis of an organism betrays the fact that the empirical method shows the elements of that which we call an organism to be inorganic. The arrangement of these inorganic elements is no essential part of the organic being. If, on the other hand, the function of that which we call organic differentiates organic from inorganic existence, it is not sufficient to prove that the function of the inorganic is not the same with the function of the organic, otherwise the functions of the sensitive plant being different from those

of the dandelion would make it necessary to classify those two plants as being quite as different in their nature as the oyster is from the most productive vegetable. No plant has an independent life; it assimilates that which is nutritive. If that which is nutritive be absent, the plant will not grow, but the absence of growth is not an exception to the conservation of energy. A sand-bar in a river has a growth if it receives deposits. If it disappear the deposits vanish, and something else is increased by them. If a diamond be put under the blow-pipe it ceases to be a diamond. If a plant be taken out of the warm sunshine and placed in a cellar it will die or undergo a radical change of appearance. If it be said that the difference between the organic and the inorganic is explained from the fact that the former is reproductive of its kind and the latter is not, an explicit meaning must be given to the term reproductive. We call the oak reproductive because the acorns which drop from its

branches are seeds of other oaks. We do not fail to notice that the existence of the acorn is dependent entirely upon the circumstances of the oak. It assimilates what is nutritive, and the result is the acorn. We say that the fact that the oak is alive explains the existence of the acorn. If we mix nitric acid and glycerine together, and a gas is liberated which will put a town into ruins, we do not make the reproductive power effected by a union of the elements a sign of life. The cause of that is, that we imagine the oak to generate acorns *de nihilo* because the processes by which it grows are less evident than the processes by which the combination of certain useful substances generate a new natural phenomenon the effects of which can never die. If we appeal to experience in support of the proposition that the combinations of inorganic substances have never been known to produce that which is organic, we inevitably present an *argumentum ad ignorantiam*, or else we fail to re-

member that there are certain inorganic things which according to experience have never been formed from inorganic combinations. If the position just noticed be taken, we must refuse to consider the diamond or the emerald, which have never been manufactured, quite as different from what is inorganic as the clover in the field or the insect which is bred upon the water. But the impossibility of spontaneous generation and of manufacturing organisms thus far confront every faithful biologist.

If we turn away from experience to find a clue to the separation of the organic and inorganic, we find no *a priori* (in the Kantian sense) method of reaching a knowledge of the origin of life.

IV.

Some Difficulties connected with any Doctrine of the Ego.

The Ego, or Self, must be either knowable or unknowable. In the former case it is of course an object of knowledge ; in the latter case it cannot be regarded as lying within the domain of science. If the Ego, or Self, is knowable, it must be an object of consciousness, *i. e.* self-consciousness, or an object of knowledge by the senses. If the ego, or self, is known by self-consciousness, it must be either identical with the phenomena presented to self-consciousness or not. If it is identical with the phenomena of self-consciousness, it must either vary as the phenomena vary or not. If it varies with such phenomena, there is a plurality of egos or selves before the same self-consciousness, which is absurd.

If it does not vary as the phenomena vary, there must be a common object, always present to the self-conscious subject. If this common object is known by the phenomena presented to self-consciousness, there is a plurality of egos or selves, which is again absurd. If the ego, or self, is not known by phenomena, it does not appear, and it must be concluded that what does not appear is known, which is inconceivable. If on the other hand the ego is known by the senses, there is the grotesque conclusion that the ego, being a sensible object, must have the qualities which are inconsistent with its essential being as the ego, *i. e.* it must be concluded that knowledge of the ego is a knowledge of that which is not the ego, which is absurd. It may be added that the ego is either a part of conscious thought or it is not. If it is such a part, then the absence of the thought is an absence of the ego, which is absurd. If it is not such a part, then the ego is unknown. If the ego is

unknown, there are no predicates which can be applied to it. The difficulty which meets us is then as follows: If there is no ego there is no conceivable knowledge, hence the knowledge in which the ego is not an object is impossible without an ego, as subject.

V.

Unconscious Mental States.

THERE seems at first to be a contradiction between the terms unconscious and mental, for our immediate knowledge of mental facts is given by consciousness, and it is not possible to speak of a consciousness of unconscious states. Either the mind and the facts of consciousness are interchangeable terms, or there are mental states of which we are not conscious.

It has been shown that what we call self is the subject of all our mental states, but is not a phenomenon of consciousness. Self is the condition of consciousness, and the necessary postulate on which the possibility of consciousness depends. It does not appear with the phenomena; it does not change with the phenomena. It lies beyond our immediate consciousness, and

so far it lies in the realm of the unconscious. For it has been shown to be untenable, that it emerges into consciousness with every new phenomenon. From this metaphysical view of the subject we may turn to the more common view — the psychological.

There is a great number of ordinary mental phenomena which lead directly to the conclusion that there are unconscious states and actions of the mind. These have been noticed by psychologists, after having been discovered by inference. In sensations there is shown to be an element of which we are not conscious but which affects perception.

In memory unconscious states are essential. It is memory which makes experience possible, and it is experience which to a great extent gives significance to our new acts of cognition. But all of our experience is not at one time before consciousness. In order to be of any advantage to us, the past experience must be

recalled to consciousness. If our thoughts are limited to the immediate phenomena of consciousness, we must always live in the present. But if we can recall past experiences, these must be already either in the mind or out of the mind. If they are not in the mind, we can no more recall them than we can recall what we have never known. It is inconceivable that the mind should create them *ex nihilo.* Even the imagination can only combine or construct but cannot create. If the past experiences are in the mind, however, and yet are not before consciousness, it must be concluded that the mind is an unconscious possessor of that which the memory preserves. It becomes conscious of its possessions only when the past is recalled.

The rapidity with which inferences may be made without a conscious reference to that upon which they depend, *e. g.* the suppressed premise in an enthymeme, may be explained by unconscious activity. Intermediate steps in an argument which

must have been taken if the conclusion is valid are not apparent. Unconscious states must there have effected conscious states. Further illustrations of this point might be found in the phenomena of automatic and reflex action where there are undoubted evidences of mental influence, but where no such influence is revealed to consciousness.

Assuming that the mental life of a man is not confined to those states of which he is conscious, interesting questions are at once raised both as to the relation of this unconscious element to the central nervous system and to the activity which we call consciousness.

If the functions of mind may be localized in the brain, and if mind and brain are connected, then it is probable that cerebral action produces mental effects of which we are unconscious, as well as those of which we are conscious. It has not yet been determined how far these unconscious states

are identical with the physical activity of the brain and nervous system.

If we regard mind and that of which we are conscious as interchangeable terms, then the mind is simply a shifting succession of phenomena without any stable, abiding existence.

It would appear, however, that consciousness is simply a light which passes along the whole field of mental states, while only a part of these states is illumined at one time. It is impossible to conceive of unconscious intelligence or unconscious memory or even of unconscious volition. But it is impossible to think that what we call mind is limited to the succeeding moments of conscious existence. It is difficult to account for the various phases of our conscious mental life if we refer only to *conscious* states in the past. It is easy to conclude that beyond the series of phenomena which emerge into consciousness there is a wide and deep source of knowledge lying beyond con-

sciousness. The direction of our thoughts is largely determined by these influences of which we have no immediate knowledge but which condition thought, feeling, and abiding character.

VI.

The Problem of Physiological Psychology.

The relation of the brain and nervous system to mental phenomena raises questions of great interest and importance. Until a comparatively recent date, psychologists were wont to regard with suspicion any attempt to explain mental facts by means of physiology, and some were ready to take the extreme position of Descartes, that the mind is wholly distinct from the material world. This position was necessary — so the extreme spiritists believed — because a dogmatic materialism had been the result of investigations in the physiology of the brain. But at present both of these extreme doctrines have well-nigh disappeared from science, and if what was once called materialism exists among philosophers, it is in a greatly modified

form. It is important to look at the present aspect of the science of psychology as affected by the results of inquiry into the brain and nervous system. It has been demonstrated that what is called mind is related to the material world by the nervous system, that the vehicle by means of which sensible knowledge is obtained is the nerves of the special senses which are shown anatomically to connect the organs of sense with determinate centres. It has been argued that the localization of sensory functions renders it at least probable that higher mental functions should be localized in the central nervous system. This view has been strengthened by anatomical observation, by physiological experiment, by the facts of pathology, and by other results in the world of natural science. While, however, many positive instances are to be cited supporting the view that mental functions may be localized, there are many negative instances throwing doubt upon the theory. Without entering ex-

tensively into this important subject I may say that the evidence seems at present to favor the opinion that certain cerebral phenomena correspond to certain mental phenomena. How far localization can be confirmed is, however, not the point to which I would call attention. The question which I would ask is this: Supposing that the complicated structure of the nervous system were perfectly understood, so that the course of nerve fibres could be traced from the periphery to their primary or secondary centres; suppose that every known mental activity could be localized in the brain, what would be the effect of such knowledge on psychology? It is sometimes said that psychology is only another name for cerebral physiology, and that to attain such knowledge as that to which I have just referred is to complete the science of the mind. However perfect our physiology may be, however, it does not call attention to subjective phenomena, and even if it be held that our sensations, feel-

ings, thoughts, volitions, are simply effects of material actions, the science of these effects is not covered by physiology. It follows, whatever be our view of the meaning of nervous phenomena, that mental science has two sides: one the subjective, consisting of those phenomena which we call non-material, which cannot be expressed in terms of matter. This is the historic conception of the field of psychology. It is presented with wonderful completeness in the works of Aristotle, and has made but few advances since his day. The other side of mental science is the objective side, which includes among other phenomena those of the nervous system. It is to show the agreement or correspondence between these two sides that is the present problem of psychology. We cannot show that the two sides are identical, nor can we show how they are connected. The connection of mind and brain is admitted by almost everybody to be an insoluble mystery. But the progress of psy-

chology undoubtedly leads one in the direction of the study of the nervous system. We may revise our classifications of mental phenomena, we may discuss at wearisome length the nature and scope of our mental "faculties;" we may fight again and again the battles of former centuries; but our efforts must necessarily be fruitless until we have learned something more of this great and complex structure, the actions of which seem so inseparably interwoven with those of our consciousness.

I can see many ways in which light may be shed on psychology by a more thorough understanding of the nervous system. But this particular field of thought has led many into speculations as idle and fanciful as those of the much-abused metaphysicians. It is wiser to keep for the present the twofold problem, the induction of the subjective facts of consciousness, the induction of corresponding cerebral and nervous phenomena, and in proportion as this correspondence is found to exist, and is un-

folded, we shall be in a position to explain more thoroughly the origin and development of our knowledge.

A peculiar interest belongs to this line of inquiry. One cannot overlook the fact that the once favorite "empirical" doctrine of the origin of knowledge has been abandoned by almost every contemporary thinker of any reputation. It has been admitted that the experience of the individual man cannot *per se* produce the mature knowledge of a mind fully developed. This may be due to the fact which is noticed by Mr. Herbert Spencer, — the fact that our scientific inquiry into the phenomena of consciousness cannot take in the data of infant years, when first impressions are formed. We have to investigate the tree and know nothing of the seed from which it springs. But in retreating from the old empirical position, philosophers have not always accepted the *a priori* or intuitional doctrines of their opponents, but have fallen back upon the hypothesis of development

to explain that which the experience of the individual cannot explain. It has not been shown that mind is the result of this process of development. If it should be shown that, for example, what we call *a priori* truth is simply the result of repeated experiences of individuals, transmitted according to the law of heredity from generation to generation, there would have to be a general revision of the theory of knowledge. This has not yet been shown to be true. Nor has the theory of development made it necessary that we should look for any origin of mind simpler than consciousness which has thus far not been analyzed. It is a mistake to draw too wide conclusions, considering how hypothetical our premises are in all that concerns the existence of mind in the earlier stages of evolution. But on the other hand it is a more serious mistake to overlook the importance of inquiry into the physical conditions of our mental life, or to allow a fear of "materialistic" results to warp our judgment.

It is impossible to conceive of matter except as a modification of mind, and dogmatic materialism has been left to doctrinaires and to certain amateurs in that "science" which bears the same relation to philosophy that astrology did to astronomy. How far influences of which we are not conscious, but which determine our mental experience, are dependent on cerebral conditions is a question which suggests a field for much fruitful inquiry. It is right that the psychologist should not leave this field entirely to the physiologist, but should regard it as supplementary to that which is revealed by reflection, and by reflection only.

There are two principal points, then, to be kept in view.

1. The thorough demonstration of the theory of localization.

2. The proving and developing of a correspondence between psychical and physiological states and actions.

The history of philosophy shows a de-

velopment toward this view of the subject. Side by side with the advance of purely psychological science there has been an advance in the investigation of the physiological conditions or accompaniments of mental phenomena. These have often resulted in materialism. The atomists laid down the principles of materialistic psychology before an attempt had been made to classify the phenomena of the mind. The speculative psychology of Plato and the inductive psychology of Aristotle show no development of physiological principles. From the closing days of ancient until the opening days of modern philosophy, the problems of physiological psychology were left to a series of speculative materialists, whose reasons for the principles which they defended were seldom scientific. How widely apart the two schools of thought were at the beginning of the modern period is well shown in the sharp opposition of Gassendi to the spiritualism of Descartes. The approach of Locke to the ma-

terialistic position when he suggested that matter might be made to possess a capacity for thought, led to the crass and unscientific French materialism of the eighteenth century. In England, Hartley and Priestley endeavored to identify mental and material modes, but the defective physiology of the former and the defective metaphysics of the latter led to indifferent results. Until our own time the problem of physiological psychology has not been considered in its true light. Even so radical a thinker as Mill was not impressed with the close connection between thought and cerebral action. But even those who differ widely from Mr. Herbert Spencer in metaphysics and who find much that is false in his scientific conclusions, will admit that he has appreciated the problem in its true form. It is doubtless dogmatic to assert that mental force is simply a transformation of physical forces, but whatever definition be given to mind or to matter, it is well to remember that there are two sets

of entirely different phenomena. A correspondence may be observed between them, and this is the point at which we set out. With such a view of the subject, one need not be disturbed by the popular materialistic literature like that of Büchner. In proportion as the importance of physiological psychology is apprehended, the deeper will be the significance of mental phenomena. A striking example of this is to be found in the writings of the late Hermann Lotze, who was fully alive to the great importance of this new development of psychology. There are two common mistakes: one the denunciation of physiological methods by men who have never seen a ganglion cell; the other, the denunciation of subjective methods by men who have never given an hour to introspection. It does not appear to be necessary, however, that a knowledge of one set of facts should be incompatible with knowledge of the other set. A combination of the two is the ideal psychology.

VII.

Reason in Contradiction to Reason.

If a certain conclusion be reached which appears to the reasoner to be rational, and if the contradiction of that conclusion seems to the reasoner to be irrational, even false, it does not follow that the contradictory proposition may not be accepted if it is supported by an authority which may be rationally shown to be superior in its dicta to the conclusion which is held to be rational. Reason may tell us that $2 > 1$. A contradictory statement may be presented in which it is affirmed that $2 < 1$. If these are extrinsic reason for belief in the latter position, the question is :—

1. Whether we can believe what is, as far as we can know, irrational.

2. Whether the reason which supports directly the proposition $2 > 1$ is entitled

to greater weight than the reason which ascribes a higher rational value to the authority which favors the proposition $2 < 1$.

The content of the proposition and its contradictory is not in question. It is possible that it is rational to accept what is irrational because it is more rational to trust the authority for what is thought to be irrational than to place our own reason above such an authority.

VIII.

The Relation of Belief to Knowledge.

It is doubtless true that belief, like knowledge, is a term which acquires no additional meaning if one attempts to define it. Nothing is gained, if belief be defined as a state or action of the mind. If an attempt be made to differentiate belief from knowledge, so that both terms may be distinct from one another, the problem which it is proposed to consider is presented. An inaccurate use of language is one cause of difficulty in solving the problem of the difference between belief and knowledge. In many cases it is customary to say "we believe" when we may properly say "we know;" and conversely, it may be said that "we know" that which we also "believe." For example, we know that the sun rose yesterday morning. We

must also believe that this happened. It is difficult, if not impossible, in this case, to point out any difference between our knowledge and belief, for it would be absurd to say, because we believe that the event occurred we do not know that it occurred, and *vice versa.* It may be said, also, we know that the sun which has risen this morning will set this evening, and it would not be proper to find fault with that use of the word "know." We believe, however, that the sun will set. In cases like those, the difference between belief and knowledge would appear to be one of degree rather than kind; indeed, the two terms in such cases might ordinarily be regarded as being interchangeable. *Credo ut intelligam. Intelligo ut credam:* these phrases are both expressions of truth. I know that the sun is shining, but if asked why I know it, I must reply, because I believe in the veracity of my vision. I believe that an eclipse will occur on a certain day, because I know that the prediction is

made by a great astronomer. Why do I only believe in the truth of that which gives me knowledge? Why do I know that the prediction is given by a great astronomer, while what is predicted is only an object of belief?

It is evidence that one is at this point in danger of dealing with a metaphysical question so subtle as to be inconsistent with the language of the race. It is necessary, however, that certain distinctions should be made.

Of any event or thing, one of four predications may be made. It is actual, it is probable, it is possible, it is necessary. If we know what is actual or what is necessary, then it is superfluous to assert that we believe what is actual or necessary. Belief in this case is a synonym with knowledge: for if we say A is B, the proposition is actual; but if we only think it probable or possible that it is actual, it is plain that its actuality is reduced to probability or possibility. One cannot say, however, that the

actual is coextensive with that which is known or knowable. Can it be said, then, that whatever is known is actual? True knowledge of anything implies that the thing is actual. A thing may be known to be possible. That thing is not to be called actual, but if the possibility of its being is known, the possibility is actual. Assuming, under the above restrictions, that whatever is known is actual, it may be asked whether that can be a knowledge of that which is probable. It has been concluded that a belief in that which is known to be actual is simply a knowledge of that which is actual. It has also been concluded that there may be a knowledge that a thing is possible (or probable, for possibility in this instance illustrates the question of probability), but so long as a thing is merely probable, or possible, can it be an object of knowledge? It would seem to be true that what might be called a knowledge of the probable is in reality a belief in the existence of the probable. If

I believe that the battle of Waterloo was fought, it may be said that the battle was actually or probably fought. If I say I know that it was actually fought, then, in examining the ground of my knowledge, I find that what I call an actual event is in reality merely a probable event, — not an event which is probable in the future, but an event which probably occurred in the past. It becomes again apparent that our knowledge that the event happened and our belief that the event happened are practically synonymous terms ; our knowledge may be founded on what we believe, or our belief may be founded on what we know. It may be well, therefore, at this point to look more closely at the nature of belief.

In order to believe that A is B, it is not necessary that the proposition should be actual. In this case, however, it may be said A is probably B, or A may be B. It is here that knowledge and belief follow different paths. If it be asserted A is B,

it must be known that A is B. If it be believed only that A is B, the categorical form of the proposition must be abandoned. It is then known that A may be B; but it is believed that A is B. The psychological difference between the cognition and the belief is represented by the logical difference between the assertory and problematic propositions. Psychologically the cognition and belief do not differ, unless it be said that they differ in degree; the reasons which lead one to the knowledge that A may be B are always the same with those which lead one to the belief that A is B. We cannot know that a thing may exist without believing that it does exist, unless there be a radical difference between knowledge and belief, — a difference in kind, not in degree. Clearly, while we are obliged to believe or know that which is presented to us as actual, we are not obliged to believe what is merely probable. Actuality presents no alternatives except possibilities. These possibili-

ties in any given case are not direct objects of belief or knowledge. A cannon is fired. I know that it is fired. I believe it is, also, but it is possible that the explosion might have failed; this possibility need not be considered, however, in direct relationship to the question which we are considering. Probability involves the presentation of alternatives. We are not shut up to any one of these alternatives. It is probable, for example, that a man who stakes his money at *roulette* habitually will leave a large part of his money in the gambling-house; but while this probability may be explained to him, he still believes that he will win in the end. It will be answered that he has no belief, that he does not believe that he will win or lose, but is simply experimenting: for the probability that he will lose is not a certainty, and therefore he may win, *i. e.*, he believes that an improbable event may occur. This is the conclusion which I intended to reach; for we are now led to

consider another question. Is probability the cause of belief? That which is improbable may occur. Improbable events are possible, and it cannot be denied that one can believe in the occurrence of a possible event, even if such an event be improbable. If it be asked, why does one believe that a probable event will occur, the answer is, that certain known facts lead to that belief. There is the application of the *Intelligo ut Credam.* But where the known facts show the occurrence of an event to be improbable, must belief follow the knowledge of the facts or not? A man may have a perfect knowledge of the facts leading him to a correct estimate of what is probable; but disregarding probability, knowing that probability is not certainty, he may believe that an improbable event may possibly happen. Is that event probable to him? His knowledge for the most part gives a negative answer. But his knowledge certainly tells him that improbable events have happened. Does this

latter knowledge differentiate his belief from the belief which he would have were he to be led by the facts which point to the former alternative conclusion? If we say no, then probability, being founded upon that which is known, must be necessarily a standard of belief, and belief in the possible makes the possible synonymous, to that extent, with the probable. If we say no, the question arises, Can one believe that, belief of which is not warranted by knowledge? It may be fairly concluded that a belief in the occurrence of that which is improbable, while it does not separate belief from knowledge, prevents one from asserting that only that which is probable can be an object of belief. One may believe that an improbable event is possible. But what is meant by possibility? By what tests shall possibility be determined? Necessity is not antithetical to possibility. While no necessary event is impossible, there are many possible events which are not necessary. Act-

uality and probability are not antithetical to possibility. The difficulty is lessened by answering the question, Why can there be a belief that an event will occur which is neither necessary nor actual, nor probable, but which is possible? Suppose that it be said, whatever is possible is conceivable, it may still be asked whether it is not possible to believe that the inconceivable may occur. One answers in the negative. But it should be considered that it is possible that our conceptions should be so limited or defective as to be useless in deciding the question just put. Why must one confine possibilities to the actual conditions of one's mind? It is not an extravagant assertion to say that even the inconceivable may be possible. The inconceivable is a dark negation, but that only the conceivable is possible is certainly a dogmatic assertion. But if a man declares that he believes in the inconceivable he is not necessarily guilty of an absurdity, for we may not be able to conceive of all that

which is possible. It must then be asked, Can belief go still further, and can one believe in the impossible? This question needs no answer.

IX.

The Problem of the Human Will.

If the will is free, it is not conditioned by any antecedent motive. If the presence or absence of any motive affects the action of the will, there is no freedom. If two opposing motives, A and B, are viewed by him who wills, it must be asked whether the absence of A would cause a willing of that which is suggested by B, or if the absence of B would cause a willing of that which is suggested by A; then, in any case, the will is not free. If it be said that the individual will may produce an effect *a* or an effect *b*, indifferently the questions arise: —

1. Have *a* and *b* any influence over the one who wills?

2. Would the absence of *a* result in the willing of the effect *b*, or *vice versa*?

If both propositions are answered, as they must be, in the affirmative, then the will is not free, but conditioned.

If it be said that the denial of freedom to man justifies the suspension of volition, *i. e.*, the refusal of man to will or not to will, the proposition is logically valid. It follows, however, from the nature of the will as determined by psychology, that it is impossible to suspend volition. To will not to will is an act of will. Logically we conclude that the will must be the effect of motives. Psychologically we conclude that volition cannot be suspended except by an act of will, therefore the suspension of volition is impossible. It follows that we must will. If my meals are set before me from day to day, I must will to eat them or starve to death. If I say motives determine my will to eat or not to eat, therefore I will suspend volition, I am willing not to will to eat, and I starve to death. Therefore I cannot escape the law of nature unless I can avoid exercising an

act of will. If the alternative of preventing a crime or not preventing it is set before me, I may say I will not exercise my will to prevent it or not prevent it. I thus will not to prevent it and am *particeps criminis*. Therefore I cannot escape from the moral law unless I can avoid exercising an act of will. One cannot escape volition, and the determination of the will does not relieve the man who wills from the physical or moral consequences of volition.

X.

The Immortality of the Soul.

If the soul is, it is either mortal or immortal. If it is immortal, then it is not dependent on the body, for the body after death is changed, and may be reduced to the form of substances which have no relation to the soul of man. If the soul is immortal, that immortality must be either known or unknown. If it is unknown, there is no proposition which is proven which asserts that the soul survives the body. If it is known, it must be known either directly or indirectly. If it is known directly, there must be a statement from the souls which survive the death of the body that they still survive. If no such statement is forthcoming, it must be concluded that there is no direct knowledge of the immortality of the soul. If it is known

indirectly, it must be by inference. Inference to be valid must be drawn from known facts. Physically there are no facts which warrant an inference that the decay of the body does not involve the extinction of the soul. There are no *post mortem* facts of science from which an inference may be drawn. The inference, however, must be made from known or from unknown premises. If the premises are known, they must be *post mortem* premises, but *post mortem* premises imply a *post mortem* life, which begs the question. If the premises are unknown, there is no conclusion. It must be added that all moral arguments fail unless Pessimism be refuted. It may be asserted, for example, that man's life would be incomplete if his soul were mortal. The Pessimist asserts that it is incomplete. No induction can establish the truth of Optimism, for the negative instances of evil stand in the way of drawing a conclusion ; no induction can establish the truth of Pessimism, for the

negative instances of good stand in the way. The problem of immortality lies therefore outside of the circle of theoretical philosophy.

XI.

The Feeling of Obligation and Moral Knowledge.

The term "feeling of obligation" is used in a broad sense in what follows to indicate the existence of a fact which is generally admitted. This fact is that all men in regulating their conduct feel under some obligation to do one thing rather than another. The inexactness of the expression is made necessary in order that the position from which we set out may be as broad as possible. If there be such a feeling of obligation, it may be either ultimate or not. Without pausing to consider whether what is pleasurable, or what is good, or what is to the advantage of society, or what is in conformity to the principle of *right* or the will of God, is that which we are under obligation to follow,

we may ask whether that which we ought to do (using *ought* either in a relative or in an absolute sense) is known. It is not sufficient to assert that we ought always to do what is right and ought never to do what is wrong. The reason of this insufficiency is, generally speaking, twofold.

1. If nothing but what is right should be the ideal of conduct, assuming that invariable right and invariable wrong are terms which are unambiguous in theoretical ethics, certain questions of casuistry present themselves which cannot be answered in accordance with our theory, without the commission of a wrong. Supposing, for example, that it is wrong to steal, and suppose that unless a theft be committed by a certain man, his wife will starve and he knows it. If he steals he does what is wrong, and if he does not steal he kills his wife. Even the law of the land does not punish him for murder if he refuses to steal, and does punish him for theft if he steals. If the theft is justified because of

the results which would follow a refusal to steal, then the obligation not to steal is not absolute, but depends on the goodness or badness of the end for which the theft is committed, and our first assumption is incorrect. If, on the other hand, the refusal to steal is justified, then the obligation to refrain from taking human life is not absolute. It is not, however, the main object of this discussion to raise such well-known difficulties as this.

2. If it be admitted that there is a feeling of relative or absolute obligation in all men, it may be asked whether, assuming, as above, that the obligation is to do what is right and not to do what is wrong, there is an universal knowledge of what is right and wrong. This implies that this knowledge is found in the possession of all men. If the Eastern mother throws her child into the Ganges or the Eastern widow sacrifices her life at her husband's funeral; if the Catholic penitent contracts disease in performing penance for sin, and the

Catholic priest advises it; if the clergyman of any creed hastens a patient's end by exciting emotions which interfere with medical directions; if the medical man interferes with the giving of spiritual aid which may save the patient's soul, and looks only to the question of life and death; if the heathen priest deifies a vice which to the Christian is an abomination against the God of Christians; and if all feel under obligations to exercise such conduct, — the inference is plain. Either our theory that there is a knowledge of right and wrong is untrue, or there is some perversion of the understanding in the instances mentioned above.

The second alternative only need be discussed. The knowledge of what is right and wrong is either original or it is acquired. If it is acquired, it cannot be maintained that it is universal or uniform, for such a view would involve the uniformity of experience. If it is original, it must be either necessary or not. If it is

necessary, then there arises a new difficulty. A necessary truth is one, the opposite of which cannot be believed; if moral truth is necessary, it follows that no immoral proposition can be believed to be true. If, therefore, moral doctrine is necessary and original it must be universal. All men must know what is right and what is wrong. If a man does that which he holds to be right, and if his actions are not in harmony with other actions supposed to be right, it must be concluded that there is no determined standard by means of which the morality or immorality of actions may be judged unless there be a standard which is beyond the natural knowledge of moral agents. A asserts, for example, that he knows the action X to be less obligatory than the action Y. B asserts (and this is quite conceivable) that the action X is more obligatory for A or B than is the action Y. If that be the true statement of a case, it follows: 1. That ethical knowledge is not necessary knowledge. 2. That it is

not universal knowledge. If it is not universal but is original, it must be explained why the original knowledge of A differs from the original knowledge of B. The alternative presented is this: either A's knowledge is unfounded, or B's knowledge is unfounded. Ethical knowledge must therefore be non-absolute, *i. e.* must be relative, whether the propositions of A be true or not. We need not turn to the question whether A has received his knowledge from an authority beyond himself. If he has, ethical knowledge ceases to be original, and because it is empirical ceases to be necessary in the philosophical sense; and as already suggested, because B and A do not agree, there is no instance in this case of universal knowledge.

The conclusion need not be extensively considered. The only escape from the inferences reached in what has been said is to be found in the proposition that the failure of men to agree in their view of a moral standard arises from a perversion of

knowledge, or of feeling or of will. If there be a perversion of knowledge, then knowledge of right and wrong is not absolute. One cannot pervert a man so that he believes the half to be greater than the whole. It may of course be said that he does not know which is the half and which the whole. That is not essential. It is not necessary for a valid mathematical judgment as to the relative value of a trade dollar and a gold five-dollar piece that a man should be able to state which is the more valuable. If he regards the trade dollar as more valuable, it may be on account of its larger size or on account of having had a perverted account given him as to which of the two has a greater commercial value. Now that corresponds to a moral judgment. It would not be difficult to persuade that man that one of the pieces is more valuable than the other. Take, however, a five-dollar gold coin, cut it in two, and ask the lowest barbarian whether a half of the mutilated coin is (not is

worth) less than the whole, there can be no perversion of judgment. One of these truths is to be regarded as being accidental and the other as necessary. Now if it be possible to pervert a man in his knowledge of right and wrong, it must be concluded that such knowledge is not necessary, that there is no knowledge of what is necessarily right or wrong. If, on the contrary, necessity be denied to "the feeling of obligation," it is evident that the "feeling of obligation" is as necessary to one who follows the teaching of the Ten Commandments, for example, as to one who denies their binding force. To demonstrate that a man ought not to do a thing is to imply that he ought to do some other thing. Hence that there is an obligation is a necessary proposition. Hence the knowledge of what the obligation is, is not necessary, is not absolute, is not original, is not universal.

If there be no knowledge of what is right or wrong, it may be asked whether

the feeling of obligation to do what is right and avoid what is wrong is not accompanied by a feeling which suggests what is right or wrong. Feeling depends either on what is known or on what is not known. In so far as it depends on what is known, the objections are applicable which have just been urged against ethical knowledge. If the feeling that one thing is right and another is wrong be dependent on what is unknown, then such a feeling cannot be shown to have a legitimate foundation ; for it cannot be shown to be universal or necessary, for it cannot be proved that the unknown object about which A has a moral feeling is the same or must be the same with the unknown object about which B has a moral feeling. It is impossible to pervert a feeling about an object which is unknown. If it be said that the will is perverted, it must be shown that the motives are the source of this perversion, but unless motives are dependent on knowledge and feeling there can be no voli-

tion. Having shown that the perversion of knowledge and feeling is inconsistent with any necessary, universal, or original moral standard, I infer that if the will be perverted, the conclusion reached is that there is a form which we call loosely a feeling of obligation; that there is no matter which has an absolute moral claim.

XII.

Is Hedonism Equivalent to Pessimism?

Pessimism is used here in a relative sense — the meaning given to the term being, not the theory that the world is the worst possible, but that life is an evil, and that the end of ethical conduct is not ideally good, but practically bad.

Hedonism teaches that the standard of human conduct is the pleasure resulting to the human agent. Whatever is pleasurable is held to be right. It follows that the rightness of an action is dependent upon the disposition of the individual man. If it be asserted that what is pleasurable to the libertine or drunkard in so far as it is pleasurable is not moral, Hedonism is in so far abandoned. For if one asks why a selfish indulgence for the sake of pleasure is immoral, no explanation can be given by

the Hedonist. It may be said that prudence should suggest to a person of disorderly life that the end will be painful and therefore immoral. In this case he may be called upon to practice self-denial for the sake of future pleasure. If, however, he prefer immediate pleasure to future pleasure, there is no motive which Hedonism can urge to change his view except the quantity of the pleasure to be enjoyed. But in urging the quantity of a remote pleasure as a motive to immediate self-denial, it is conceivable that an objection like this might be raised. A man might say, pleasure is the standard of morality; but to be moral, that is, to gain pleasure, one must be immoral, that is, avoid immediate pleasure. The rule of conduct is Hedonistic only in the end to be reached, but the way to that end, the way to pleasure, is not Hedonistic. One must be immoral in order to be moral. The rule of conduct is not in harmony with the motive of conduct. The practical result

of Hedonism must then be apparent. If it is right or expedient or justifiable to be moral, then pleasure must be the ideal or standard of every voluntary action. It is plain, however, both in theory and practice, that the pursuit of pleasure will be carried out differently by different men.

There are two general commandments given from the Sinai of Hedonism.

1. Deny yourself, that you may be happy. 2. Indulge yourself, that you may be happy.

Obedience to the first of these is in practice a virtual rejection of Hedonistic Ethics. True Hedonism is obedience to the second. It is conceivable that a Christian might indulge himself in intoxicating liquors so as to be able to nerve himself for the taking of monastic vows. It would be difficult to defend such Christianity. Such a man would be a true Christian in the same sense in which a self-denying pleasure-seeker would be a true Hedonist. The true Hedonist is looking always for

pleasure. "To-morrow we die," is the motive of conduct. There is a sufficiency of brothels and of asylums and of hospitals and of prisons and of scaffolds and of tombs to answer the question with which our discussion began.

XIII.

The Ethical Conflict.

HUMAN conduct is determined by two influences which are sometimes in harmony but more often in conflict with one another. One of these influences is the series of natural motives which determine the action of the will. The other is the series of what one may call ethical motives. Natural motives are effective because they appeal to appetites or desires. Whatever be one's view of the meaning of morality, if one believes in the existence of moral conduct at all, it must be admitted that the motives to morality are often in conflict with those of our natural desires. Where a course of action is adopted which is in opposition to our desires and yet is moral, we are accustomed to describe the action as self-denial, and to put in antith-

esis the gratification of our desires. Suppose that if I do a wrong to my neighbor I satisfy certain desires effectively, and that I refrain from doing a wrong because of some moral principle. My refraining may be prompted by a fear of the legal consequences of my action. It is not an act of self-denial, but of self-interest. I may refrain because I am too tender-hearted to do the wrong action; in this case there is no self-denial. If I refrain because I prefer to go contrary to my own desire rather than to do injury to another, that preference is itself a wish, and unless that wish is stronger than my wish to do an injury, I will do that which I wish for the most. In that case there is no self-denial. Wherever, then, the consequences of our action are the standard of morality, self-denial is impossible. Wherever our disposition is such that injury done to another is more painful to us than the sacrifice of our own desires, there is no self-denial. Self-denial in these cases is only another name for ful-

filling a wish which is stronger than our ordinary wishes or is used figuratively because of an ambiguity in the term *wish* or *desire.* A desire to benefit another at the risk of discomfort to himself is so keen in a benevolent man that he would regard the selfish act as really the act of self-denial. For, strictly speaking, no man ever wills to do that which he does not desire to do. The reason why we are accustomed to believe the contrary is that men's natural desires are in the vast majority of cases the same, and in the long run the natural desires of the individual man are constant. A desire which is uncommon, which does not harmonize with the average tendencies of men, is looked upon as psychologically as well as ethically different to the desires which we call natural.

Even if we take as an example the case of a man who refrains from doing what he "desires" to do because he believes it to be contrary to the will of God, the motive of his abstinence is a desire to obey God,

and this desire is stronger than the desire to gain the pleasure consequent on doing a wrong. The pleasure to him of obeying God is greater than that of disobeying him. We have here nothing to do with the question as to which is the loftier pleasure, which the more moral desire, but which is the intenser pleasure, the more effective desire. It all depends on what meaning be given to the word desire.

The necessity of religion may be best shown from the fact that it furnishes a motive for willing that which is usually regarded as undesirable. Asceticism is a great example of this. There is no system of sensualism which has had so powerful and constant an influence on men's desires as has the teaching that the negation of all desires is the thing most desirable. The devotees of Christian asceticism seem never to experience such exaltation as when dwelling upon the crucifixion of the desires and lusts which belong to our common humanity. It would appear, then,

that the ambiguity of the terms *desire* and *desirable* occasions the difficulty which has been raised. One is led to confound what is pleasurable and what is desirable. When what is not pleasurable is desired, we speak of self-denial. But there may be an objection urged that nothing but what is pleasurable is desirable, and that in the case of the ascetic the abstinence from satisfying certain desires is itself pleasurable, its pleasurable quality depending on a peculiar subjective condition. I may say it is a pleasure to satisfy hunger, to assuage my thirst. I am both hungry and thirsty, but choose to forego the pleasure of eating and drinking, and why? It cannot be because I find the sensations of hunger and thirst agreeable. But it may be because there are desires differing in quality from the desire for food and drink, — a desire to perform a meritorious action, a desire to acquire self-control, — the satisfaction of which, in opposition to the demands of appetite, gives me the greater pleasure. In this case self-denial

means simply the gratification of a higher desire. Is it conceivable, it may be asked, that a man will perform an act which he does not desire to perform? It is not conceivable, for we always will according to our choice, and choice is simply deciding that one course of action is more to be desired than another. Is it conceivable, then, that a man should desire to perform and should so perform the more painful of two actions? It is only conceivable in case the more painful action is judged to be the conducive to future happiness.

It is to be remembered, however, that pleasure and pain are in no sense *standards* of ethical conduct. If there be truly right action, it is followed, not because it is pleasurable, but because it is right, and the highest morality consists in desiring to do what is right, irrespective of the pleasure or pain involved. This does not conflict with the view that what is moral is in the end that which is the most pleasurable. But suppose it be denied that the most pleasurable

course of action is the most moral course, why should one be moral? There is no answer to this question except the religious answer.

XIV.

The Doctrine of a First Cause.

THE question, is there a first cause, has both a philosophical and a theological importance. In one case it is related to the problem of the origin of all natural phenomena; in the other case it is related to the Theistic arguments. If the reality of causation be disputed, there is no first cause. It is intended in what follows to assume that causation is a reality and then to consider the propositions which may be advanced with reference to the possible, probable, or actual being of a first cause, and to endeavor to form some conclusion as to the nature of such a cause in case it should be said to exist.

There are various ways in which the conclusion is reached: *there is a first cause.* Some of these ways need only be stated

without extended discussion. Sometimes the affirmation is made as a deduction from the proposition that there is a God, but the existence of God as an object of belief depends on the principle of causality, and unless it be held that our belief in God is independent of his revealed actions, such a deduction as that referred to must be regarded as invalid. It would appear to be inconceivable that the being of God as God could be reached without the aid of the principle of causality. For if such a deduction were possible it would result in the affirmation that a Being exists who produces no effects.

Sometimes it is affirmed that the mind is not content with the contemplation of secondary causes; that it can only be satisfied in resting ultimately upon a belief in the existence of a first cause. But that this belief is satisfactory, even assuming that it is universally satisfactory, does not mean that it is scientifically justifiable, unless its satisfactory character depend on

revelation. There are several aspects to this question. We say the universe exists, therefore it must have been made, and the ultimate, *i. e.* the first cause of the making of the universe is God. The Bible tells us distinctly that God did make the universe; but does science tell us that God made the universe? It is evident that a negative answer to the latter question is not necessarily connected with the Biblical doctrine. It does not follow that because natural facts do not lead us to the inference that God made the universe, a supernatural revelation may not be made leading to a contrary conclusion.

But it is by no means established that the doctrine of a first cause and the doctrine that God made the universe are inseparably connected. It is possible to deny the conceivability of a first cause; it is even possible to deny the possibility of belief in a first cause (using cause in a scientific sense) without denying that an Infinite God is cause of all that we know.

The simplicity of the law of causation is the clue to be followed in reaching that conclusion which at first sight seems to be so paradoxical. As we have assumed that causation is a reality, it is not necessary that the doctrine of Hume should be discussed : that causality is a matter of experience and cannot be shown to be applicable with respect to events of which there has been no experience. Those who dispute the doctrine that there is a first cause take one or more of the following positions :

1. There is no first cause, for Nature is self-existent ; it cannot be shown that matter has a beginning ; it cannot be shown, therefore, that matter is an effect. If matter is not an effect, it is not caused. There is, therefore, no first cause. The conclusion is atheistic.

2. There is no first cause, for even assuming that matter is self-existent and that the arrangement of matter in forms of inorganic and organic existence is due to a

Deux ex machina, even assuming that mind has been introduced as something above and beyond matter; even assuming that a Supreme Architect may have fashioned the already existing matter so as to reach certain ends, a difficulty is at once apparent. This difficulty is to be found in what is often called the "Infinite Series."

The first of these positions is one which has often caused great difficulty. It is affirmed that "creation *ex nihilo*" is inconceivable. It is not a question of an infinite series in this case. Can one believe that something comes from nothing; *i. e.* can one believe that matter is not eternal or that mind has not always existed? But what is the meaning, it may be asked, of such inquiries as these? This is a point at which the simple, the very simple law of causality may be applied. An effect is that which begins to be. A cause is that without which a thing would not begin to be. What we call matter has never been known to begin to be, but what we call

matter is a series of effects. Where there is no knowable effect there is no matter; uncaused material phenomena are inconceivable.

It is necessary, then, that one should assume that the regressus of material effects is infinitely material. Matter as we know it is simply a constant, uniform series of modifications of the mind. Is the series of mental modifications eternal? Has the mind never begun to be? It must be concluded that matter, except as a modification of mind, is inconceivable, in which case the problem as to the beginning of matter must be either a problem as to that which causes the modifications of mind, or a problem as to the origin of mind itself. But mind does begin to be. There is no continuity between the minds of A, B, and C, analogous to the continuity which may be observed between the spring weather and the revival of vegetable life. Mind, or rather minds, and the modification of minds, are events which point backward.

The index finger is the law of causality. Where does the series of causes end?

The first position is evidently merged in the second. Every effect must have a cause, and as the effect points to a cause, in considering the cause we find an effect and may proceed in this way finding the causes of effects to be the effects in their turn of other causes. One cannot rest on anything knowable without knowing that that thing is a change, and one is thus necessarily forced to proceed, or rather to go back, pressed by the principle of causation until these changes grow dim and more dim, until an infinite series of causes and effects is suggested. What is this infinite series? To say that it is an effect of matter is to say that without mind the series of mental modifications would still continue. To say that it is mind, is to say that there is a causal relationship between mind and mind, which is inconceivable.

It is at this point that the real Theism of Atheism begins to be manifested, demon-

strating the infinite character of God by the finite character of Nature. The infinite series of causes which baffle our knowledge and imagination when what we call matter and the finite mind are left behind, is nothing more nor less than the resources of a Nature, or a Force, or a Something, which we call God. To the Pessimist he may be an evil spirit; to the Agnostic, an algebraic x; to the Christian this infinite series becomes a living and intelligent Power. This backward and apparently atheistic journey leads us at last to the contemplation of God's chief attribute. The faint lights are extinguished one by one and darkness is expected, but an unexpected light appears a long way off and the lesser lights are needed no more.

XV.

The Infinite.

It is not intended in the short discussion which follows to do more than to point out certain conclusions which may be reached with respect to this important metaphysical question. The adjective infinite may be applied to more than one being. It may be said Space is infinite; time is infinite; God is infinite. It may be also said God's attributes are infinite; he is infinitely holy or benevolent or powerful. The term infinite is ambiguous. Literally there is no conceivable infinite being of which we can think unless it be God himself who is regarded as truly infinite. For example, when we say that space is infinite, it is meant that there are no bounds to space; but still this is only to assert that space as space is infinite. It has no bounds

in so far as its extensiveness is considered, but it has limits. It is finite in so far as dimensions are concerned, if we adhere to what is conceivable. It is finite in the forms which it can assume ; it is limited, in a word, to being space. In every case where infinite is made a predicate, the relativity of that predicate is apparent. The subject is said to be infinite in its kind, but not absolutely infinite. Noticing this restriction, one may ask what we mean by infinity, and a consideration of one or two examples may help to answer the question. Take the proposition just referred to : Space is infinite. This does not mean that Space has no bounds of any kind. To be anything conceivable, a thing must *not be* something else. It is this which makes the term infinite as applied to space a relative term. But we may say space is infinitely extended. Extension is ordinarily applied to objects which fill space, but it may be said of space itself that its extension has no limits. Starting

from any given point of space, we can neither empirically nor non-empirically, neither by imagination nor thought, reach any point where Space ends except under the restriction mentioned above. It is not meant, however, that the man who thus views Space is like the man who views a vast prairie or desert. Immensity and infinity are not synonymous terms. Take the proposition: God's power is infinite. This does not mean that God's power is infinite except as power. God's power is not infinitely spatial, just as Space is not infinitely powerful. The two kinds of infinite existences are not inconsistent with each other.

Assuming that a difficulty, however great, is present, infinite power can overcome the difficulty, unless the difficulty be infinite. If the difficulty be infinitely great, the doctrine that there is anything infinitely powerful may of course be abandoned. With these few introductory observations, let us now consider the validity

or invalidity of the following propositions: —

1. There is something which is infinite.

2. There is something which is infinite, and that something cannot be known.

3. There is something which is infinite, and there may be belief in the existence of that infinite something.

4. There is something which is infinite, and that something may be inadequately, though not fully, known.

5. There is something which is infinite, and that something is known and known as infinite.

These various propositions do not present a logical division of the various forms in which the doctrine of the infinite may be stated. They exhaust all of the possible alternatives, but the defective logical arrangement is necessary so that certain distinctions may be more apparent.

It is plain that there is no empirical knowledge of that which is infinite, for human experience is finite. It is equally

plain that there exists a belief in that which is infinite, and if one believes in the existence of that which is infinite, it ought to follow that the meaning of the term infinite is known. Before any of the propositions just advanced can be considered, it must be asked whether the Infinite is conceivable or not. It may for the moment be admitted that there is no Infinite, or that we do not know whether there is an Infinite being of any kind or not. This admission does not carry with it the inconceivability of the Infinite.

It may seem presumptuous to assert that the test of the validity of the propositions noticed above may be found in a definition in a few words of Infinity. Infinite or Infinity — these terms are negative. If we say that anything is infinite, we must make the term negative or abandon our proposition. Non-finite is that which is either infinite or nothing. It can be shown that infinity is not nonentity. Is Infinity, then, a positive quality? Is there a positive in-

finite known to the human mind? It seems to me that there is no knowledge of a positive infinite, otherwise such knowledge would be infinite knowledge requiring either infinite time or an infinite mind. What we call a knowledge of the infinite is a knowledge of something potential, not actual, which we express in negative terms. We are obliged to hold that there is something which is infinite, for we can never reach limits beyond which something does not lie either in fact or in thought. The nature of our knowledge has been shown to be negative, not positive, so that a knowledge of immensity is not more a knowledge of Infinity than is our knowledge of a grain of sand.

XVI.

God and the Principle of "Right."

If it be held that there is a God, it is difficult, if not impossible, to avoid the inference that there is an absolute principle of Right. Conversely it may be said that to assert the existence of an absolute right is to lead one to the conclusion that there is a God. If there be a God and if there be an absolute right, it may be asked, what is the relation between God and this principle? This may be said to be a matter of mere speculation. Is that which is right to be called right because of its intrinsic "rightness," or is it right because it is conformable to the Will of God? It is not necessary in considering this alternative to affirm or deny that there is a knowledge of an absolute right in the possession of men. It is simply a question as to whether God

could, if he would, will what is not Right. If it be said that the principle of right is that which determines the Will of God, we not only limit the absolute supremacy of God, but we virtually create a Superior God, an abstract principle, or a concrete rule which is without a person to create it or enforce it. It may be affirmed, however, that the will of God is that which creates Right. In this case it is impossible that God should will what is wrong. The fact that God wills a thing insures its rightness. If it be objected that it would be wrong for God to will an immoral action, it may be said that: 1. The willing of such an action on the part of God would take away its immoral quality. 2. That the absolute will of God makes right as absolute as his will, and the unchangeable character of God guarantees the unchangeable character of the principle of right. It would then follow that God could make Right wrong and Wrong right if he would, but that he would not. This view is avoided

by some who likewise reject the theory that God's will is determined by an absolute principle of right. It is then suggested that God's will is determined by the Holiness of his Nature. In this case we have simply a new form of the old teaching, for we are obliged to ask what determines the Holiness of his Nature. If we say his own will (and we should say this if we believe in Omnipotence) we must conclude that what is right is dependent on the will of God. If we assert that the Holiness of God conditions his will, we must conclude that the essence of Holiness is independent on the Divine volition, and that God must will according to the principle of Holiness which elevates that principle to supremacy and dethrones the Deity. It might be added that a vindication for the actions of what is called Providence may be found in this, and that if God has given Himself to Man, it need not be a matter of doubt that Man should assent to all volitions of God, when those volitions are revealed.

XVII.

The Atheistic Meaning of Pantheism.

If the universe is, it must be either material or ideal, or both. If the universe is identical with God, God must be material, ideal, or both. If God and matter are identical, then the terms God and matter are interchangeable. Matter is then the only being; the result is Atheism. If God and the ideal, *i. e.* the spiritual, are identical, then the ideal world of human personality is a part of a phenomenon of God. The existence of human persons with conflicting purposes cannot be explained without asserting that there is opposition between the parts of God, *i. e.* a plurality of principles. If there is a plurality of principles, the hypothesis of Pantheism fails, for Pantheism affirms that there is but one principle. There must be, therefore, either

no God, which is Atheism, or there must be a plurality of principles, which is not Pantheism. If the universe, *i. e.* God, is both material and ideal, then in so far as God is material, the objection urged as to materialistic Pantheism is applicable; and in so far as God is ideal the objection urged against idealistic Pantheism is applicable. Therefore if the only God be the universe, there is no God.

XVIII.

The Doctrine of Cause and Effect.

One might reasonably demand a definition of the terms now to be discussed. A definition given at the outset would be likely to beg the question to be considered. The terms "cause" and "effect" are equivocal, and it is perhaps better to look at them in a broad popular way before attempting any philosophical treatment of them. The ordinary laborer understands to some extent the meaning of these words when he tells you that death is an effect of disease or fire the cause of heat, but the concrete example is not a definition, nor is a definition a philosophical explanation. One may have an idea that cause is that which brings to pass some event without realizing what is involved in the term "bringing to pass," or in the term "event."

It is proposed to examine this subject: —

1. Historically — in order to determine what opinions have been held with reference to it.

2. Critically — in order, if possible, to point out defects in such opinions.

3. To set forth briefly, not a complete theory of cause and effect, but only certain principles which seem to me to be involved in the solution of this most difficult problem. Without entering the mysterious realm of Eastern thought, I shall notice first the more important allusions to the subject of cause or effect in Greek philosophy. Theories upon causation may be divided as follows: —

A theory of cause and effect is: —

1. Dogmatic. *a.* Empirical. *b. A priori.*
2. Skeptical.
3. Critical.

As will be seen from this division, the dogmatic theory may be either empirical or *a priori.* I may add that the skeptical

theory is always empirical, while the critical theory is *a priori.* In case there should be some fault found with the combination of the words dogmatic and *a priori*, I would say that I use the term *a priori* simply in the negative sense; applied to that which is not the result of pure experience.

Those who discussed the theory of cause in the period of Greek philosophy usually took the dogmatic-empirical view. The fact that causes and effects existed was observed, but was not considered in the first instance as anything requiring explanation. It was a thing belonging to the universe.

The Atomists, for example, in supporting the doctrine that everything that happens happens necessarily, regarded the necessity of that happening as a necessity of the universe; not as a necessity of perception or thought. Plato fails to notice cause in its relations to thought, but points out certain facts which show his general

theory of the subject. In the *Hippias Major* he makes Socrates ask the question, "Is there anything which effects anything excepting cause?" In the *Euthyphron* he points out by an example the priority of the cause to the effect, where he says: "A thing is not beloved by the gods because it is holy, but is holy because it is beloved by the gods." In the *Timæus* a distinction is drawn between a necessary cause and a divine cause, and Necessity is viewed by Plato as a loose kind of cause, which is itself uncaused. In the *Phædo*, Socrates is made to discuss the nature of cause, and three points of view are there presented: the physical cause, such as the eating and drinking which assist in the growth of a man. With this, Plato is not satisfied, nor is he content with that kind of cause which was introduced by Anaxagoras, *i. e.*, the theory of supernatural agency. The *Phædo* brings out, however, not only an interesting view of the Platonic Idea, but also an interesting view of

Plato's doctrine of causation. The idea is that which makes a thing what it is. The phenomenal world changes because it is participating in the noumenal world of ideas. A thing is beautiful because it is in reality an effect of the Idea of Beauty ; it is great because it participates in greatness. The change which is incident in what one calls an effect is in reality only successive phenomena of various eternal ideas. This very imperfect view of cause is rendered still more imperfect by the difficulty which attends an understanding of what Plato's view was as to the Μεθέξις of the phenomenal with the Ideal or Noumenal world. Still the discussions which I have briefly alluded to are almost the first words upon causation which we find in Greek Thought. Plutarch tells us that this subject was discussed in the house of Pericles, but with what result we do not know.

Passing over certain vague allusions in the works of the Academicians, one finds a remarkable reference to cause in the

Philosophy of Aristotle, who seems to have interpreted the search after the ἀρχή in the pre-Socratic period as a search after the cause of the universe. The Ionians had looked for the το ἐξοὗ, the Pythagoreans for the formal cause, Empedocles and Anaxagoras had emphasized the efficient cause or causes, and Socrates, looking at the universe teleologically, had recognized the final cause. Aristotle grouped all of these under the heads of Matter and Form. He saw that the being acted upon was a cause of the effect which followed when that being was acted upon. He saw that the mode of the action of *causa efficiens* was a condition of the action itself, and therefore a cause; and in pointing out the end of the action he rose beyond the anthropomorphic doctrine of Socrates and identified ultimately the First and the Final Cause. The theory of Aristotle is perhaps the most complete one before the Philosophy of the eighteenth century. This fourfold division of cause pervaded all the later

thought down to the beginning of modern philosophy. Like many of Aristotle's doctrines, it was incorporated in the language and in the practical teaching of the civilized world. The Epicureans returned to the Atomic conception of the universe, and Lucretius pauses to notice the reign of necessity and of law in the universe and the uniformity of causation. The Stoics did not emphasize the doctrine; they were content to revert to Matter and to God as the conditions of Being and of Change. The Skeptics seem to have regarded the notion of cause with contempt. In his work *Adversus Mathematicos*, Sextus Empiricus tells how the Skeptics regarded the problem. The statement is interesting and important. A cause is relative, for it implies an effect, but the relative *is* not. If the cause comes with the effect, they cannot be distinguished from one another. If the cause precedes the effect, it cannot be a cause; for it is only cause after the effect is produced, and it is absurd to say

that it follows the effect. In the works of St. Augustine we find the recognition of cause, and a Platonic treatment of the subject. Causes are fortuitous, natural, or voluntary ; but the cause of causes is God. All good things come from the goodness of God. Evil things come from the privation of God's goodness. The scholastic philosophy was so largely influenced by Aristotle that one looks for the reproduction of the four causes in the works of their representatives.

Prior to the time when the Aristotelian philosophy was revived by the Moorish and Jewish philosophers of the Middle Ages we find the general subject of causation treated of, although unsatisfactorily, in the works of some among the earlier schoolmen. In the third chapter of his *Monologium* we find Anselm discussing in a Platonic manner what that certain nature may be by which whatever thing is, what it is (Quod sit quædam natura per quam est quicquid est), and showing that anything which is

what it is by virtue of nothing is itself nothing; and this fact seems to indicate the presence in his mind of what after all will be found to be the philosophical essence of cause as such. There is with Anselm, as with others of the schoolmen, a tendency to fall back on the efficiency of the will of God as the principle of causation. The similarity of this view with that of Augustine cannot fail to be noticed. In the work of the latter, *De Civitate Dei*, xii. 25, the bearing of fruit by the plant is ascribed to the direct agency of God, with the quotation, "Neither is he that planteth anything, nor he that watereth, but God that giveth the increase." From this view Abélard dissents in his work on the omnipotence of God, where he carefully distinguishes the act of creation from Nature, which is the active, perfected, created being. In the works of the Cordova philosopher Averroës may be found an elaboration of the Aristotelian metaphysical doctrine as to the relation of potentiality

to reality, which is indeed a species of causal relation. The transition from potentiality to reality was accomplished, according to Aristotle, by motion; and God, who was the source of motion, was himself unmoved. According to Averroës the forms lie in the matter itself. Albert the Great reduced the four causes of Aristotle from a single principle: material and formal causes become *causa intrinseca*, efficient, and final *causa extrinseca;* these lead us back to the *esse*, or form. This *esse*, however, is only a general cause *quo aliquid est*, and Albert adds that there is also *existentia*, or the cause *quo aliquid est hoc*. This doctrine of the schoolman, which really involved the whole much ridiculed question as to entity and quiddity, seems to me to signify the presence of a difficulty as to the real essence of the principles under consideration.

In his *Summa Theologica*, Thomas Aquinas, working rather within the lines of Aristotle and of scholastic theology, sheds

but little light upon our problem, but by his distinction between the various kinds of causes shows different sides of the causal principle. Out of the more than one hundred allusions to the subject in his comprehensive work, I may mention some of his statements. A cause is that which is necessarily followed by an effect. Cause is duplex in its nature (22 q., 94, 4, o.), causa *dispositiva* and *consummativa*. These are used, however, in relation to problems of theology as to the dealings of God with man. An effect is like that which causes it, but not like the means or instrument which brings it to pass. The operation of second causes is always founded on the operation of first cause, and presupposes it. This is a fair specimen of the scholastic discussion of the subject. I notice it chiefly because it illustrates how little the schoolmen grasped the real difficulties of the subject. There is one impressive fact, however, common to both patristic and scholastic thought, — the tendency to em-

phasize the power of God as exhibited in the causes and effects of the universe. I am disposed to think that this idea was so strong as to make them consider the essence of cause as lying to some extent in the realm of the supernatural. Bacon does not treat very particularly of cause and effect. He notices with a word of approbation the Aristotelian causes, and explains in his *De Augmentis*, in the fourth book, how important a part causes play in nature. The material and efficient cause he puts in the realm of physics, formal and final in the realm of metaphysics. Descartes took a most superficial view of cause, as did all the Cartesian school of France and all the dogmatic school of Germany. Malebranche, by denying the existence of any efficient causes except God, placed the causal problem in the domain of theology. The views of Spinoza and of Leibnitz deserve, however, some attention. The former in the first book of his Ethics lays down with a show of mathematical precis-

ion, but without critical explanation, his Doctrine of Cause. It is interesting to see great problems treated in this severe and simple, although it must be admitted insufficient, manner. The first definition in the first book of his remarkable work shows the prominence which the idea of cause had in his mind.

"By its own cause," he says, "I understand that the essence of which involves existence, or that which by its nature can only be conceived as existing." (Def. 1.)

Proposition xxv. of the same book asserts that "God is not only the efficient cause of the existence of things, but of their essence also." And in the demonstration of proposition xxxvi. he says: "Whatever exists expresses the nature or essence of God in a certain and determinate manner; that is, whatever exists expresses the power of God, who is the cause of all things in a certain determinate manner; thus and therefore nothing exists from which some effect does not follow."

The effects of nature are thus simply the manifestations of a mode of God's attributes.

Before noticing the views of Leibnitz on this subject, which involve a notice of the doctrine of Locke, it may be well to glance again at English philosophy, and see what position was occupied by Hobbes. According to him, all causes are but effects of the first cause, which is God. (IV. 246.) He recognizes the universality and necessity of the law of causation, and the doctrine takes a prominent place in his writings on account of its intimate association with his definition of philosophy. Lotze, in his Metaphysics, gives to Herbart the credit of being the first to point out the duality of causes. The doctrine of the duality of causes, usually assigned to Mr. John Stuart Mill, may be found implied in the ninth chapter of Hobbes's *Elementa Philosophica.* "A cause simply or an entire cause is the aggregate of all the accidents both of the agents, how many

soever they be and of the patient put together; which, when they are all supposed to be present, it cannot be understood but that the effect is produced at the same instant; and if any one of them be wanting, it cannot be understood but that the effect is not produced." He points out also that the efficient cause must precede the effect (II. 677), shows that a thing cannot be imagined to begin without a cause. In short, there is no writer in the English language who returns so constantly to the consideration of causality as Thomas Hobbes; but the appreciation of the true character of the problem was left to his successors. Most men could give as satisfactory an explanation of cause and effect as John Locke does in the well-known passage from the second book of his Essay: —

"In the notice that our senses take of the constant vicissitude of things we cannot but observe that several particulars, both qualities and substances, begin to exist; and that they receive this their existence

from the due application and operation of some other being. From this observation we get our ideas of cause and effect. That which produces any simple or complex idea we denote by the general name cause; and that which is produced, effect." (Bk. II. 26.)

He concludes:—

"For to have the idea of cause and effect, it suffices to consider any simple idea or substance as beginning to exist by the operation of some other without knowing the manner of that operation." (Ibid.)

A good commentary on the above is furnished by the reply of Théophile to Philalethe in the dialogue of Leibnitz's *Nouveaux Essais.*

PHILALETHE begins: "Cause is that which produces any simple or complex idea; effect is that which is produced."

THÉOPHILE: "I see that you often mean by idea, the objective reality of the idea or quality which it represents. You define only the efficient cause. . . . You must ac-

knowledge that when you say, the efficient cause is that which produces, the effect that which is produced, you deal only with synonymous terms."

Leibnitz himself avoids the difficulty by denying all causality except immanent causality of the monads, which to him are the ultimate principles of being. There is no effect produced except the effect produced by the monad on itself. The theory of Preëstablished Harmony, while not necessarily pantheistic, makes cause and effect merely a relation between each monad and its own more or less fully developed consciousness.

To David Hume the world owes much, and among other things the debt incurred by his having shown that if Empiricism be the only true method, Philosophy is bankrupt. Hume's doctrine of Causation, as every student of philosophy knows, was the central point of the important war waged among thinkers of England, Scotland, and Germany, in the last part of

the eighteenth and the beginning of the nineteenth century. If, as Hume taught, all our knowledge is derived from impressions and ideas, and if we have no impression of necessary connection or of power in the universe, then there can be but one explanation of cause and effect. If that explanation fails, the problem is insoluble. We have, therefore, to trace the development of Hume's doctrine in the philosophy of the younger Mill; notice the vain struggle of the latter to retain the position of the former, and finally to note the virtual abandonment of the problem by Herbert Spencer.

It is hardly necessary for me to give a detailed account of Hume's doctrine. It is probably quite well known to everybody. I shall quote only his general statement. The key to Hume's position is furnished in a foot-note in Section VII of his Inquiry concerning the Human Understanding, where he comments on Locke's doctrine of Causation. He there argues, that,

in view of Locke's own admission that reasoning can give no new simple idea, it cannot be held that reasoning may give us an idea of power. Following out logically his own doctrine that what we perceive may be resolved into impressions and ideas, Hume maintains that neither the power of cause to produce the effect, nor the necessary connection between cause and effect, are objects of knowledge. While willing to admit a principle of union among ideas, he denies that there is any impression of power or necessary connection, or any idea of power or necessary connection. He has but one alternative, which is expressed in his general conclusion :—

"We have no other notion of cause and effect but that of certain objects which have been always conjoined together, and which in all times past have been found inseparable. We cannot penetrate into the reason of the conjunction. We only observe the thing itself, and always find that from the constant conjunction, the ob-

jects acquire an union in the imagination." (*Hum. Nature*, Part III, Sec. 6.)

This is quite in accordance with a statement made by him in the earlier part of his treatise, that "every demonstration which has been produced for the necessity of a cause is fallacious and sophistical." (*Ib.* Part III.)

In Section 15 of the Third Part of the same work he lays down eight rules for the determination of cause and effect, and in discussing these certainly lays himself open to some pointed criticism.

Hume met with opposition in both Scotland and Germany. In the former country, Reid opposed him with his theory of common sense. In the latter, Kant established the critical philosophy.

It is to the Kantian system that I shall first turn.

It is difficult to give an exposition of any part of this remarkable philosophy without passing over the whole, and the doctrine of cause and effect is so important a part

that its exposition is doubly difficult. It is well known that Kant admitted Hume's proposition that experience gives the materials of knowledge. He denied that experience gives all knowledge, and proceeded to show that the forms of sensibility do not come with the phenomena *a posteriori* but are *a priori*; that the understanding possesses spontaneity, and that from the judgments of the understanding are to be deduced the forms of the understanding, which when filled by the intuition, constitute our knowledge of nature. Among these forms or concepts of the understanding is that of cause and effect. (I am aware that the above explanation is open to some objection; it is so because space is wanting for a more thorough or explicit statement of the doctrine.)

To state the doctrine plainly, the law of causation is not a law of sensibility, but a law of judgment. It comes not from the phenomena received by the mind; it is the

form in which the phenomena are understood "to be related." The causal judgment is involved, then, in the very succession of objects in time as conceived of by the understanding. Causality is not a deduction from phenomena, but a law according to which we judge of phenomena. As it has been clearly put by Professor Harms: —

"The Law of Causality is only a Law or Form of our thought, because we cannot represent to ourselves anything coming into or passing out of being; since we can observe all changes succeeding one another in time. This succession, as the order of it cannot be changed, establishes a rule according to which it takes place."

Without speaking of the treatment of this subject by the absolute philosophers, I may pause for a moment before passing from Germany to notice the views held on causality by Schopenhauer.

The doctrine of causality is discussed in his early work, "Die vierfache Wurzel

des Satzes vom zureichenden Grunde." The principle of causation is the ground (*Grund*) of all becoming. Every change is preceded by a change. Causation is an objective law: "It may be regarded as a mechanical law in the physical world, an organic law in relation to the living body, but in the world of mind it appears as *motive*."

As was said above, Hume met with opposition from Reid as well as from Kant. Reid held that the only efficient causes are subjects which possess "thought, understanding, and will." Physical causes are not efficient, they are not agents; they are acted upon, but are themselves passive. He criticises Hume's doctrine, and was the first to use against him the illustration of the succession of day and night.

Dugald Stewart regarded the law of causation as a fundamental law of belief, which made it necessary that we should rise from effect to cause. Like Reid, however, he seems to have been inclined to limit effi-

cient causes to non-physical agents; and this, evidently, as has been pointed out by some of his critics, reduces his view of causality in the physical world to something approaching the doctrine of Hume.

It was the doctrine of Dr. Thomas Brown as to cause and effect which called forth the severe criticisms of Sir William Hamilton, who was fond of finding fault with that gifted philosophical writer. The training of Brown himself and the traditions of Hume explain to some extent the former's doctrine. As has often been noticed, Brown clearly showed that there was no *tertium quid* intermediate between a cause and its effect. He saw that to attempt to explain causality in this way was simply to repeat the difficulty when one endeavored to explain the relation of cause to this supposed intermediate something. He follows the opinion of Hume that causality is only another name for invariable antecedence and consequence; but, unlike Hume, holds that our belief in causality is

determined by intuition, and not by the experience of uniformity.

As is well known, Sir William Hamilton's doctrine of causality depends on his doctrine of the conditioned. Unlike many philosophers, he holds that our belief in the existence of a cause for a given event comes not from an intuitive power, but from a mental impotency. "We are," he says, "utterly unable to realize in thought the possibility of the complement of existence being either increased or diminished. We are unable on the one hand to conceive of nothing becoming something, or on the other something becoming nothing. . . . *Ex nihilo nihil*, in *nihilum nil posse reverti* expresses in its purest form the whole intellectual phenomenon of causality."

I come now to another representative of the doctrine of Hume to John Stuart Mill, and shall endeavor to state briefly his view of causality as contained in his system of Logic.

His doctrine of Cause in general is only a form of the doctrine of David Hume. The knowledge obtained by sensation is reproduced according to the Laws of Association. The law of association is, according to him, sufficient to account for all mental states or action, however complex, and causality may be expressed in terms corresponding to association.

It will not be unfair, so far as the purpose of this paper is concerned, to limit my notice of John Stuart Mill's discussion of Causation to the special point where his definition passes beyond the definition of Hume, where he avoids or attempts to avoid certain difficulties to which Hume's definition and doctrine were undoubtedly open. Reid urged the plausible objection, as we have just seen, that invariable succession in some instances was not the same with causation. Mill writes as follows: —

"When we define the cause of a thing . . . to be the antecedent which it invari-

ably follows," we do not use this phrase as exactly synonymous with "the antecedent which it invariably has followed in our past experience." Such a mode of causation would, he says, be open to Reid's objection. If there can exist a condition not necessary to the production of a certain effect, there is no cause present; and he continues: "If there be any meaning which confessedly belongs to the term necessity it is *unconditionalness*. That which is necessary, that which *must* be, means that which will be, whatever supposition we may make in regard to all other things." "Invariable sequence, therefore, is not synonymous with causation unless the sequence, besides being invariable, is unconditional. We may define, therefore, the cause of a phenomenon to be the antecedent or concurrence of antecedents on which it is invariably and unconditionally consequent." (III. v. *Logic.*)

After showing that our knowledge of space and time is purely relative, and that

space and time as such are unthinkable, Mr. Herbert Spencer turns his attention to Cause.

"We are no more able to form a circumscribed idea of Cause than of Space or Time, and we are consequently obliged to think of the cause which transcends the limits of our thought as positive, though indefinite. Just in the same manner that on conceiving of any bounded space there arises the nascent consciousness of space outside the bounds, so when we think of any definite cause there arises a nascent consciousness of a cause behind it; and in the one case like the other, this nascent consciousness is in substance like that which suggests it, though without form. The momentum of thought invariably carries us beyond conditioned existence to unconditioned existence, and this ever persists in us as the body of a thought to which we can give no shape." (*First Principles*, 93.) We are told later on that absolute reality "is some mode of the un-

knowable, related to the matter we know as cause to effect." This partly separates Mr. Spencer's position as to cause from the position of John Stuart Mill, for as a mode of the unknowable can hardly be regarded as knowable — otherwise it would make the unknowable, knowable — one cannot reasonably suppose that such a mode has been observed as the invariable and unconditional antecedent of matter.

In his *Psychology*, vol. ii., in a chapter on the *Relation of Sequence*, we have the following: "Thus the relation of sequence, considered subjectively as a change in consciousness, is of three general kinds. The fortuitous, in which the two terms are as nearly as may be alike in their tendency, or want of tendency, subsequently to suggest each other; and in which the change may be reversed in thought with a feeling of non-resistance like that with which it originally occurred. The probable, in which the terms are unlike in their tendency to suggest each other; but in which the usual

order of the terms may be inverted with but little effort. And the necessary, in which the antecedent being presented or represented to consciousness, the consequent cannot be prevented from following; and in which the direction of the change cannot be changed."

Mr. Spencer thus holds a middle position between the schools of Hume and Kant. He admits a case of causality in the relation of the unknowable to the world of phenomena.

It is quite evident from what has just been gone over that the problem of causality was not appreciated in its true significance until the time of David Hume. Former philosophers noticed Cause and Effect but did not explain the terms. The solution of Hume was the result of the empirical method, and the result was logical. The point at issue is evidently a point between the *a posteriori* and the *a priori* methods, and without further specific remark I shall proceed to the general discussion of the question now before us.

If we look at the phenomenal world alone the theory of Herbert Spencer as to Causation resembles closely that of John Stuart Mill. It is evidently the result of some kind of association. The doctrine of the latter shows the insufficiency of Hume's view of the subject. If our belief in the necessity of the causal relation in future time is the result of an observance of mere succession in the past, then our position is that described by Hume. It is open to the objection of Reid. If more is involved, if it be held that invariable, unconditional prospective sequence is essential in the idea of Causality, the question arises, On what grounds does our belief in the invariability and unconditionalness of future sequences rest? If we say, on past succession, we are once more in Hume's position. If we hold that other elements enter in to determine the invariability and unconditionalness, we must ask, what are these elements?

To answer this question is to solve the

problem of Causation. Mill does not answer it. Unsatisfied with the position of Hume, he finds no escape from that position in the empirical method. It is evident that the experience of the individual gives only succession. As to that, one is obliged to agree with Hume. The question that arises is: Admitting the method of experience to be the true method, does invariable succession mean causality? The tendency of mankind is to confound succession, variable or invariable, with causality. A plague following the appearance of a comet suggests to the uncivilized man a causal connection between the two. A period of agricultural or industrial prosperity following a certain political administration is used by the political orator as an argument in favor of such an administration. These are, however, examples in many instances of the familiar fallacy *post hoc ergo propter hoc.* As men become more intelligent they distinguish succession of this variable and accidental kind

from succession, which is invariable and necessary. The former kind of succession is not regarded as an illustration of causality; the latter is. One has to ask, is the succession in the latter case invariable because it is under the law of causation, or do we regard the phenomena as causally related because they invariably succeed one another? The answer to these questions is the crucial test of Hume's doctrine. It is necessary at this point to emphasize the proposition that to say that causality is a necessary law is not to say that the cause of a specific event or effect is given necessarily, but only that, given an event, the event must necessarily have a cause. One who looked at the combustion of a quantity of gunpowder brought about by the application of fire might say that the cause was either the motive in the mind of the agent who applied the fire or the act of volition which effected that application, or the properties in the fire and in the gunpowder. Men might differ ac-

cording to their information in pronouncing judgment as to the cause, yet all would agree that the explosion was *caused.* The simpler the case which illustrates causality the easier the exhibition of the law itself.

What, then, is it that gives unconditionalness to the succession of cause and effect? There is nothing in the nature of succession that makes a necessary connection. Indeed, there is no such thing as necessary succession so far as thought is concerned, for one may always imagine or conceive a change of antecedent conditions which would alter any ordinary succession of events. If we adopt the method of pure experience, we can never get necessity, for, as was said above, Hume showed that the mere observance of phenomena following one another was not the observance of phenomena connected with one another. At what point, then, does this inevitable necessity arise?

One explanation is as follows: The mind has an intuitive knowledge of substance;

Substance being that which possesses Being — for it is Permanency, *i. e.*, existence, independent of our perception of the substance and potency or power. From this point of view, a cause is a substance possessing power. When that power is exercised, an effect is produced. When any event or change in nature is observed, the mind intuitively judges that a substance possessing power is the cause of that event or change. It is a cause of which the given change or event is an effect. Here we have evidently a satisfactory solution of the problem of cause and effect, provided that it can be shown that there is an intuitive knowledge of substance and of power; provided also that it can be explained what is meant by substance and by power. Passing over for the present the difficult metaphysical question, "What is substance?" let us inquire, "What is meant by potency or power?" As Aristotle pointed out, power may be one of two kinds. There may be power in

the sense of Δύναμις or potentiality — a capacity to act or to be made to act. This is evidently not power, in the causal sense. Cause is a relative term; it implies an effect. If the power be not active there is no cause, for active power is necessary for the production of an effect. But power in its other signification is active. It is the Ενέργεια of Aristotle; it is already producing an effect, and it is this active power which constitutes cause. But on reaching this point, we find that like Locke we are dealing with synonymous terms. When I call a cause a substance with active power, I am simply stating in other language that a cause is a substance which is a cause; that is, a cause is a cause. If it be said, the term is ultimate like the terms knowledge and faith, that we cannot state them in any simpler terms, then I am evidently wasting energy in attempting to explain the proposition "Every effect must have a cause."

Another explanation of this necessity

which characterizes causality in the judgment is that which is founded on a theory of knowledge which bases the law of causation, as it bases all so-called necessary truth, on the repeated sensations of the individual and the accumulated experience of the race transmitted from generation to generation under the Law of Heredity. This theory is based on a vast and comprehensive generalization, the result of which is the conclusion that all Life is One; that Man is a part of a great organism in process of evolution, or perhaps in process of dissolution; that the physical condition of man cannot be separated from the life of nature; that nature itself can explain all that is most simple or most complicated in man's most simple and complicated mind. There are, it is said, successions in nature which are repeated again and again in the individual mind, by means of a nervous organization which seems to be stretched out wistfully to touch, to know that which is its source and its life. As we look back-

ward, age after age, we see this repetition constant and invariable. We find that physical characteristics and mental qualities of the most varied kinds are transmitted from generation to generation. At rare intervals peculiarities of structure which exist in the lower species are reproduced in the higher species. Appetites, desires, intellectual tendencies, descend from parents to children. Normal and abnormal traits of body and of character seem to be stamped upon families and upon races; and all necessary truth, mathematical, metaphysical, moral, is the result of the teaching of nature. Nature, being invariable, teaches by endless repetition the same great lesson. This invariable succession of causes or effects in the nervous system is accompanied by a correspondence of psychical phenomena, and the invariability of causes in nature is reproduced by invariability in the organism of belief in natural causes. Is not this, then, the object of our investigation? Have we

not reached a point beyond the objections to which the theories of Hume and of his opponents are open?

It must be asked, in the first place, whether the reproduction of individuals or of species produces any essential change in the law of succession. If A alone cannot reach necessity by observing invariable succession among certain events of nature, will one thousand generations of A's reach such necessity? Where does invariable succession resolve itself into connection? Why even should repeated nervous motion resolve itself into connected nervous motion?

It must be asked, in the second place: If we are to account for the unconditionalness of the law of cause and effect, is the law from which we deduce the necessity of causality an unconditional law? It is hardly necessary for me to say that in the present undeveloped condition of science, the law of heredity has been only partially understood. There is a constant fluctua-

tion in the transmission of qualities from species to species, from individual to individual. No special mental quality that can be shown to have been directly transmitted can be shown to be a necessary quality. If the law of heredity be made the ground of unconditional truth, it must be shown to be as unconditional as the truth derived from it.

I have laid down these somewhat dogmatic propositions with some diffidence, for I do not profess to understand altogether how far hereditary tendencies have been shown to be constant.

Assuming this to be the true explanation of the law of causality as of all necessary truth, a difficulty arises which appears to be insuperable. We are now face to face with the most important and far-reaching doctrine of Modern Philosophy. We have to ask, What is the true theory of knowledge? The question is most significant. Its answer is most difficult. With respect to the particular point at issue, one

of two general positions may be taken. Man may be explained by explaining Nature — the mind of man as well as his body. Or Nature may be explained by explaining man. In Greek Philosophy before the time of the Sophists, Nature was made the central point and man was considered as a part of Nature. Certain of the Sophists, notably Protagoras, by an almost Copernican revolution reversed the order, and asserted explicitly or implicitly the *Homo Mensura* doctrine. This gave point to the inquiry of Socrates, "What is the true knowledge?" The issue is before us to-day. What is Nature? Is it that from which we must seek the explanation of our knowledge, or is nature simply what we know? If I, or A, or B, or C, were Nature, an affirmative answer to the former question would be imperative. But what do we find to be the case? Is Nature anything except what we know? Nature is only a name for knowledge. Our knowledge is the sum of Nature. The principles

of Nature cannot be employed to explain knowledge. A far more difficult problem is before us. We must explain the principles of knowledge first, for Nature is only what we know. To explain knowledge from Nature is dogmatism, for we first assume a being called Nature that appears to us only in terms of knowledge; we take this Nature and deduce from it the principles of that which makes Nature what it is. Nature without knowledge is nothing. Destroy my mind, and Nature ceases to exist for me. Destroy the minds of A, B, C, and D, and Nature ceases to exist for them. Destroy mind in the created universe, and Nature ceases to exist for the created universe. Destroy — I say it reverently — the mind of God, and Nature ceases to exist. If it be said it still exists but is not known, it must be answered that unless it is known to exist one cannot scientifically affirm that it exists; and this I apprehend is the beginning of all Philosophy. One must assume knowledge; to doubt that we

know is to doubt that we doubt, and Philosophy is not possible unless knowledge is possible. After knowing Nature, one cannot begin and work backward to knowledge. One must begin with knowledge; and here I believe one must begin with the problem of Cause and Effect. If we take, for example, the fundamental principle of Herbert Spencer, we find that it involves a dogmatism as decided as the dogmatism of Wolff or Reid. Force is made to explain all; but what is Force? Is it the simple ultimate idea from which one may construct the universe of mind and matter? On the contrary, it is an idea which involves some of the most important principles of knowledge. To assume that there is Force, before assuming that there is knowledge, is as peculiar as to assume that the sunbeam exists before the sun.

I am far from wishing that Philosophy should rest on the Hegelian foundation. What seems to me to be certainly true is this. We have a knowledge of the uni-

verse communicated by the various senses. These senses do not give us the law of Causality, yet we judge that material phenomena are connected by the law of Causality. If this law be a fiction, why do we judge that it is necessary? If it be not a fiction and be not derived from the phenomena which present themselves, is it not a law of that which knows the phenomena? I am disposed to think that it is a law of knowledge, *i. e.* a law of judgment, — a form of Thought. The mind observes a manifold series of phenomena. It is compelled to pronounce a causal judgment. The necessity of that judgment depends on the existence of mind. If one asks, Suppose Mind to be annihilated, does the necessity of Causation exist? I answer, Suppose Mind to be annihilated, does Nature exist as we know it? If one further asks, Suppose the law to be a mental one under which we class causality, are not the phenomena mental phenomena? the answer is plain. What is meant by the

external world? It is the world that is known in the form of Space. If one asks, Is the heat which comes from the fire observed to be causally connected with the fire by a subjective law? I answer yes. If it be asked, Is that law objective as well? I answer, I do not know, for I cannot go beyond my own knowledge. If it be asked, Are the phenomena so observed, phenomena of an external world? I answer yes; but I add the question, What is meant by external? Is not the question tautologous? If I say, this table is external, I mean it is like this chair, that book, that man, that horse; but if I repeat that assertion, that book is external or that horse is external, I mean that it has externality, just as the table has externality. I am no nearer the solution of the problem.

But in conclusion I would say, that if so ultimate a term as causality be in any degree definable it will be found to involve the following elements: A cause is: —

1. An antecedent.

2. It is judged to be a necessary antecedent, *i. e.* if the event B follows A; not Nature, but Mind judges that A is the cause of B.

3. If an event B occur, the mind judges that there must be a cause, be it x, y, or z, the cause in each case being an antecedent — a necessary antecedent, something that is judged to be a necessary event before the consequent can follow as a necessary event.

4. The sequence is necessary, not because it is invariably observed, but because the mind judges that it is necessary.

5. The necessity of cause continues even when the cause is absent from our view, for on the presence of a given event a cause is judged to be necessary.

6. The succession of cause and effect is not the same with the uniformity of Nature. The uniformity of Nature is based on past experience. The Law of Causation is *a priori.* I undoubtedly believe that fire will cause heat in the future because it has

caused it in the past, but the connection between the fire and the heat is causal. If I attempt to resolve the connection into a mere succession, I find, indeed, succession, but I find something beside, and that something is the causal nexus.

In the specific example the mind may err as to what the cause is; it never errs in the necessary judgment that a cause exists. Of course, if fire be fire and heat be heat, I cannot violate the law of contradiction and conceive of fire without heat, for one of the elements in the concept fire is the phenomenon heat. But suppose with eyes closed I am brought close to a hot body, I am liable to make mistakes as to what that hot body is, but I know that there must be a cause for the heat which I feel. All such questions as those of John Stuart Mill, as to why one instance in some cases suffices to establish the fact of causal connection, and in others a large number of instances is necessary, are idle. The law of causality is illustrated when-

ever the mind judges concerning a new phenomenon, and the law is as inexorable in the first individual instance as it is after a thousand observations. Superstition and ignorance are quite compatible with the most emphatic affirmation of the causal judgment.

Whatever be our view of the question, no one can fail to be impressed by the fact of Causation itself. It is the path which leads us backward through stage after stage of the life of Nature; it is the clue to many mysteries of History. All the possibilities of action in Science, Art, and Religion are dependent on the action of this law.