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## PHILOSOPHY AND SCIENCE

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**P**hilosophy is here defined as dialectical activity in general. The locus of its occurrence is intellectual controversy or dispute. Not all human conversations actually do become philosophical; in some instances, they are terminated by reference to facts already determined, or by the attempt to determine the facts by some manner of empirical procedure; in other instances, they avoid the full obligation of the dialectic process. But in so far as dialectic emerges in the clarification and resolution of the oppositions which form the themes of conversation, philosophy occurs.

It should be pointed out that this conception of philosophy is not altogether incongruous with common usage. The examination earlier in this book of a number of typical arguments revealed what is ordinarily meant in saying of a conversation that it has become

philosophical. The history of philosophy, furthermore, is certainly in part a history of intellectual controversy,—of the opposition of opinions and theories. There is nothing unusual about a conception of philosophy which merely pretends to report these two circumstances. But that conception is here carried a step further. The identification of philosophical thought with the activity of dialectic is equivalent to the assertion that only thinking which is engaged in a certain way with the phenomenon of controversy is philosophical. Philosophy thus becomes exhaustively an affair in the universe of discourse. This assertion has a number of illuminating implications for the interpretation of philosophy.

(i) Philosophy has no special subject-matter, and no special problems. The group of themes and problems which have been classified by historical accident as the subject-matter of philosophy is not an adequate demarcation of its subject-matter. Those problems, however, are not improperly classified; they are familiar themes engendered by almost any general discussion. But the point is that they are merely the representation of a philosophical tradition rather than the precise denotative indication of the subject-matter of philosophy.

The subject-matter of philosophy is here defined as any partial universe of discourse; its problems are whatever oppositions obtain among the subordinate entities of that partial universe, or between that partial universe and some other co-ordinate with itself. With respect to this subject-matter and these problems, philosophy is simply the method of dialectic, a specific form of intellectual activity which can be applied to any partial universe of discourse suffering opposition. Philosophy thus is concerned only with possibility.

In contradistinction, the subject-matter of science in general is actuality rather than possibility. Its problems can be stated as questions concerning the nature of things. And with respect to this subject-matter and these problems, science is a method of determining by experiment, or investigation of some sort, what are the facts. just as there are partial universes of discourse so there are partial fields of actuality, and the special sciences have as their separate subject-matters these partial fields; their special methods are devised to satisfy the requirements of inquiry in these different fields.

Philosophy and science may be viewed not as methods, but as bodies of propositions, as systems, theories or instances of knowledge. The distinctions between them can be made even more accurately in these terms.

Actuality is a class of entities, which are not statements, that is, which do not express propositions, or refer to entities in discourse. Let this class of entities be designated the first order of facts. The second order of facts is the class of entities which are statements about the first order of facts. The propositions which these statements express form a partial universe of discourse. This universe of discourse contains the body of propositions comprising the sciences. The third order of facts is the class of entities which are statements about the second order of facts, that is, statements about statements. The propositions which these statements express form a partial universe of discourse which is the body of philosophical opinion. A scientific proposition is expressed in a statement about facts of the first order, which are usually designated existences or existential relations, entities in the field of actuality. A philosophical proposition is expressed in a statement about facts of the second order, that is, about the statements expressing propositions in some partial universe of discourse.

Science and philosophy, viewed as bodies of propositions, are thus both seen to be partial universes of discourse, but science is a universe of discourse whose subject-matter is actuality, whereas philosophy is a universe of discourse whose subject-matter is other partial universes of discourse. Science as a method is concerned with the determination and manipulation of facts which are not statements; its problems in general may be expressed in the typical question, What is the fact with regard to . . . ? Philosophy as a method is concerned with rendering statements intelligible; its problems in general may be expressed in the typical questions, What does it mean to say that . . . ? and What divers statements can be made about . . . ?

(2) Actuality as an ontological realm is irrelevant to philosophy. Philosophy being confined by its subject-matter and method to the universe of discourse deals only with systems of possibility. Philosophy, therefore, cannot provide knowledge or achieve truth, when knowledge and truth are taken as qualifications of a proposition, or a set of propositions, in a certain relation to the actual facts. The kind of truth which is relevant to scientific procedure, empirical truth, or the extrinsic relation of discourse to actuality, is totally irrelevant to philosophical activity. It is not interested in whether the isolated propositions which form its subject-matter are true or false. When they are taken merely as entities in discourse they can be neither true nor false in themselves. They may have either intuitive or demonstrative status in a system of propositions, and in this way be true by assumption or by implication; or they may be ex-

cluded from a system by being inconsistent therewith, but they are not proved false thereby. They are then either isolated propositions, or true propositions as postulates or theorems of some other system in opposition with the first one. Philosophy is thus concerned with truth only as a relation among propositions, as a systematic relation of propositions intrinsic in discourse. And there are no absolutely true or false propositions in the universe of philosophic discourse.

This establishes another point of distinction between philosophy and science, when philosophy is identified with dialectic. The aim that seems to be implied by the nature of empirical or scientific thinking is the discovery of the truth about things, whether the truth be taken absolutely or pragmatically. Science is interested in knowledge of some sort. Philosophical thought depends upon such knowledge only in so far as knowledge as a body of propositions provides a partial universe of discourse which is subject-matter for dialectic. But it is not concerned with its subject-matter as knowledge. Its interest is entirely in the systematic import of propositions, and in the resolution of systematic oppositions. Truth-value enters only as a by-product of the dialectic processes of analysis, synthesis, and definition. It is involved in the determination of what follows and what does not, of what may or may not be implied and demonstrated.

(3) Philosophical thinking cannot end in belief, when belief is taken to be the assertion of any proposition or set of propositions as extrinsically true. In an even more general sense philosophy never eventuates in belief. The establishment of any system as internally true immediately generates a set of oppositions with other systems, themselves internally true; and if any of these oppositions are resolved, the resolution is not final, for new oppositions are similarly provoked by the establishment of the system effecting the synthesis. Philosophy may be concerned with the criticism of beliefs, but the attitude of impartiality which is so essential to philosophy as a dialectical activity should prevent the attribution of finality to any intellectual position philosophically achieved. In this sense, philosophy reaches no real conclusions, is incapable of being ancillary to any genuinely ultimate faiths, can be the warrant for no belief. In this sense, philosophy is clearly distinguished from theology as well as from science.

Theology is often extremely dialectical in its method. This was particularly so in the case of the great Catholic theologians. But the doctrine of the Church, the truths of revelation, impose a limitation upon dialectical activity. Articles of faith introduce a dogmatic ref-

erence into dialectic, just as the “actuality” of natural science does. Canonical truth may be taken for dialectic purposes as the postulated doctrine of a system; but when that doctrine is given the status of absolute truth, instead of the conventional role of a set of intuitive propositions, the dialectical activity generated thereby is circumscribed and limited. The theological system is a piece of partial dialectic which is taken as final and ultimate, because its postulates are believed as ultimately true. The religious attitude that qualifies theological thought is thus seen to be incompatible with the attitude of impartiality.

Science like theology is profoundly religious. Its field of actuality which it postulates as its subject-matter, it postulates necessarily rather than tentatively, and merely as the convention of a system. Actuality is the scientific canon. Science has other articles of faith. It postulates the law of contradiction, and the law of uniformity and determination. But this is dogmatic rather than dialectical postulation. It does not admit of alternatives. The ideal of science, in terms of these initial assumptions, is the achievement of an ultimately true system of knowledge. Whether or not science can ever actually realize this ideal is for the moment irrelevant. The point is that scientific method and scientific thought is motivated by a set of genuine beliefs and, in the end, hopes to achieve, or at least to approximate, a system which can be genuinely believed. The attitude of impartiality is thus seen to be incompatible with the nature of scientific activity, and it is this attitude which primarily distinguishes the philosophical enterprise.

(4) Historically philosophy itself has often been religious, either because philosophers have not been thoroughly dialectical, or because they have confused their ends with the ideals of science or theology. The last consequence of the identification of philosophy with dialectic is the utter freedom of philosophy from dogmatism.

A philosophical system or a metaphysical theory is an instance of intellectual partisanship in discourse. But to understand the nature of partisanship in controversy or argument is equivalent to the maintenance of impartiality in the given intellectual situation. A philosophical theory, therefore, must be viewed as a fragment or piece of dialectic incompletely carried out; as such it has no finality whatsoever. It may be the result of a thorough process of definition and analysis, but it is dialectically inconclusive in that the opposition which the system engenders is temporarily ignored. The philosophical theory is dialectically established if the oppositions in which it stands are merely ignored; if they are denied, that de-

nial is equivalent to asserting the final truth of the theory in question. Such assertion would be dogmatic.

A philosophical theory, in other words, is only one-half of a conversation, a single voice in a controversy. To view it otherwise would be inconsistent with the definition of philosophy as dialectical activity, and would permit philosophy to become dogmatic. Duality is indispensable to conversation, and partisanship inseparable from controversy. And if dogmatism enters into argument, either in the form of referring to actuality, or in invoking unquestionable creeds, dialectic is immediately stopped. These three qualifying circumstances of conversation describe the nature of philosophy. It is partisanship in controversy qualified by critical impartiality toward its results.

There are certain advantages in conceiving philosophy in this way. In the first place, philosophy so defined is clearly distinguished in its methods, purposes, and subject-matter from science, on the one hand, and theology, on the other. Precise differentiation is the first pre-requisite of a good definition. In the second place, not only is the character of philosophical thinking described by identifying it with the dialectical acts of definition, analysis, and synthesis, and the processes of clarification, resolution, and translation, but dialectic itself is evaluated by that identification. It assumes importance as the essential technique of philosophy, and as its fundamental intellectual attitude of impartiality.

And in the third place, the spectacle of the history of philosophy may be viewed in a way that makes it a more intelligent phenomenon than it otherwise would appear to be. The history of philosophy is a history of frustration, if philosophy be conceived as comparable or similar to science. It is the record of the conflict of contradictory systems, each of them claiming dogmatic finality and ultimate truth, a claim made apparently absurd by the plurality of the claimants. But if philosophy be nothing more than the development of systems of thought, and the resolution of their oppositions, and if it make no claim to extrinsic truth or conclusiveness, then it is quite properly the record of unending controversy. The history of philosophy is a sustained conversation, prolonged through millennia; it has been continuously dialectical or controversial, even though this quality has been masked by the dogmatic attitude that for the most part philosophers have maintained toward their pronouncements.

The critics of philosophy have always supported their derogations by pointing to its history. Philosophy has not progressed as science

has. Philosophy has not solved the old problems, and gone on to new ones; its problems are persistent. Philosophy has added nothing to the stock of knowledge; it is obfuscation, futility, and frustration.

Such depreciation is justified if philosophy pretends to satisfy the ends imputed to it by its critics. Traditionally, philosophers have made the mistake of misconceiving their task, their subject-matter, and their instrument; the criticism in so far forth is deserved. But that is equivalent to saying that these philosophers have been dogmatic rather than dialectical. Progress is irrelevant to philosophy in the sense in which progress occurs in the natural sciences. Philosophy never solves its problems, for it has no specific problems to solve. Whatever appearance of persistent problems there has been in the history of philosophy is due to the fact that in the tradition of European thought, there has been to some degree an intellectual continuity, and a funded vocabulary of philosophical discourse. Whatever issues that philosophic tradition has repeatedly faced, it has partially resolved on many different occasions, in many different ways; but the resolution in each instance has been temporary, and entirely relative to the intellectual situation in which it occurred. Philosophy has not added to the stock of knowledge, nor culminated in any fundamental truths or fixed beliefs; if its nature were essentially dialectical, it could not do otherwise.

The futility that is ascribed to it, is definitely a proper attribute of the philosophical enterprise; it must be thoroughly impractical if it is to be dialectical, and in terms of the pragmatic values which the natural sciences have come to satisfy, it is no wonder that philosophy should be denounced as futile. But that denunciation, on the other hand, is somewhat of a corroboration of the identification of philosophy with dialectic. Finally, philosophy ends, not only in futility but frustration; it arrives nowhere even intellectually. But that again is a proper attribute of philosophy as dialectic. It must never reach a conclusion, a final resolution, an ultimate theory. The fact that the history of philosophy has been a chronicle of intellectual frustration further illustrates that it has been a career of dialectic. Opposition can never be totally removed from the universe of discourse in which philosophical controversy occurs.

The conception of philosophy as dialectic may explain certain of the attributes of the historical panorama, but it does not alter the standards of value which are invoked by the usual criticisms of philosophy. In one sense, it makes the criticism irrelevant, since philosophy so conceived does not pretend to satisfy the pragmatic or dogmatic values referred to by its critics. Nevertheless, the justi-

fication of philosophy can be made positively in terms of the set of intellectual values which it does attempt to satisfy. This will be done later.

Some inspection of the history of philosophy may discover the exemplifications of the foregoing thesis. Philosophy has been obviously controversial. The writings of philosophers in any generation have been stimulated by the opinions and theories of their predecessors. Opinion has provoked opinion, and belief antagonized belief. Philosophical thought has derived its greatest impetus not from commerce with the world, but from the contact of one philosopher with another. Opposition has been the fertile seed of philosophical production. The formula that the universe of philosophical discourse is expressed by statements made upon statements, for the most part seems to be corroborated.

What might be more apparently a history of dialectic has been masked, however, by the confusion of attitudes that has pervaded the history of philosophic thought. The dogmatic manner in which most philosophic theories have been presented, the suggestion that systems have been in absolute contradiction rather than merely in opposition, the absence of distinction between what was pre-scientific\* speculation and what was theoretical argument, with the resultant confusion of empirical and discursive references, the lack of clarity with regard to the sense in which philosophical thinking might satisfy a truth-value, and the senses in which truth and actuality were irrelevant to philosophy—these factors have made the historical spectacle so difficult to interpret, and have made philosophy so dubious and nondescript an undertaking. By deleting from the history of philosophy all of the passages in which philosophers have indulged in the imitation of science, most of the second book of Locke's *Essay*, for example, which is pre-scientific psychology, or Descartes' cosmogeny and "natural philosophy" which is pre-scientific physics, and by effacing all evidences of dogmatic assertion and denial from the more theoretical portions, the dialectical fabric of the history of philosophy could be analyzed into strands of a prolonged argument which has not, and cannot, reach a conclusion in any of its loose ends or unraveling threads.

If philosophers have been consciously dialectical at all, they have been so in method rather than in attitude.

\* "Pre-scientific speculation" is here used to designate reflection or theorizing upon scientific subject-matter prior to the empirical investigation of the relevant field of actuality. It is arm-chair speculation about the phenomena, and may have value and certain merits proper to it, but it does not satisfy the require-



ments either of empirical science or of philosophy as dialectic. It is what Santayana has called “rhetorical physics” and “literary psychology”.

Their manner of debate, their technique of definition and analysis, and the way in which philosophers have comprehended or refuted their opponents by processes of translation and absorption, has been dialectical enough. The defect has been one of incompleteness, due usually to a corrupting dogmatism of one sort or another. In other words, many philosophers have been dialecticians somewhat in practice without understanding the theoretical implications of that practice, the intellectual attitudes it involves, and the ends it is able to serve. For this reason philosophical theories that have been the work of dialectical processes, have been advanced as ultimate rather than as partial systems in discourse; and the plurality of such ultimate systems has presented the picture of irremediable contradiction rather than has suggested the dialectical situation of oppositions in discourse which further dialectic might resolve.

The philosophical systems of Descartes and Leibnitz, for instance, are dialectical in their execution, but dogmatic in their attitude, both in their scientific and their religious prejudices. The theologians of the twelfth and thirteenth centuries were consummate masters of the technique herein described, but they exercised it within the bounds of revealed truth, a dogmatic doctrine with which all other propositions must be made consistent, or else totally excluded from the system of theology as contradictory and therefore untrue. In contemporary thought there is no intellectual vigor except it be in pragmatism, and this both in attitude and practice is a complete denial of dialectic, and, therefore, of philosophy according to the conception here developed. The metaphysical systems of Aristotle, Spinoza, and Kant, are marvelous works of dialectic, but they are partial systems; they are like single voices that have not been harmonized with the polemic which they provoke. The philosophy of Hegel comes nearest to the conscious expression of dialectic as a method and as a theory; its only flaw, perhaps, is that it terminates in the Absolute Idea in which all oppositions are resolved. It surrenders the inconclusiveness of the dialectic process for an ultimate dogmatism.

The only figure in the history of thought that may be construed as fully understanding the nature of philosophy as dialectic is Plato. The dialogues form a dramatic rendering of human conversation as the locus of philosophical thought. Therein the philosopher and the dialectician are identified. The theme of a Platonic dialogue is an opposition of opinions, an opposition that usually arises in the course of conversation. The opposition is clarified, and perhaps, resolved, only to suffer the facing of another opposition, and so on.

There is no ultimate resolution of the intellectual controversy that forms the dialogue; many doctrines are proposed; their meanings are made clear; but none are proved in the dogmatic manner. In the light of the present discussion, there is no philosophy in the dialogues of Plato outside of the dialectic that is therein contained. In this sense, Plato is the first and, unfortunately, the last philosopher perfectly to understand the nature of his proper task and the traits of his technique.

Credit must be given Hegel, however, for the explicit formulation of the logical structure of dialectic. But in the first place, that logical structure is immanent in the actual as its form and process; and in the second place, it is conceived as a finite hierarchy. In this Hegel fails to assume the dialectical attitude toward the dialectical process itself—the philosophical mood of impartiality which is able to witness the inconclusiveness of any theoretical enterprise. Hegel exemplifies the failure of a dialectic which avoids frustration finally, and in that dogmatic aversion he is imperfectly philosophical. He is one of the earliest modern historians of philosophy, and probably the first who ever attempted to write that history as a sort of dialectical progress.

In a series of triadic steps, an argument or thesis, its negation by some other argument or thesis, and the resolution of the argument in some third argument or thesis, the history of opinion is developed as a pyramidal structure of trilogies. If this architectural conception is the beauty of Hegel's method, it is also its defeat, for the perfect pyramid must have some crowning stone. There must be some one category which resolves the difficulties engendered by all others, some last resolution of some last antithesis. Whether or not the Absolute Idea is the source of dialectical peace need not be debated here; it is rather the attitude which such an ultimate termination expresses that is here being contrasted with the attitude of regarding dialectic as interminable, which the present exposition has stressed as so essential to philosophy.

*From Dr. Adler's first book, *Dialectic* (1927)*

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