



THE CONDITIONS OF PHILOSOPHY

Chapter 6 - A Method of its Own

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Part 1 of 2

Let us imagine once more a world in which philosophy as an academic discipline did not exist in any form or shape, but one in which all the other major branches of learning—science, history, mathematics—remained the same. We should have little difficulty in drawing the lines that separated these modes of inquiry or types of knowledge. Why would the introduction of philosophy complicate the picture? Why should we have to redraw the lines in order to fit philosophy in with a method and a place of its own?

The reason is that the picture into which we should be trying to fit philosophy is one the main lines of which were drawn by David Hume. His basic disjunction between two realms of learning and discourse dominates modern thinking about the order and relation of the disciplines. The whole field of reputable and reliable learning, it would appear, can be exhaustively divided into “abstract

reasoning about quantity or number,” which, since Hume’s day, has come to be recognized as the sphere of *formal* or *analytic* statements; and “experimental reasoning about matters of fact or existence,” which has come to be recognized as the sphere of *empirical* or *synthetic* statements. Since Hume’s day, and especially since Kant’s treatment of the distinction between analytic and synthetic judgments, this disjunction has been endlessly discussed, and the line between the two spheres has as often been made shadowy and unclear as it has been made sharper and clearer. I think I have a way of skirting the pros and cons of this discussion, by reinstating the Humean disjunction, freed of the Kantian overtones that were added to it. By “formal” or “analytic” statements, I shall always and only mean *statements that are neither verifiable nor falsifiable by appeal to experience*; and by “empirical” or “synthetic” statements, I shall always and only mean *statements that are verifiable (that is, incompletely verifiable) or at least falsifiable by appeal to experience*.

With the lines thus drawn, there would seem to be no question that mathematics represents one of the two principal archetypes of learning and discourse; mathematical statements are neither verifiable nor falsifiable by appeal to experience. There would also seem to be no question that science and history both fall under the other archetype; the conclusions of historical and of scientific research are to some extent, but not completely, verifiable by appeal to experience, and they can be empirically falsified. What about philosophy? How shall philosophy be distinguished in type from history and science without its becoming indistinguishable from mathematics? Or if philosophy—at least the part of it which claims to be first-order knowledge—cannot be associated with mathematics, how can it be placed on the other side of the line which separates the formal from the empirical, the analytic from the synthetic?

There are no satisfactory answers to these questions in the terms in which they are asked. The terms are insufficient and the questions themselves are misleading, because they are based on the Humean disjunction. That disjunction is not the only way of exhaustively dividing human learning into its principal archetypes. There is another principle of division which makes it possible to accommodate philosophy without distortion. When that principle is introduced and added to the principle underlying the Humean disjunction, we shall, I think, be able to solve the problem of distinguishing philosophy from, and relating it to, science, history, and mathematics.

Why just these three? the reader may ask. What about the relation

of philosophy to poetry? To common-sense beliefs or opinions? To religion? Let me remind the reader that we are concerned with organized bodies of knowledge (that is, knowledge having the status of testable and criticizable *doxa*). Even admitting the sense in which some writers speak of “poetic knowledge” or regard poetry as a form of knowledge, it would be difficult to claim that poetry constitutes an organized body of knowledge resulting from a specific mode of inquiry that involves submitting theories or conclusions to test and criticism. Commonsense beliefs or opinions can be excluded from consideration here on the same two counts, though it will become necessary, at a later stage of the argument, to consider common-sense beliefs or opinions not only in relation to philosophy but also in relation to science.¹

¹ See Chapter 8.

But what about religion? Let us assume that the question does not cover religion in every aspect; for, in addition to being an organized body of knowledge, it is also a set of institutions, a set of practices (ceremonies, rituals, forms of worship), and a way of life. Limiting ourselves to religion as an organized body of knowledge, we must admit that there are parts of it which appear to have the character of historical knowledge and parts which appear to resemble philosophy, at least in the character of some of the problems dealt with. Now it is sometimes claimed that religion as a body of knowledge rests on divine revelation (that is, the word of God as revealed to man). When it is thus construed, the ultimate warrant for religious doctrines or beliefs would lie in their having a supernatural origin; and religion would then be sharply distinguished from all other bodies of knowledge which have a purely natural origin—that is, which are acquired and possessed by man solely through his own efforts. Since the claim here being made is that philosophy is a branch of natural knowledge (and that this can be made clear by showing that it can have a method of its own for answering questions of its own), we need not for the moment be concerned with the relation of philosophy to religion conceived as supernatural knowledge, any more than we need be concerned with the relation of history or science to religion so conceived.²

² This is not to dismiss as without interest or importance the whole problem of the relation of any of these branches of natural knowledge to religion conceived as supernatural knowledge. We shall return to the question, particularly as it affects philosophy, at a more appropriate place later in this book.

Not everyone, however, accepts the view that religious doctrines or beliefs have a supernatural origin and should, therefore, be placed in a different category from all branches of natural knowledge. On

the alternative view of religion as knowledge which man acquires solely by his own efforts, where does it stand in relation to science, history, mathematics, and philosophy? I fear that my answer to this question may sound outrageous to certain ears, but there is no other answer I find tenable. When religious doctrines or beliefs are regarded as belonging to the category of natural knowledge, they are reducible or assimilable to historical knowledge in part and to philosophical knowledge in part, at least insofar as they have the character of testable and criticizable *doxa*. This is tantamount to saying that science, history, mathematics, and philosophy *exhaustively* represent all the distinguishable bodies of organized *natural* knowledge. Any set of doctrines or beliefs which falls under the category of natural knowledge must fall within the sphere of one or another of these four disciplines. To which one of these a particular doctrine or belief should be assimilated depends entirely on the type of question being asked and the type of method employed in arriving at the answer.

In what now follows I hope to show not only that philosophy can occupy a distinct place in the sphere of natural knowledge, but also that the principles by which the fourfold division is set up render it an exhaustive one. I shall proceed, first, by identifying the place of science in the picture; next, by differentiating history from science; then, by setting mathematics apart from both science and history; and finally, with all this done, by showing that there is still a distinct place that philosophy can occupy.

(1)

I shall use the word “science” to cover all the disciplines in the university catalogue which are usually called sciences, from astronomy to zoology. The enumeration of these particular subdivisions of science need not be exhaustive for the purpose of exemplifying what is here meant by science in general. In the sense intended, physics is a science, or a group of sciences; so, too, are chemistry and biology; so, too, are the social sciences.

While some of these particular sciences are experimental in the strict meaning of that term, not all are. All are empirical, but that is not their distinguishing mark. Historical research can also claim to be an empirical mode of inquiry, and it must be left an open question whether or not philosophy, too, is empirical—at least in the sense of testing its theories or conclusions by reference to experience. Nevertheless, it remains true that if we use this collection of disciplines to exemplify what we are referring to when we use the word “science,” then whatever is a science is also an empirical

mode of inquiry, though not every empirical mode of inquiry is a science.

This restriction on the use of the word debars us from calling mathematics a science or a group of sciences (including arithmetic, geometry, algebra). Clarity of analysis is served by this procedure. In deference to the prevalent convention of calling mathematics a science or a group of sciences, we might hereafter keep them distinct by referring to *empirical* science, on the one hand, and *formal* science, on the other. But I think that the nomenclature I have adopted will, in the long run, make things clearer. Since my aim is to show that science is only one of the four main departments of knowledge, and is not the only respectable branch of learning or mode of inquiry, no pejorative overtones attach to the statement that mathematics is not science.

With this restriction, we can ask, what characterizes science in general? What is common to science in all its forms? What unifying thread of method runs through all the subdivisions of science, tying them together as particular instances of one and the same mode of inquiry? The first part of the answer, but not the whole of it, is for me best expressed by using the words “investigation” and “investigative.” I have chosen “investigation” in place of “research” because that word is used in too many ways and too loosely. Of course, any word is subject to the same difficulties; all I can do is to petition the reader—at least while he is reading this book—to use the words “investigation” and “investigative” with the restricted meaning that I am now going to assign to them. This is solely to facilitate communication. No questions will be begged or foreclosed by his acceding to this request.

By “investigation” I mean the process of deliberately making observations either for the express purpose of answering certain questions or solving certain problems or for the purpose of testing hypotheses, theories, conclusions, or conjectures. Accordingly, I shall call a discipline “investigative” in method if it proceeds to answer its questions, solve its problems, or test its answers and solutions by means of investigation as thus defined.³

³ In this connection, cf. an interesting discussion of observation, investigation, and experimentation in Claude Bernard’s Introduction to the Study of Experimental Medicine, Part One, Chapter 1.

I have already pointed out that, according to the Humean disjunction, science and history belong in what has come to be called the sphere of “empirical” or “synthetic” statements; and I have further defined this sphere by saying that nothing belongs there which is

not testable by appeal to experience. By using the notion of investigation as just elucidated, it is possible to introduce a further distinction that is of the utmost importance for the fourfold division of human learning being proposed. What I have in mind is a distinction between two kinds of experience, one of which I am going to call “special experience,” the other “common experience.”

Concerned as we are with types of knowledge and modes of inquiry, it is necessary to understand that experience as such is neither a kind of knowledge nor a kind of inquiry. We may know, or know about, the things we experience, but the experience of them is not knowledge of them. It is one thing to have the experience of breathing or not breathing, quite another to know about respiration and asphyxiation. Experience does not consist of assertions; it is neither true nor false; it is simply whatever it is. In contrast, knowledge (*doxa*) consists of assertions which may be either true or false. Unless we distinguish between experience and knowledge, we cannot say that our knowledge is based on experience or that what we claim to know can be tested by experience. Similarly, unless we distinguish between experience and inquiry, we cannot speak of empirical and non-empirical modes of inquiry.

With this understood, let me draw a line between special and common experience. By “special experience” I mean the experiences we have as the result of investigative efforts on our part, *and only as the result of such efforts*. By “common experience” I mean, in sharp contrast, all the experiences we have without any effort of investigation on our part. These are the experiences we have simply by virtue of being awake—with our senses alive and functioning, with an awareness of our inner feelings or states, but *without* asking any questions, *without* trying to test any conjectures, theories, or conclusions, *without* making a single deliberate effort to observe anything.⁴

⁴ What I have here called “special experiences” are usually called “the data of science” or “scientific data.” But if the word “data” means that which is given to us without any effort on our part to get it, then it would be much more appropriate to use the word for our common experiences. These come very much nearer to being “data” or “givens.” Stated another way, the given is the immediate in the purely negative sense of not being mediated by prior thought or action. In this sense of immediacy, common experience is immediate experience, and every type of special experience is mediated.

I shall subsequently have more to say about the character of common experience. Here I shall confine myself to pointing out two things about it. One is that all men have common experience, but only some men—only those who investigate—have special experience. The other is that common experience is common not only in

the sense that *all men have it*, but also in the sense that it is, at least in its rudimentary lineaments, *the same for all men*. Different groups of investigators with different interests and problems do not share the same special experiences, as all men, at least to a certain extent, share the same common experience.

To say that investigation is the *sine qua non* of science and, consequently, that science depends on special experience (on the so-called data obtained by investigation) is not to overlook the tremendous role that reasoning, imagination, theorizing, the formation of concepts and hypotheses play in the development and advancement of science. While observations made in the course of investigation are indispensable to science as a mode of inquiry, they are far from being the whole of it. Nevertheless, to say that they are indispensable is to say two very important things negatively.

First, all the theorizing in the world, and the very best that the human mind can accomplish, could *not* by itself produce a single ounce of science without investigation and the data of special experience which it obtains. The scientific enterprise would never have got under way in the first place had men been content with the common experience of mankind.

Second, when we say that theories, hypotheses, reasoned conclusions, and conjectures are turned into scientific knowledge only by testing them empirically—that is, by looking for experiences which can falsify them—we always mean the special experiences which have been or can be obtained by investigation, *never* the common experience enjoyed and shared by men generally.

(2)

To sharpen the meaning of science, it is necessary to draw the line which separates it from history. I have already cautioned the reader about the word “history,” which is usually employed in the titles of books that contain artfully constructed narratives. What distinguishes such narratives from works of fiction (which are sometimes also called “histories”—for example, *The History of Don Quixote de la Mancha*, *The History of Tom Jones*, *a Foundling*) is that they are supposed to be based on “historical facts” or “historical information.” The information or facts about past events which historical narratives are based on or make allusion to, together with whatever can be inferred from such evidence, constitute items of historical knowledge and are the findings or conclusions of historical research. Since our concern here is with history as a type of

knowledge and a mode of inquiry, I must ask the reader to keep remembering that I am always using the word “history” as short for “historical research” and “historical knowledge” and never using it to refer to historical narratives, which often contain much more than can be known by means of research.

When the word is used in this way, it should be clear at once that history is an investigative discipline and in this respect is like science. Now suppose that we were to divide all disciplines or modes of inquiry into the investigative and the non-investigative. This would give us a division of all disciplines into two archetypes:

I. Investigative disciplines

These are dependent on the special experience or data obtained by investigation; negatively stated, they are unable to proceed on the basis of common experience alone

II. Non-investigative disciplines

To whatever extent or in whatever way these are dependent on experience, they are dependent on common experience alone; negatively stated, they are able to proceed without any special experiences whatsoever

This dichotomous division of all disciplines is as exhaustive as the Humean division, which gives us the following two archetypes:

I. Empirical disciplines

The sphere of synthetic statements; that is, statements that can be tested by appeal to experience

II. Formal disciplines

The sphere of analytic statements; that is, statements that cannot be tested by appeal to experience

At first glance, it might be supposed that the two divisions simply coincide, but in fact they do not, for they are based on quite different principles. The principle of the Humean division lies in the distinction between what *is* and what *is not* capable of being tested by appeal to experience, whereas the principle of the division which I have introduced, for the purpose of expanding the picture, lies in the distinction between special and common experience—that is, between what *is* and what *is not* dependent upon investigation.

We can now see that history stands with science on the same side of each of the two divisions. Whichever way the archetypes of knowledge are set up, history and science fall under the same ar-

chetype. That being so, how is history to be differentiated from science as a distinct branch of learning or mode of inquiry? Everyone knows the answer. Science and history have different objects of inquiry—not just materially different objects, but objects different in type. Hence, the questions they ask and the methods they employ to find the answers are also different in type.

Scientific inquiry asks the kind of questions which call for *general* statements or formulae as answers; these are statements about classes of objects, not about particular instances. Historical research, on the other hand, asks the kind of questions which call for statements about *particulars*; these are statements about singular happenings or existences which have unique temporal and spatial determinations. In addition, it should be pointed out that these particulars are all *past* events or *past* existences; for, if they were present and capable of direct observation, they would not be objects of historical research.

There is more which might be said about history, but I do not think I have omitted anything which bears on the line that separates it from science. Men who are historians sometimes formulate theories or hypotheses about general patterns or causes of historical change; but when they do so, they go beyond the sphere of historical research and become philosophers—or, as Vico would say, scientists—of history. Men who are scientists (such as geologists, paleontologists, evolutionists) sometimes attempt to establish the spatial and temporal determinants of particular past events or to describe a particular sequence of such events; but when they do so, they cease to be engaged in scientific inquiry and become engaged in historical research.⁵

Let me repeat: though history, like science, is investigative and depends on the data of special experience, and though history like science makes statements that can be tested by reference to such experience, the method of history is distinct in type from the method of science, even as the questions it asks and the objects it asks about are distinct in type. Negatively, historical research performs no experiments, collects no statistical arrays, and so forth, as a basis for generalization. These are in the nature of the things that scientists do.

⁵ Just as philosophy has pure and mixed questions, so do history and science. The solution of a problem that is a mixed question for science and history may involve a combination of scientific and historical knowledge and a combination of the methods of both disciplines. This would hold true for most of the problems in “natural history” which occur in such sciences as geology and paleontology. In contrast, the kind of questions that direct research in the fields of

social and political history are likely to be purely historical—that is, answerable without the employment of scientific knowledge.

Positively, historical research looks for and probes particular remains from the past; examines documents, traces, and monuments; sifts testimony; and the like. These are the kinds of things that historians do. Hence, though both are investigative, and though both submit their conjectures or conclusions to the test of experience (to the data obtained by investigation), history, by its method, can answer questions that science cannot answer; and science, by its method, can answer questions that history cannot answer.⁶

⁶ As an investigative discipline, history is coeval with science. The father of history, Herodotus, writing about the same time that the Ionian scientists were engaged in their physical inquiries, opens his book with the words, “These are the investigations of Herodotus of Halicarnassus. . . .” The Greek word from which our English word “history” is derived literally means “research” or “investigation.”

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THE GREAT IDEAS ONLINE

Is published weekly for its members by the

CENTER FOR THE STUDY OF THE GREAT IDEAS

Founded in 1990 by Mortimer J. Adler & Max Weismann

Max Weismann, Publisher and Editor

Ken Dzugan, Senior Fellow and Archivist

A not-for-profit (501)(c)(3) educational organization.

Donations are tax deductible as the law allows.