

Lesson 8: The Method of Philosophical Inquiry

The Evaluation of the Rational Method

In the previous lessons it has been repeatedly said that philosophical problems must be investigated by the rational method, and that the empirical method is of no use in this area. However, those who have come more or less under the influence of positivist thinking imagine that this is reason for the imperfection and worthlessness of philosophical thought, because they think that the empirical method is the only sure and scientific method and that no certain conclusions can be obtained by the rational method.

On this basis, some imagine that philosophy is the infancy of the sciences and they consider it to be the duty of philosophy to present hypotheses for solving scientific problems, and even Karl Jaspers, the German existentialist philosopher, writes: “Philosophy yields no certain knowledge and as soon as knowledge is accepted by all as certain with decisive reasons, then that knowledge cannot be considered philosophical, but rather, it at once becomes transformed into scientific knowledge.”

Others who have been intimidated by Western industrial and scientific progress reason that Western scientists have achieved bewildering and daily increasing scientific progress only when they abandoned the deductive and rational methods and began to employ the inductive and empirical methods.

Evolutionary progress was especially hastened since the time of Francis Bacon, who emphasized the empirical method. This is the best reason for the superiority of the empirical method to the rational method.

Unfortunately, some of the new Muslim thinkers and imitators who accept this reason would hang a medal of honor on the chest of Muslim scholars as if they had been inspired by the Noble Qur’an to confront and challenge Greek culture and to replace the deductive and rational method by the inductive and empirical method, so that later, the influence of Islamic culture in Europe would cause the awakening of Western scientists and their awareness of this victorious method.

This fantasy has gone so far that some of the ignorant imagine that the research method which is presented by the Noble Qur'an for solving all problems is none other than the empirical and positivist method. They even imagine that the problems of theology, fiqh (Islamic jurisprudence) and morals must be investigated by this method.

Of course, it should come as no surprise that those whose eyes are fixed on that which is given by the senses, who have closed their eyes to that which is beyond sensory perception, who have denied the power of reason and rational understanding and who consider rational and metaphysical concepts to be invalid and meaningless should also deny any place for philosophy among the human sciences.

They consider it to have no role but explaining some terms current in languages, and that its dignity must be reduced to that of linguistics. They present its function to be that of offering hypotheses for the solution of the problems of the sciences.

This is most unfortunate, that someone who calls himself a Muslim, who is acquainted with the Qur'an, should relate such intellectual perversions and decadence to the Noble Qur'an. They consider this to be cause for the honor of Islam and for Muslim scholars.

Here, we do not intend to criticize positivist ideas, which are the basis of such fantasies, and in comparative discussions these will become more or less familiar. However, we consider it necessary to explain more about the rational and empirical methods so that the weaknesses of the arguments which have been made in this area become clear.

Analogy, Induction and Deduction

Attempts to discover what is unknown on the basis of what is known are of three forms:

1. Inference from particulars to another particular, that is, when two subjects are similar to one another and a judgment about one of them is known, we may infer the same judgment about the other, on the basis of the similarity which exists between the two of them. For example, if two people are similar and one of them is intelligent, we say that the other is also intelligent.

In logical terms this is called *tamthil* (analogy) and in the terminology of *fiqh* (Islamic jurisprudence) it is called *qiyas*. It is obvious that the mere similarity of two things does not imply that the common judgment about them is certain, and thus, analogy is of no use for obtaining certainty and has no scientific worth.

2. Inference from particulars to a universal, that is, when we investigate the individuals of one essence and it is found that they share a common property, we may infer that this property holds of the essence, and that it occurs in all of its instances. In logical terms this is called induction, and it is divided into two kinds: complete induction and incomplete induction.

In complete induction it is assumed that all the individuals under consideration are investigated and that

their common property is observed in all of them. It is clear that in practice this is impossible, for even if all the present instances of a whatness could be investigated, there would be no way to investigate all past and future instances.

At the very least, the possibility would remain that in the past or in the future there could be instances of that essence. Incomplete induction occurs when many of the instances of whatness are observed and a property common to them is attributed to all individuals of that essence.

But this intellectual inference will not lead to certainty, for there will always be the possibility, no matter how weak, that some of the individuals which have not been investigated lack this property. Therefore, in practice, certain and indubitable conclusions cannot be obtained by induction.

3. Inference from universals to a particular, that is, first a predicate is proved for a universal subject and on the basis of this the judgment about the particulars of that subject becomes clear. In logic this sort of intellectual inference is called qiyas (deduction), and it yields certainty under the conditions that its premises are certain and the deduction also has a valid form. Logicians have allocated an important section of classical logic to the explanation of the material and formal conditions of certain deduction, proof.

There is a famous problem which has been raised regarding deduction. If a judgment is known to hold generally, the application of that judgment to all instances of the subject will also be known. But then there would be no need for the formulation of a deductive argument. The scholars of logic have answered that a judgment for a major premise may be known in summary form, but in the conclusion it becomes known in detail.

Meditation on the problems of mathematics and the ways of solving them shows how useful deduction is, for the method of mathematics is that of deduction, and if this method were not useful, none of the problems of mathematics could be solved on the basis of mathematical principles.

A point which must be mentioned here is that in analogy and induction there is a hidden form of deduction, but nevertheless, in the cases of analogy and incomplete induction this deduction does not constitute a proof and is of no use for obtaining certainty.

If, however, this sort of hidden deduction did not exist, there could be no form of inference at all, no matter how speculative. The hidden deduction of analogy is this: this judgment is true for one of the similar objects, and every judgment which is true of one of a pair of similar objects is also true of the other.

It is to be noted that the major premise of this deduction is not certain. In incomplete induction there is a similar speculative deduction, that is, there is a suppressed major premise in it such as: "Every judgment which is proved for many individuals of a whatness is proven for all the individuals of that essence."

Even if induction is considered valid by way of the probability calculus, it will still need deduction. Likewise, empirical propositions are in need of deduction if they are to take the form of universal propositions, as is explained in the books of logic.

It is to be concluded that reasoning about a problem always must take the form of an inference from universal to particular, although this intellectual inference will sometimes be performed explicitly and clearly, as in logical deduction, and sometimes in a hidden form, as in analogy and induction.

Sometimes it yields certainty, as in deductive proofs and complete induction, and sometimes it does not bring certainty, as in rhetorical and polemical deductions, analogy and incomplete induction.

Rational Method and Empirical Method

As was previously mentioned, deduction brings certainty when in addition to having a valid form, and satisfies logical conditions, each of its premises is also certain. If certain propositions themselves are not self-evident, inevitably they should lead to self-evident ones that are they should be inferred from propositions which have no need of rational proof.

Logicians have divided self-evident propositions (badihiyyat) into two general groups: primary self-evident propositions and secondary self-evident propositions. One of the types of secondary self-evident propositions is considered to be “empirical” (mujarrabat), that is, propositions which are obtained by experience.

According to them the experience is not a method which is the opposite of the deductive method, and it not only includes the deductive method but it may also serve as one of the premises in another deduction. Therefore, it is not proper to equate induction and experience nor to take deduction and experience as opposites.

Of course, experience has a variety of other meanings, but this is not the proper place to discuss them. However, taking the empirical method to be the opposite of the rational method is based on considering the rational method to be limited to the deductive method where the only premises are those of pure reason.

These premises are those which are either primary self-evident propositions or are implied by them (not merely by empirical propositions), such as all of the syllogistic proofs which are employed in first philosophy, mathematics and for many of the problems of the philosophical sciences.

The difference between this and the empirical method is not that one of them employs deduction and the other induction. Rather, the difference is that the rational method is supported solely by primary self-evidence while the empirical method is supported by empirical premises, which are considered to be secondary self-evident propositions. Far from being a flaw in the rational method this is the greatest distinction of the rational method.

Conclusions

With the points which have been mentioned here in summary form, it becomes clear how weak and far from the truth are the positions mentioned [of the positivists], because:

Firstly, it is not correct to equate experience and induction.

Secondly, it is incorrect to consider the empirical method as the opposite of the deductive method.

Thirdly, neither induction nor experience is without need of deduction.

Fourthly, both the rational and empirical methods are deductive, and the distinction of the rational method is that it relies upon primary self-evident propositions, contrary to the empirical method which relies upon empirical propositions, premises whose value never reaches the level of the value of primary self-evident propositions.

It should be noted that this topic requires further explanation and investigation; and some of principles of classical logic are debatable, while we have merely indicated the materials necessary to the extent required to dispel some fantasies in this regard.

The Scope of the Rational and Empirical Methods

Despite the advantages which the rational method has over the empirical method, it is not applicable to all sciences, and likewise, the empirical method has its own specific scope and cannot be applied to philosophy and mathematics.

Of course, this division between the ranges of these methods is not conventional, but is required by the nature of the problems of the sciences. The kind of problem in the natural sciences requires that they be solved by the empirical method and from premises obtained by sensory experience, for the concepts which are used in these sciences and which make up the subjects and predicates of their propositions are those which are obtained from sensible things. Naturally, sensory experiences are also required to prove them.

For example, merely by using philosophical and rational analysis, no philosopher, no matter how much mental effort he makes, can discover that bodies are composed of molecules and atoms, or what elements must be combined to form a given chemical matter and what properties it will have, or what living existents are composed of, and under what material conditions they survive, and what things cause sickness in animals and humans, and how various diseases may be cured and treated, so this sort of problem and thousands of others like them can only be solved by the empirical method.

On the other hand, the problems which are related to immaterial things can never be solved by means of sensory experience, nor can they be denied by the empirical sciences. For example, with what sensory

experience, and in what laboratory, and by means of what scientific instruments can the spirit and immaterial things be discovered or their absence be established?

Furthermore, it is the propositions of first philosophy which are composed of secondary philosophical intelligibles, that is, of concepts which are obtained by means of mental effort and rational analysis. It is only possible to prove or disprove their relations or unity by means of reason. This sort of problem must be solved by the rational method and by reliance on rational self-evident propositions.

From this, it becomes clear how weak the position is of those who confuse the ranges of the empirical and rational methods and who try to establish the superiority of the empirical method over the rational method, and who imagine that the ancient philosophers only used the rational method, and that it is for this reason that they were unable to make successful scientific discoveries.

However, the ancients also used the empirical method in the natural sciences, and among them Aristotle, with the help of Alexander of Macedonia prepared a large garden in Athens, and grew various kinds of plants and animals there, and he himself observed their states and characteristics.

The rapid advance of modern scientists must be considered to be the result of the discovery of new scientific instruments, their endeavors to solve natural and material problems, and the focusing of their thoughts and ideas on discovery and invention, not a result of a turning of their backs on the rational method and its replacement by the empirical method.

Let it not remain unsaid that in cases in which the means and instruments of experience were insufficient for solving a given problem, the ancient philosophers tried to compensate for this deficiency by postulating hypotheses, and probably, in order to confirm or explain these hypotheses they sought the help of the rational method.

However, this was due to the immaturity of their philosophical thought and the inadequacy of their empirical instruments, not an indication of their failure to heed or underestimation of the empirical method, and this is no reason to think that the function of philosophy is to provide hypotheses and the function of science to confirm them by scientific methods.

Basically, in that period, there was no distinction between science and philosophy, and all of the empirical sciences were also considered to be parts of philosophy.

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