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## TESTS OF TRUTH IN PHILOSOPHY

MORTIMER J. ADLER

1

The definition of truth as the correspondence of the mind with reality presupposes philosophical realism. Idealists denying a reality independent of the mind lack anything independent of the mind to serve as its measure.

To avoid a confusion that runs through philosophical controversies about truth, it must be remembered that the correspondence theory of truth is not itself a test of truth. It merely states the definition of truth—what it is. This underlies all the empirical and pragmatic tests of truth. As we shall see, the logical tests of truth, such as coherence or the absence of intrinsic contradiction in a theory, do not presuppose the realist's definition of truth as agreement or conformity of our thinking with the way things, in fact, are. That is why idealists tend to define truth entirely in terms of coherence.

The definition of truth in terms of correspondence does not apply to the whole of philosophy, first because in the sphere of second-order knowledge, philosophical analysis, like mathematics, does not consist in thinking about matters of fact and real existences; and secondly, because it applies only to propositions that are descriptive and not to propositions that are prescriptive.

Let me explain the distinction between descriptive and prescriptive propositions. A descriptive proposition is one which asserts that something exists or has certain properties or attributes. It asserts that that which is, is; or that that which is not, is not. Obviously, such assertions correspond to that which is or is not. The contrary assertions—the denial that that which is, is, or that the affirmation that that which is, is not—obviously do not correspond and, therefore, are false. But prescriptive propositions—propositions that declare what ought to be sought, desired, or chosen, or what ought to be avoided, not desired, nor chosen—have no reality with which to correspond.

In what sense, then, can they either be true or false? The failure to find an answer to this question has resulted in the twentieth-century view of ethics as noncognitive—that is, not a branch of objective valid knowledge.

An answer is to be found in one sentence in Chapter 2 of the sixth book of Aristotle's *Ethics* and appears to be known only to some of his later disciples. There Aristotle points out that the truth of injunctions (which contain the words “ought” and “ought not”) cannot correspond to reality. Their truth, he writes, consists in their conformity to right desire.

This is not the place to explain how this definition of prescriptive truth works in moral and political philosophy and serves to establish them as objectively valid branches of knowledge. [1] I mention it here only to indicate the limited applicability of the correspondence definition of truth: not to prescriptive knowledge, as we have just seen, and also not to second intentional, or second-order, philosophical analysis. [2]

One further preliminary clarification is necessary before we consider the various tests of truth. Strictly speaking, the correspondence definition of truth applies to propositions that are entertained by the mind with suspended judgment. These are either true or false and immutably so; nor do we ever say of them that they are in the sphere of doubt. They are either true or false but never more or less probable. [3]

When judgment is not suspended, and the mind judges correctly or incorrectly about the truth or falsity of propositions under consideration, such judgments may be either highly probable (i.e., beyond a reasonable doubt) or just more probable than contrary judgments, but they are never beyond the shadow of a doubt. They change from time to time, as new empirical evidence is found or new and better reasons are given for altered judgments.

If we never applied the words “truth” and “falsity” to such judgments, but always spoke of them as “correct” or “incorrect,” we would not have to say that when we refer to such judgments as true or false, as we habitually do in everyday speech, the correspondence definition of truth applies to them differently from the way it applies to propositions that are entertained with suspended judgment.

In the case of judgments, their truth consists in correctly affirming as true propositions that are true because they correspond with reality. When we incorrectly judge a proposition that is true to be false (as great physical scientists did with respect to the divisibility of atoms), then instead of saying that our judgment is incorrect, we say that it is false. In other words, truth and falsity as said of our correct and incorrect judgments is truth and falsity by one remove from correspondence with reality.

## 2

Tests of truth are either empirical or pragmatic or they are logical. In both cases, our sensitive powers and our rational processes may be involved, but in tests that are empirical and pragmatic, sensory experience, usually perceptual, is indispensable.

The empirical and pragmatic test of truth clearly derives from the correspondence definition of it. Let us suppose that you find yourself asleep in a hotel room that has three doors, one to the hallway, one to a clothes closet, and one to the bathroom. You awaken, fail to turn on the light, and wanting to go to the bathroom, your thinking about which door opens into the bathroom turns out to be incorrect or false. How did you find that out? By opening the wrong door and bumping your head against clothes in the closet. Your false or incorrect judgment has been tested by your action. Your action does not work out successfully.

Idealist philosophers in the time of William James, such as F. H. Bradley of Oxford, vilified him for defining truth pragmatically as

that which works successfully or pays off in action. They failed to understand that James was offering a pragmatic test of truth, not a definition of it, which, for him, consisted in correspondence with reality.

Another empirical test of truth is offered by Professor Karl Popper. It applies to all generalizations in science or philosophy; that is, statements that contain the word “all” or “always.” In his view, the test of truth with regard to such statements is to be found empirically in the perception of one or more negative instances.

The judgment that all swans are white is falsified by one negative instance—the perceptual experience of one black swan. Generalizations that time and time again are exposed to the possibility of falsification by contrary perceptual experience and escape such falsification are correctly judged by us to be true with an increasing degree of probability, but they never attain certitude. They always remain in the sphere of doubt. They are never beyond the shadow of a doubt. [4]

### 3

Of the four tests of truth in philosophy, only two are empirical. They are applicable to science as well as to philosophy. They are, as we have seen, the pragmatic test of whether a judgment, leading to action on our part, has a successful outcome; and the test of generalizations—whether or not the generalizations are falsified by the perception of one or more negative instances.

All the remaining tests are logical, and here the principle of inner coherence, not correspondence with reality, is operative. Nevertheless, the correspondence definition of truth is still presupposed because the principle of noncontradiction (which governs coherence) is an ontological as well as a logical principle. In other words, coherence, or the absence of contradiction, is a sign of truth in our thinking because there are no contradictions in reality. Hence only a coherent theory or doctrine can correspond with reality. [5]

When in the claims to truth made by historians, scientists, or philosophers, incoherence is found by virtue of some incompatibility among the elements of what is being proposed for consideration, the remedy, of course, is the elimination of one or the other of the incompatible elements, thus resolving the contradiction. It is in this way that hypotheses, theories, or doctrines are logically corrigible and amendable, becoming thereby not just true, but truer than they had been before.

The most all-embracing of all applications of the principle of coherence is the one that applies to branches of first-order knowledge. In this application, the principle affirms the unity of truth. This, fully understood, declares that all the branches of human knowledge are interdependent. Consequently, even though each branch has its own mode of inquiry and method that enables it to answer certain questions and not others, thereby possessing autonomy, that autonomy is relative and limited, not absolute.

Truth is a whole that has many parts, parts that differ from one branch of knowledge to another by virtue of each branch's mode of inquiry and method of posing and answering questions. We may even include in this whole of truth a part that consists in the dogmas of religious faith, but only, of course, if factual-logical truth is claimed by a religion.

The different modes of inquiry and the different methods of the relatively autonomous branches of knowledge do not exempt them from the application of the principle of coherence. Something cannot be claimed to be true in philosophy or religion that is inconsistent with what is claimed to be true in history or science. The fact that history and science cannot answer the questions that fall within the province of philosophy's mode of inquiry and its method does not exempt it from being challenged and discredited by knowledge available to history or science.

How can this be, it may be wondered, if the questions to be answered are purely philosophical? To say, that a question is purely philosophy is to say that it can be answered only by philosophy's mode of inquiry. Hence if history or science cannot answer such questions, how can they challenge or discredit the answers given by philosophy?

The solution is twofold. First, in the case of purely philosophical questions, the answer given may include assertions about matters of fact that fall within the purview of science. Secondly, not all the questions that philosophy tries to answer are purely philosophical. Some are mixed questions, falling within the province of both science and philosophy. Let me now give examples of these two cases.

#### 4

The question whether a spiritual Supreme Being exists is clearly a purely philosophical question. The attempt to prove or disprove

that God exists is entirely a philosophical effort. But let us suppose that one of the premises in the argument attempting to prove God's existence is a proposition asserting that the cosmos is radically contingent. It is capable of not being. One indication of this is that it is capable of being otherwise than it is. The crucial proposition in the proof of God's existence as the exnihilitating cause of a radically contingent cosmos is the statement that what is capable of being otherwise is capable of not being at all.

The truth of this philosophical statement may be beyond a reasonable doubt, but it certainly is not beyond the shadow of a doubt. The question of fact involved—the question of whether chance, randomness, and contingency are present in this cosmos—is a question about which the natural sciences, biology as well as physics, have something to say.

I think they confirm the radical contingency of the cosmos, but others may think the opposite; and if, at a given time, the received opinion among scientists competent to judge is that this cosmos is not capable of being otherwise (that, in fact, it is necessarily determined to be the way it is), then it follows that a proof of God's existence that has been developed in philosophical theology has been, to that extent, discredited; and philosophical theology must get to work revising its proof.

## 5

For an example of a mixed question involving both empirical science and philosophy, let us turn from theology to philosophical psychology. The question, which both empirical and philosophical psychology try to answer, is about the intellect in relation to the brain.

There is no question that all the sensory powers of the human mind, as well as the minds of brute animals, are seated in bodily organs. We cannot see without having healthy eyes to see with, and we also see with them. The visual apparatus along with its connections in the cerebral cortex is the bodily organ of vision. But is the brain the bodily organ of intellectual thought? Not if we do not think with our brains, even though we cannot think without them.

The opposite philosophical answer is the materialist answer, either denying that the intellect is radically distinct from all our sensitive powers or asserting that conceptual thought is an activity of the human brain. This answer is given not only by philosophers who

are materialists, but also by neurophysiologists, experimental psychologists, and experts in the field of artificial intelligence.

At the moment, the issue remains unresolved. But the great computer expert A. M. Turing proposed a way to test whether artificial intelligence machines can think in a completely human way. The test involves asking a human being and an AI machine, both behind a screen, a long series of questions. The AI machine and the human being are instructed to try to deceive the interrogator. If the AI machine succeeds in doing this, so that the interrogator can find no discernible difference between the answers given by the human being and the AI machine, then, according to Turing, we are justified in concluding that a machine has been built that can think in a thoroughly human fashion. Since the machine is built out of entirely material parts, the immaterialist answer must be dismissed as false.

At present computer technicians have not yet built a machine that can successfully pass the Turing test. So far they have tried and failed, but they can try again. Each time they try and fail it becomes more and more probable that the immaterialist position in philosophical psychology is the correct solution to the issue about the intellect in relation to the brain.

The future is long and unpredictable. The philosophical arguments for the immaterialist position are strong, but that position will always remain in the realm of doubt. The continued failure of the computer technologists to produce an artificial intelligence machine that can pass the Turing test increases the probability that the position of the philosophical immaterialist is true, or at least truer than the position taken by its adversaries. [6]

## 6

It may be asked why, when conflicts occur between empirical science and philosophy, the resolution of them tends to favor science. It is on the side of science, not philosophy, that we tend to think that the more probable truth lies. Why?

Let us remember that while both science and philosophy appeal to experience, science is investigative and philosophy is not. The experience that philosophy appeals to is the common core of everyday experience that everyone shares, whereas scientific investigation turns up specialized experience—the data gathered by investigative observation, usually aided by powerful instrumentation.

That is why we tend to favor the conclusions reached by investigative science and allow conclusions it has established at a given time to discredit philosophical assertions with which they are incompatible. However, the interdependence of science and philosophy works both ways. Scientists as well as philosophers make mistakes that the others correct. The mistakes usually consist in philosophers or scientists erroneously exceeding an authority that is limited—limited by their mode of inquiry and the method they employ to answer questions within their province and nothing outside it.

This interdependence has worked in opposite directions in different epochs. In antiquity and the Middle Ages, philosophers could not possibly have foreseen the extraordinary discoveries that would be made by scientific investigation in modern times, from the seventeenth century to the present day. Such ignorance on their part may be excusable, but it led them to exceed their rightful authority by venturing to answer questions beyond their powers because investigation was needed to answer them. They should have waited for science to answer them later.

An example of this is Aristotle's wrong answer concerning the difference between the matter of celestial and terrestrial bodies. His answer was based on the common human experience of the heavens observed without telescopes and other means of scientific observation. Another example is the wrong answer given by Descartes concerning force and momentum in the physics of moving bodies.

On the other hand, in modern times empirical scientists who are philosophically ignorant or naive presume to make statements that their mode of inquiry does not give them the authority to assert. For example, in twentieth-century cosmology many physicists of eminence have asserted that the big bang 18 billion years ago can be interpreted as the beginning of the cosmos and of time, when they should have said more precisely that it is for them the beginning of a physically measurable cosmos and of measurable time.

Some even go so far as to talk about creation without having understood that creation is exnihilation. They proceed in ignorance of philosophical theology and do not know that any discussion of creation must assume a cosmos without a beginning or an end in time, and that creation must be understood as making something out of nothing. It is not just an explosive transformation of the state in which matter exists—the so-called big bang. Here, then, it is the philosopher who has the authority to correct a mistake made by



those scientists who have strayed beyond their sphere of competence.

## 7

The principle of coherence also operates as a test of truth in a way that is peculiar to philosophy. The reason this is so is that only philosophy claims to have a hold on truth in different modes—the descriptive mode of is or is not statements (which it shares with science) and the prescriptive mode of ought or ought not statements (only within the province of philosophy to assert). In *The Conditions of Philosophy*, I called this the “is-ought” test of truth.

In that book I gave the following example of how this test works. I wrote: Does a philosopher’s view of the nature of things support or undermine his view of how men should conduct their lives? In the one case, he would be free from inconsistency; in the other, not. For example, a philosopher who denies the existence of individual beings which retain their identity over a span of time cannot consistently hold that men should be held morally responsible for acts which they performed at an earlier time. If there are no such enduring entities, the agent who performed a certain act at an earlier time cannot be identical with the individual who is to be charged at a later time with moral responsibility for that act. [7] Another example is that of the determinist who denies that human beings have free choice and yet, when he comes to prescribing human conduct, makes statements about how they ought to behave. It has been said that “ought implies can.” If injunctions about how we ought to behave are true, then it must also be true that we freely choose to obey those injunctions or to violate them. Such inconsistencies cannot be resolved by taking either horn of the dilemma and retracting that statement. The ought has a prior claim on our allegiance.

Our common experience of living and acting gives a certain primacy to prescriptive over descriptive truth. The denial of moral responsibility is immediately falsified by our common experience of human life, in which we feel responsible for our acts and hold others responsible for theirs. The primacy of the prescriptive over the descriptive gives special force to the “is-ought” test. It requires us to reject as unsound any philosophical theory about what is or is not which undermines our effort, on the prescriptive side, to deal philosophically with how men ought to behave.

## 8

Still other examples of internal inconsistency in philosophical thought raise questions about which of the incompatible views should prevail.

A sound philosophical theory should be free from internal inconsistencies or theoretical embarrassments. Their presence indicates serious flaws or defects—some mixing of error and truth. The “swerve of the atoms,” invoked by Lucretius to explain free will, is a scandalous embarrassment to a theory that attempts to explain everything in mechanical terms. The necessity for psychophysical interaction to explain sensation and voluntary movement is an equally scandalous embarrassment to the Cartesian theory of mind and body as separate substances. Bishop Berkeley’s introduction of “notions” to account for our knowledge of spiritual beings is inconsistent with his basic principle that all the objects of human knowledge are “either ideas actually imprinted on the senses, or else such as are perceived by attending to the passions and operations of the mind, or lastly, ideas formed by the help of memory and imagination.” The mind, soul, or spirit that knows or perceives is not itself an object of knowledge and cannot be, since we can have no idea of it. Nevertheless, Berkeley is compelled to assert that “we have some notion of soul, spirit ... inasmuch as we know or understand the meaning of these words.”

Berkeley also affords us another example of internal inconsistency, one that is present in all nominalist attempts to account for “general ideas,” or the meaning of common names, while at the same time denying the existence of abstract ideas. The bishop finds himself forced to say that “an idea which, considered in itself, is particular becomes general by being made to represent or stand for all other particular ideas of the same sort.” The nominalist’s embarrassment lies in the impossibility of his explaining how we can know that two or more particular ideas are “of the same sort” when we can have no idea whatsoever of any sorts or kinds.

The nominalist’s inability to escape inconsistency appears in another way in Hume. The “absurdity of all scholastic notions with regard to abstraction and general ideas,” he tells us, will be seen by anyone who tries “to conceive a triangle in general, which is neither Isosceles nor Scalenum, nor has any particular length or proportion of sides.” But when, in another place, he treats mathematics, he tells us that “though there never were a circle or triangle in nature, the truths demonstrated by Euclid would forever retain their certainty and evidence.” He offers as an example the proposi-

tion about the equality between the square on the hypotenuse of a right triangle and the sum of the squares on the other two sides; but he overlooks the fact, as he must, that this geometrical theorem applies to all right triangles, regardless of the length of the sides; and he must ignore the fact that other Euclidean theorems deal with the properties of triangles in general (prescinding from the special properties of triangles which are equilateral, scalene, or isosceles). How geometry can treat such objects when it is impossible for us to conceive of them is a matter that the nominalist must always find embarrassing to explain.

Still one more example of an embarrassing inconsistency is to be found in the ethical theory of the Roman Stoics. On the one hand, central to their doctrine is the proposition that nothing which happens to you from external sources can injure you if you interpret it as not doing so. On the other hand, the Stoics say the virtuous man will be just to others and refrain from injuring them. But injustice on the part of one individual to another is impossible if he cannot be injured by what impinges on him from without. [8]


## 9

Let us pass now from philosophical doctrines to philosophical analysis—from first to second intentions. In the sphere of thinking about thinking itself—not thinking about objects in the external sensible world but thinking about objects of thought and about the branches of knowledge and other products of intellectual work—the correspondence theory of truth does not apply. Coherence or logical consistency still remains an applicable test of truth, but by itself it is not enough to measure the worth or excellence of the philosophical effort.

One effort to understand ideas or objects of thought is better than another to the extent that it achieves clarity and comprehensiveness. Clear and adequate understanding has, in the sphere of second intentional thinking, an excellence that is appropriate to that sphere of thinking. It is the counterpart of truth by correspondence with reality in the sphere of first intentional thinking.

Mathematicians use the words “simple” and “elegant” for proofs, arguments, or formulations that they wish to praise. Philosophers might borrow these terms from mathematics and regard simplicity and elegance, along with clarity and adequacy, as the criteria of excellence in the case of philosophical work to which the criteria of truth do not apply.

Returning once more to philosophical doctrines that claim truth for themselves, it is important to remember that the philosophical knowledge with which we are dealing is *doxa*, not *epistémé*—that is, it is knowledge in the sphere of doubt, never knowledge beyond the shadow of a doubt. To regard knowledge as in the sphere of doubt does not amount to a skeptical denial of knowledge.

Since such knowledge is always corrigible and amendable, we should never claim for a philosophical doctrine, as it is formulated at a given time, that it is true. To call it true smacks of a finality and incorrigibility that it does not possess. It would, therefore, be better to make the more modest claim that, at a given time, it is truer than competing alternatives, always bearing in mind that at a later time it may become truer or less true relative to alternative philosophical doctrines. 

## NOTES

- 1 The explanation will be forthcoming in Part Two, Chapter 9.
- 2 This second limitation of the correspondence definition of truth will be discussed in Part Three.
- 3 An example of such an immutable and certain truth is the proposition that atoms are divisible into elementary particles. The production of atomic fission in this century falsifies the proposition that was judged to be true (i.e., that atoms are indivisible units of matter) by philosophers and physical scientists from Greek antiquity down to the fourth quarter of the nineteenth century.
- 4 That is why, with the exception of a small number of self-evident truths that do have certitude, philosophical knowledge is not what the Greeks thought of as *epistémé*, but rather what they thought of as *doxa*—knowledge that remains in the sphere of doubt.
- 5 For the defense of this against the Copenhagen interpretation of Heisenberg's principle of indeterminacy in quantum mechanics, see my book *Six Great Ideas*, pp. 212-18; and also my *Truth in Religion: Note to Chapter 4 on reality in relation to quantum theory*, pp. 93-100.
- 6 See my *Intellect: Mind Over Matter*, Chapters 4 and 5.
- 7 *The Conditions of Philosophy*, pp. 195-96.
- 8 See the *Encheiridion* of Epictetus.

Chapter 5 from his book *The Four Dimensions of Philosophy*.

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