

3

NATIVE FOLK COSMOLOGIES VERSUS WESTERN PHILOSOPHY AND SCIENCE

And then the earth arose because of them, it was simply their word that brought it forth. For the forming of the earth they said "Earth." It arose suddenly, just like a cloud, like a mist, now forming, unfolding. Then the mountains were separated from the water, all at once the great mountains came forth. By their genius alone, by their cutting edge alone they carried out the conception of the mountain-plain, whose face grew instant groves of cypress and pine.

Popol Vuh, chapter 1

The fierce and bloody conflict that marked the Spanish and Portuguese conquest of America was of course a conflict of cultures as well as of individuals. In this chapter, we shall explore some aspects of that conflict with an eye to determining whether the indigenous peoples had reached an understanding of the natural world that could stand comparison with Western conceptions grounded in philosophy and science. To the extent that some ele-

ments of non-Western worldviews persist among indigenous societies of the Americas today, we too must ask about these radically different ways of understanding the world; thus the possibility of making such comparisons remains of significant interest to us.

There are, however, two separate issues here. Although the evidence examined in Chapters 1 and 2 does not show that indigenous Latin Americans thought in ways sharply at odds with those of Europeans, whether they reached an understanding of the natural world similar to that afforded by Western philosophy and science is a different question. Since the cultures that met in October 1492 were utterly alien to each other, it is plausible to think that their conceptions of nature may also have differed so greatly as to be incommensurable. Yet to explore this issue, we have no choice but to proceed with the tools available in our culture, which are Western philosophy and science; thus it seems we face a challenge. On the one hand, can our conclusions about the cognitive achievements of a radically different culture be both justified and objective? And on the other, would not any affirmative answer to that question amount to ethnocentrism in assuming our own ways of thinking to be preferable? It will be shown, however, that there is a view, "cognitive pluralism," that avoids both skepticism and relativism about such comparisons without falling into ethnocentric bias.

Understanding the Natural World: Latin America and the West

The native peoples of Latin America have left abundant evidence of their interest in the question of the origins of the natural world. For instance, the Mayan book *Popol Vuh* is an attempt to provide an understanding of these origins (parts 1 and 4), together with a narrative of their history with a detailed chronology of their kings down to 1550 (parts 2, 3, and 5). Although written during the mid-sixteenth century, probably between 1554 and 1558, it is usually thought to record teachings already in the oral tradition of the Quichés, a Mayan people living northwest of what is today Guatemala City, before the arrival of Europeans. According to a plausible hypothesis, the original *Popol Vuh*, now lost, was the work of several authors

and quite likely contained illustrations and hieroglyphs to supplement the narrative.¹ The modern English text is a translation of a Spanish manuscript in Chicago's Newberry Library that seems to have been composed between the years 1701 and 1703 by the parish priest of Chichicastenango (in highland Guatemala), Francisco Ximénez (sometimes spelled Jiménez). Beyond doubt, the *Popol Vuh* is among the most comprehensive documents showing how the Mayans understood the origins of the natural world.

In Western culture today, cosmological explanations of the origins of the universe are scientific accounts, belonging to the domain of astrophysics. To distinguish such explanations from those that do not belong to science, we shall refer to the latter as "folk cosmologies." Since mythical accounts of the origins of the universe of the sort offered in the *Popol Vuh* are not scientific explanations, they are clearly not cosmologies in the contemporary Western sense. But could these folk cosmologies amount to philosophical explanations, perhaps in a rudimentary form? If so, then at least one group of Latin American indigenous peoples appears to have developed a philosophical theory. However, not all folk cosmologies qualify as philosophical explanations, so we must look closely at the account given by such cosmologies to determine what kind of understanding is provided by them.

Folk Cosmologies in Latin America

Let us first consider the Mayan cosmological account offered in the *Popol Vuh*. In the beginning, it tells us, there was nothing but the gods of the sea ("The Maker," "The Modeler," "The Bearer," "The Begetter," "The Heart of the Lake," and "The Heart of the Sea") and those of the sky ("The Sovereign Plumed Serpent," "The Heart of the Sky," "The Heart of the Earth," "The Newborn Thunderbolt," "The Sudden Thunderbolt," and "The Hurricane"). These gods debated among themselves how to create the earth and its living things. The former emerged from the water, and the latter, by successive processes of sowing and dawning.

Creating people, however, was the most difficult challenge of all, for the gods intended them to be creatures capable of walking,

working, praying, talking, and praising them, but they failed at first to achieve beings that could do all these things. According to the narrative, the gods succeeded only after four attempts. In the first attempt, the ancestors of modern reptiles were created, but they had no arms to work and were unable to speak. Next, the gods made beings out of mud, but these could not praise them, walk, or even keep their shape—which was lost when they came in contact with water. Then the gods tried making creatures out of wood who were to be the ancestors of our monkeys. Such beings could talk and multiply themselves but could neither move easily nor praise the gods, so they were ultimately destroyed by a hurricane. But in the fourth attempt, the Mayan gods at last succeeded in creating humans. These beings, made out of a dough of yellow and white corn taken from a mountain, could do everything their creators intended. The first people were four men, whom the *Popol Vuh* calls the “mother-fathers” of the Quichés, probably because they were believed to be the original four patriarchs of their ancestral lineages.

The Mayans were not the only native group of Latin America to leave a fully developed folk cosmology. The Nahuas, for example, had a strikingly similar cosmology. This ancient Aztec group believed that the

first humans were made of ashes, and their end came as a result of water, which changed them into fishes. The second class of humans consisted of giants who, notwithstanding their great size, were . . . weak because . . . whenever they dropped to the ground, for whatever reason, “they fell forever.” The people who existed during the third Sun, or Age of Fire, likewise had a tragic end: they were converted into turkeys. Finally . . . the people who lived during the fourth Sun went on to live in the mountains after the cataclysm that finished that age.²

Narratives such as these raise the question of whether such conceptions of the origins of the universe could stand comparison with those elaborated by Western scientists and philosophers. To answer this, we must briefly examine some Western folk cosmologies often taken as the precursors of science and philosophy.

Folk Cosmologies in the West

Both science and philosophy are usually considered to have their roots in ancient Greece in the teachings of Thales of Miletus (ca. 624–548 B.C.E.) and other ancient thinkers who flourished in Ionia, in Asia Minor, more than a century before Socrates. For these pre-Socratics, the origins of the cosmos or the universe were thought to be in one of the basic sublunar elements, from which everything else was taken to derive—viz., either water, fire, air, or earth (with some maintaining that all have together generated the cosmos).³ Today, of course, it would not be to philosophy but to astrophysics that we would look to solve this problem. Although it seems that our best cosmological hypothesis at present, the big bang theory, does indeed offer such a solution, that in fact depends on how the problem is construed. According to this familiar theory, the origin of the universe was in the explosion of a primordial mass that sent pieces in all directions, thus generating the various galaxies with their millions of stars and planets.

Would the pre-Socratics be likely to accept the big bang as an adequate explanation? Certainly not, since what they wished to know were the origins of absolutely everything. Given that goal, it seems always possible to add a further question about origins until finally the question would fall beyond the scope of any sound cosmological account. Suppose, for example, that the big bang theory could solve the puzzle of what was the cause of the original explosion. Anyone who thought like the pre-Socratic philosophers would expect that the theory also should explain why there was something there at all, that primordial mass waiting to explode, rather than nothing—which the big bang theory cannot explain. Without that elucidation, the theory would appear not to provide a complete explanation of the origins of the cosmos.

Questions That Make Little Sense to Ask

Any other scientific hypothesis about such origins seems vulnerable to similar charges, so we may usefully recall a popular tenet of philosophers during the early twentieth century: that questions that

are worth asking (i.e., that have cognitive value) are only those that could in principle be answered by science. If this is correct, then the pre-Socratics' inquiry, aimed at finding out the origins of absolutely everything, would not be worth pursuing. Although that tenet was later considered too strong, there is nonetheless something appealing in being able to reject questions about the natural world that make no sense to ask. We may then hold the weaker (and therefore more acceptable) position that theories about the world that raise questions unanswerable by even the best conceivable science available hardly serve to achieve cognitive goals of any sort. Such questions would belong to neither science nor philosophy since both of these are human practices undertaken to achieve certain cognitive goals. If we are correct about the pre-Socratics' theories, then they seemed to focus on questions that make little sense to ask—which probably led these thinkers to overlook other problems more within their reach, given the knowledge available. Furthermore, it is plain that their own attempted answers were not even close to the truth about the origins of the universe.

According to a common view, however, it was the pre-Socratics who created the discipline we accept today as philosophy. For example, the Mexican philosopher José Vasconcelos (1882–1959) believed that the ancient Greeks “founded the method of philosophy.”⁴ In Britain, Bernard Williams now insists that Greek thinkers are responsible for nothing less than having given us the legacy of philosophy, establishing the discipline's major fields. According to Williams,

[t]he legacy of Greece to Western philosophy is Western philosophy. . . . The Greeks initiated almost all its major fields—metaphysics, logic, the philosophy of language, the theory of knowledge, ethics, political philosophy and . . . the philosophy of art. Not only did they start these areas of enquiry, but they progressively distinguished what would still be recognized as many of the most basic questions in those areas.⁵

In a recent introduction to the subject, A. C. Grayling agrees. “The Greeks,” he writes,

speculated about the origins, composition, and functioning of the physical universe. They discussed the ethical and political circumstances of mankind, and proposed views about their best arrangement. They investigated human reason itself, and the nature of truth and knowledge. In doing so they touched upon almost every major philosophical question, and their legacy to subsequent thought is vast.⁶

But it is ironic that those who asked questions that made hardly any cognitive sense and that provide no adequate solutions at all have entered the history of Western thought as the first philosophers. If the speculations of the pre-Socratics about the origins of the universe count as philosophy, must we not say the same about the folk cosmologies and the belief systems held by the ancient native peoples of Latin America?

Are Folk Cosmologies Philosophy?

Whether or not the doctrines of the pre-Socratic Greek thinkers are part of philosophy at all depends on what counts as philosophy. Construed in a broad sense, “philosophy” sometimes means the way of life of some person or group. It can then be said that there is an implicit philosophy in each of us and in every community.⁷ Then it would seem plausible that the ways of life, not only of the pre-Socratics, but also of the Aztecs, the Mayans, and the Incas count as philosophies—and this use of the term departs from a more technical one that takes “philosophy” to refer to an intellectual practice requiring specific methods and the formulation of questions and theories of a certain sort. The latter usage captures the meaning of the term as we understand it today. In that narrow sense, it appears that neither the pre-Socratics nor any of the indigenous peoples of Latin America had philosophy.

Yet according to the Mexican philosopher Samuel Ramos (1897–1959), philosophy and science were common practices among some ancient groups of indigenous peoples. “The astronomy of the Aztecs and Mayas,” Ramos contends, “although closely tied to religious ideas, represents beyond any doubt a rational effort to

understand the universe.”⁸ Unfortunately, Ramos offers no original sources to support his view, so acceptance of it would amount, at most, to a bad argument from authority. But let us consider some reasons suggested by others to persuade us that philosophy and science did exist among those peoples.

Did Ancient Latin American Civilizations Have Any Philosophy?

A contemporary Mexican scholar who has studied the life and thought of Mesoamerican Indians, Miguel León-Portilla, has argued that philosophy (in the narrow sense) existed among an ancient Aztec group, the Nahuas. According to him, these people had not only isolated thinkers but wholly developed schools of thought conducted by wise men. Would the existence of such men be sufficient to show that the Nahuas developed *philosophical* theories? According to León-Portilla, some documents indeed provide “sufficient evidence that they [the Nahuas] were not satisfied by myths or religious doctrines.”⁹ Yet this statement, if correct, would fall short of supporting the claim that Nahuatl thought was philosophical. Consider an analogous case: Suppose we have evidence that a certain group of people were unsatisfied by theories that explain fire in terms of the presence of some mysterious substance called “phlogiston.” By itself, that would be insufficient to show that they must instead have believed some scientific explanation of combustion such as, for example, Lavoisier’s theory, since they may have either simply lacked an account to replace the unsatisfactory theory or perhaps accepted some other nonscientific explanation.

According to León-Portilla, there is written evidence of the Nahuas’ questions about knowledge, truth, and morality—which constitute major philosophical issues. As evidence, León-Portilla offers some passages, generally embedded in longer literary pieces. Here is, for instance, one where the immortality of the soul is discussed:

Are flowers carried to the kingdom of death?

It is true that we go, it is true that we go!

Where do we go? Where do we go?
Are we dead there or do we still live?
Do we exist there again?¹⁰

If texts of this sort are the only basis of the claim that the Nahuas had philosophy, the evidence is too weak, showing no more than that they took an interest in questions which could be discussed philosophically. From such evidence we can infer the existence of neither philosophical theories nor professional philosophers among the Nahuas. To see this, recall some religious texts you have probably read: They may contain questions concerning, for instance, the existence of God and the possibility of life after death—each of which may indeed generate a philosophical discussion. But that is hardly enough to show that those texts are philosophical.

What Bernardino de Sahagún Saw in the Colonies

León-Portilla's position here, however, is consistent with the testimony of some during the Conquest, and shortly after, who noted the cultural achievements of native peoples in Latin America. One of these, Fray Bernardino de Sahagún, was a Franciscan priest who arrived in Mexico during the early days of the Conquest (1529) and came to have great knowledge of the Aztecs' intellectual practices. After learning the Nahuatl tongue, Sahagún wrote a survey of Aztec cultures, which he published under the title *General History of the Things of New Spain*. Devoting himself to the study of the Nahuas, he argued that their society had some wise men who enjoyed the status of a professional group. In fact, he took the skills of such men to be similar to those of Western philosophers and astrologers of his time.

It is unclear, however, what evidence supports Sahagún's conclusions. Did he think, like León-Portilla, that such men merely raised questions that perhaps could be answered by philosophy or even astrology? Or did he think that the existence of such men meant that the Nahuas, as a group, had philosophical concerns and fostered a professional group to help them deal with them? Since Western phi-

losophy long coexisted with astrology (and worse), we may be sure that the existence of wise men in a certain society does not guarantee that their theories could count as philosophy. Whether we should accept Sahagún's conclusions about the Nahuas would depend upon both the sources of his views about the intellectual practices of their wise men and the reliability of Sahagún's own understanding of what could be considered "philosophical" and "wise." Did he, for example, take those men to be wise because the Nahuas believed them to be so? Or did he think that such men were wise because they actually thought out theories that had intrinsic merit, whatever the Nahuas may have believed about them?

Yet since the evidence for such claims is weak, we cannot know what to make of them in the absence of further scholarly research. We would certainly need more information about the conceptual framework of those who, like Sahagún, reported the existence of philosophy among the natives of Latin America. And knowledge of these scholars' empirical sources would also be relevant to the question of whether their reports should be taken as conclusive evidence of the existence of Amerindian philosophers. But note, finally, that in finding a connection between philosophy and wisdom, Fray Bernardino de Sahagún was endorsing a well-known Western tradition. What then is that connection?

Is Philosophy Universal? Latin Americans Follow the West

In the narrow sense more usual today, "philosophy" denotes a particular intellectual discipline with a subject matter and procedure of its own. We need a precise definition so that it will be differentiated from other intellectual practices. The Mexican philosopher Antonio Caso (1883–1946) favored the traditional Western view: Philosophy is the "love of wisdom."¹¹ Attributed to Pythagoras, this definition in fact follows closely the etymology of the composite Greek word used in antiquity to refer to any intellectual discipline within what we would today call philosophy or natural science.

If wisdom is a condition for philosophy, then neither the indigenous people of Latin America nor the pre-Socratic Greeks could be said to have developed such a discipline. In both cases, the thinkers identified as wise men were devoted to problems that make little scientific sense, and their attempted solutions were false. That their theories would not qualify as philosophy by the traditional definition can be shown by a thought experiment. Imagine a person, Bert, who regularly holds false beliefs, pursues meaningless questions, and has unrealistic cognitive goals. In addition, suppose that there is evidence available to him so that, upon sufficient reflection, he could realize that his beliefs were groundless and his questions meaningless. Here, it would certainly be odd if *we* considered Bert wise and a lover of wisdom—whether or not his community took him to be so. But could not the same be said of ancient thinkers, such as the Mayans, Aztecs, and pre-Socratic Greeks? After all, we have seen that they asked questions about the origins of the universe that made little sense and that they concocted theories that were clearly false. If the analogy with Bert's case is sound, we must conclude that it is equally odd to ascribe wisdom, and therefore the practice of philosophy, to them.

Antonio Caso on the Philosophical Character

Perhaps this is only because "love of wisdom" as a definition of philosophy is far too vague. To gain some precision, we might follow Caso's conception where wisdom is accompanied by traits of character that practitioners of philosophy are supposed to share. According to him, what philosophers have in common is that, instead of pursuing worldly success, they engage in an activity that consists entirely of thinking. Here Caso probably means that philosophers value reflecting upon the beliefs they hold, which is certainly correct. But this does not preclude such reflection's being directed to some goals philosophers pursue either instrumentally (as a means) or in themselves (as ultimate ends). Making sure that beliefs are consistent among themselves and are supported by reasons exempli-

fies the former because it is a means to achieving true beliefs, which in turn illustrates the latter.

In Caso's view, because philosophy consists entirely in reflection, those who engage in it must have some other special traits of character. Not only is thinking rigorously about philosophical problems often difficult, but actual solutions to those problems are frequently beyond the philosopher's reach—so that engaging in philosophy is sometimes frustrating. (When Caso observes that heroism is one of the traits philosophers should possess, he shouldn't be taken literally.) Another character trait philosophers need is intellectual curiosity, "a constant and incorruptible spirit of adventure." Thus "[w]hoever aspires to an interior quietude of the mind, a strong stability, a soft and easy rest," cautions Caso, "should not preoccupy himself with a study of philosophical questions."¹²

If the etymological definition of philosophy as love of wisdom is too vague, the notion that such traits of character must be shared by philosophers is not better, for it is still unclear how it could make more precise just what philosophy is. Caso may have in mind something along the following lines. The philosopher's activity leads to wisdom because it is based on a special kind of reflection aimed at two goals: (1) formulating puzzles that make sense to investigate; and (2) solving them by theories or systems of beliefs that get closer to the way things are. Such aims, which we may call "cognitive relevance" and "plausibility," respectively, provide philosophy's connection with wisdom—because, as we have seen already, those who regularly pursue meaningless questions and who hold false beliefs hardly qualify as wise. But cognitive relevance and plausibility are difficult to achieve, so the practitioners of philosophy must possess certain other qualities as well (principally, heroism in the sense discussed above and intellectual curiosity) in order to practice their discipline. Moreover, for a theory to be philosophical, it must raise questions that are cognitively relevant at the time and that have some plausibility (i.e., some likelihood of being true).

Surely philosophy, like any intellectual activity undertaken for the sake of cognitive goals, must make use of optimistic means, and

they must in this case consist of the systematic use of the method of rational argumentation to elucidate and, when possible, to solve both conceptual and empirical problems. It is worth noting that philosophers have appealed to that method to examine questions that later turned out to be better settled by empirical science. For instance, the folk cosmologies of the pre-Socratics and Aristotle's physics invite doubts about whether questions more suited to the methods of science can be adequately resolved by those of philosophy. In our view, however, even though there is in principle no limit to the type of questions open to examination by philosophers, cognitive relevance seems to require that when a certain matter concerns the natural world, there should be no successful scientific competitors contemporaneous with a viable philosophical theory about it. If competitors of that sort were available, to persist in the method of rational argumentation alone would be dogmatic—and therefore nonphilosophical.

José Vasconcelos's "Super-Criterion"

Rational argumentation is perhaps what Vasconcelos had in mind when he conceived the notion of a "super-criterion" as the method of philosophy. According to him,

[T]he world of the philosopher is to be distinguished from the methodology of the experimental science and from all specialized approaches, in that it is not limited to a single criterion but must combine all of them: a philosopher requires a super-criterion. He must constantly compare the discoveries of the mind with those of the senses, and with that which the emotions teach him.¹³

Vasconcelos thinks that the work of philosophers is distinctive in that it must appeal to an overarching set of standards to justify beliefs and theories. Such a super-criterion could be recast as follows:

By combining empirical and conceptual procedures, philosophers employ an overarching method to reflect upon the beliefs they

hold and produce theories of the world and of human understanding that are both justified and plausible.

Vasconcelos is of course squarely within the Western tradition that originated in ancient Greece, and there any such overarching philosophical method is called “rational argumentation.” Without that method, no dialogue would be possible between people holding different beliefs and theories. By appealing to rational argumentation, philosophers try to ensure that their beliefs at least (1) are supported by good reasons; (2) are grounded in the evidence; (3) are consistent with each other; and (4) are the outcome of sound cognitive processes. Moreover, this method seems effective in discerning which questions make sense to investigate at all, as well as in finding the best possible solutions on the basis of the information available.

Argumentation as a Demarcation Criterion

Rational argumentation may also be a criterion for distinguishing theories that are philosophical from those that are not. When rational argumentation is taken to be the essential method of philosophy, nonphilosophical theories are those that use that method either rarely or not at all. A broad spectrum of theories may then be sorted out according to their use of rational argumentation: Some would fall at the extremes if they are either highly philosophical or not philosophical at all, and others would be placed in the middle as being only partly philosophical. Comparative judgments could be made on this basis, enabling us to determine in principle whether a given theory is more philosophical or less so relative to others. As with science and nonscience, the demarcation would then be a matter of degree, contingent upon how much a given theory depends on the method of rational argumentation.

The Ancestors of Philosophy in the West

We may now ask how much philosophy was in the pre-Socratics’ doctrines of the origin of the universe. Clearly, their concern could

also be construed as involving a fundamental question about the natural world that was empirical—in other words, answerable only by hypothesis and observation. The pre-Socratics attempted to use the method of rational argumentation as evidenced by the fact that their answers rested less on mythology and religion than on hypothesis formulated from empirical evidence. Their doctrines then would have amounted to empirical hypotheses that aimed to capture the way things are, and they were testable, at least in principle. Perhaps this is the reason Vasconcelos took such thinkers “to have founded the method of philosophy precisely in the attempt to subordinate external processes to the forms of the intellect, in contrast with primitive thought that assimilates the movement of the objects within the impulses and desires of our will.”¹⁴

On the other hand, the pre-Socratics obviously never mastered the method of rational argumentation as developed by later philosophers in the West. Were they, for instance, aware that their task was to justify their beliefs by reasons grounded in the evidence then available? And did they keep an eye on the consistency of their doctrines, remaining methodologically skeptical about their ways of drawing conclusions? More scholarly work needs to be done before such questions can be given definite answers. Until then, we must conclude that the method of the pre-Socratics is only an ancestor of the more fully fledged rational argumentation of later thinkers and that they thus qualify only as “primitive” philosophers at most. But if this is plausible in their case, why then may we not say the same of those natives of Latin America whose elaborate explanations of the origins of the universe we discussed earlier? Are these wise men not primitive philosophers as well?

The Ancestors of Philosophy in Latin America

The folk cosmologies of the indigenous peoples of Latin America resemble those of the pre-Socratics in that both could be construed as attempts to answer a fundamental question concerning the origins of the natural world. However, for the former, available documents and testimonies show that the proposed answers rested predomi-

nantly on myth and religion. Consider, for example, parts 1 and 4 of the Mayan *Popol Vuh* and the Aztec explanation of the origins of the universe discussed above. Since such doctrines were clearly not based on hypothesis and observation, they fail to count as empirical theories, testable in principle and able to describe the actual origins of the universe. Thus the kind of justification of such folk cosmologies differs from that of those offered by the pre-Socratics, who made some use of the method of rational argumentation. Although the latter also undeniably incorporated elements of mythological and religious thinking, they clearly appealed to hypothesis and observation more than did the doctrines of the Mayans and Aztecs. Only the pre-Socratics' folk cosmologies actually had a chance of finding out the truth about our cosmic origins, were testable (though false), and thus were truly empirical theories.

Still, it is clear that there is no simple way of determining which of these theories could count as strictly philosophical and which could not. In fact, a common feature of all such folk cosmologies is that they were attempts to answer an empirical question in an era when they had no scientific competitors within their own cultures.

Philosophy Today in Latin America and the West

I have argued that the pre-Socratic Greek thinkers could be considered only primitive philosophers, with their doctrines at most counting as the precursors of mature theories of the origins of the universe. Although they seem to have introduced the method of rational argumentation (fundamental to philosophy), they never mastered it in the more developed form widely used by later philosophers and scientists. Today, for instance, philosophers must be capable of recognizing reasons *as reasons* and must think about the status of such reasons with regard to their role in knowledge and truth. Furthermore, contemporary philosophers are expected to reflect upon the beliefs (and theories) they hold, to make sure that they (1) are supported by good reasons; (2) are grounded in the available evidence; (3) are consistent with each other; and (4) are

the outcome of sound cognitive processes. If these are the traits of mature philosophy, then it is plain that neither the folk cosmologies of the native peoples of Latin America nor those of the pre-Socratics qualify for it.

That the method of philosophy must be rigorously conceived follows from the discipline's definition of its intellectual goals, which are cognitive relevance and plausibility (recall that pursuit of meaningless questions and faith in predominantly false beliefs are incompatible with wisdom, which standardly defines philosophy). To show that criteria (1) through (4) are essential to the satisfaction of philosophy's goals, consider an analogy with the natural sciences. Even though notorious problems stand in the way of taking any scientific theory to be true, there is nonetheless a presumption suggesting that some theories are better than others. For instance, when the experts prefer scientific psychology over astrology and evolutionary biology over creation science, does it make sense to maintain that such preference is altogether capricious and unwarranted? Certainly not, for psychology and evolutionary theory can be shown to have certain useful features lacking in astrology and creation science. Such features are valuable because they have good track records: The theories that maintain good track records have proven to be better at explaining and predicting than others that lack them (which is why they are often known as "values" or "virtues"). Accuracy in prediction, explanatory power, simplicity, consistency, and refutability are but a few of the most commonly identified virtues of scientific theories. These are often divided into those that are instrumental (adequate for solving puzzles, accurate predicting, and so forth) and those that are evidential (indicative that the theory is true or approximately true). We may now assert through analogy that in philosophy theories resulting from reasoning that follows steps (1) through (4) are more likely to have the instrumental and evidential good traits—which we have argued are cognitive relevance and plausibility. At the same time, the presence of those virtues could also be said to confirm the soundness of such reasoning. However, it should be kept in mind that not all circles are vicious.

Suggestions for Further Reading

- Caso, Antonio. 1971. "Philosophical Heroism." In John Haddox, ed., *Antonio Caso: Philosopher of Mexico*. Austin, Tex.: University of Texas Press.
- Craine, Eugene R., and Reginald C. Reindorp, eds. 1979. *Preliminary Study to The Codex Pérez and the Book of Chilam Balam of Maní*. Norman, Okla.: University of Oklahoma Press.
- Grayling, A. C., ed. 1995. *Philosophy: A Guide Through the Subject*. Oxford: Oxford University Press.
- León-Portilla, Miguel. 1963. *Aztec Thought and Culture*. Norman, Okla.: University of Oklahoma Press.
- . 1992. *The Aztec Image of Self and Society*. Salt Lake City: University of Utah Press.
- Northrop, F. S. C., ed. 1949. *Ideological Differences and World Order: Studies in the Philosophy and Science of the World's Cultures*. New Haven: Yale University Press.
- Ramos, Samuel. 1943. *Historia de la filosofía en México*. Mexico City, Mexico: Imp. Universitaria.
- Sahagún, Fray Bernardino de. 1982. *General History of the Things of New Spain*, Books 4 and 6. Salt Lake City: University of Utah Press.
- Tedlock, Dennis. 1996. *Popol Vuh: The Mayan Book of the Dawn of Life*. New York: Simon & Schuster.
- Vasconcelos, José. 1967. *Tratado de metafísica*. In John H. Haddox, ed., *Vasconcelos of Mexico*. Austin, Tex.: University of Texas Press.
- Winch, Peter. 1970. "Understanding a Primitive Society." In Bryan R. Wilson, ed., *Rationality*. Worcester: Basil Blackwell.

Notes

1. That hypothesis could explain a certain use of demonstrative terms in the copy that remains, which would otherwise be quite odd. See Dennis Tedlock, ed., *Popol Vuh: The Mayan Book of the Dawn of Life* (New York: Simon & Schuster, 1996).
2. Miguel León-Portilla, *The Aztec Image of Self and Society* (Salt Lake City: University of Utah Press, 1992), p. 4.
3. For Anaximander, it was none of these but something he called *apeiron*—"the unbounded."
4. José Vasconcelos, *Tratado de metafísica*, in John H. Haddox, ed., *Vasconcelos of Mexico* (Austin, Tex.: University of Texas Press, 1967), p. 91.

5. See Bernard Williams's "Greek Philosophy," in M. I. Finley, ed., *The Legacy of Greece* (cited in A. C. Grayling, ed., *Philosophy: A Guide Through the Subject* [Oxford: Oxford University Press, 1995], p. 338).

6. Grayling, *Philosophy*, p. 1.

7. It is sometimes thought that there are a plurality of philosophies since different groups of people have systems of beliefs that vary greatly. We shall discuss a relativist argument for that conclusion in Chapter 4. But note that "philosophies" is used in that argument in the broad sense that equates it with "ways of life." Cf. Clyde Kluckhohn, "The Philosophy of the Navaho Indians," in F. S. C. Northrop, ed., *Ideological Differences and World Order: Studies in the Philosophy and Science of the World's Cultures* (New Haven: Yale University Press, 1949).

8. Samuel Ramos, *Historia de la filosofía en México* (Mexico City, Mexico: Imp. Universitaria, 1943), p. 11.

9. Miguel León-Portilla, *Aztec Thought and Culture* (Norman, Okla.: University of Oklahoma Press, 1963), pp. 8–9, 23, and ff.

10. Angel Maria Garibay, *Historia de la literatura Náhuatl* (cited in Miguel León-Portilla, *Aztec Thought and Culture*, p. 220).

11. Antonio Caso, "Philosophical Heroism," in John Haddox, ed., *Antonio Caso: Philosopher of Mexico* (Austin, Tex.: University of Texas Press, 1971).

12. Caso, "Philosophical Heroism," p. 79.

13. Vasconcelos, *Tratado de metafísica*, p. 81.

14. Vasconcelos, *Tratado de metafísica*, p. 91.

15. Kluckhohn, "The Philosophy of the Navaho Indians," p. 356.