XIV

ARISTOTLE

[384–322 B.C.]

ORIGIN AND NATURE OF PHILOSOPHY

IT[1] was owing to wonder that men began to philosophize in earlier times just as it is to-day, wondering at first about the problems that lie close at hand, and then little by little advancing to the greater perplexities, such as the phenomena of the moon and sun and stars, and the creation of the universe. But one who is perplexed and filled with wonder feels himself to be in ignorance, and so the lover of the myth is in a way the lover of wisdom, for the myth too is made of marvels. And so if men philosophized in order to escape ignorance it is evident that they pursued wisdom just for the sake of knowing, not for the sake of any advantage it might bring. This is shown too by the course of events. For it was only after practically all things that are necessary for the comfort and convenience of life had been provided that this kind of knowledge began to be sought. Clearly then we pursue this knowledge for the sake of no extraneous use to which it may be put, but, just as we call a man free who serves his own and not another's will, so also this science is the only one of all the sciences that is liberal, for it is the only one that exists for its own sake. . . . More necessary, indeed, every other science may be than this, more excellent there is none.

[1] Arist. *Met.* I. 2, 982 b 12.

But[2] somehow the possession of this knowledge inevitably brings us to a position precisely the opposite of that in which we were at the beginning of our investigations. For, as I have said, we all begin by wondering that things are as they are, just as marionettes, or again such things as the turnings of the sun or the incommensurability of the diameter are wonderful to those who do not yet understand the cause; for every one is filled with astonishment on first hearing that there is anything which cannot be measured if the unit of measurement be made small enough. And yet in the end our position is reversed, and "after-thinking is best," as the proverb has it; and so it is in the cases before us when once we reach knowledge. For nothing would so astonish the geometrician as to discover that the diagonal was commensurate with the side.

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Science[3] arises whenever from a number of notions derived from experience a universal conception is formed comprising all similar cases. To have the conception that when Kallias was sick of such and such a disease such and such a remedy did him good, and the same of Socrates and of many others taken one by one, is the part of experience; but to know that it did good to all such persons comprised in one and the same class, afflicted with the same disease, such as inflammation, or biliousness, or burning fever, is the part of science. In actually achieving results experience is apparently not inferior to science. On the contrary we often find men of experience more successful in reaching their aim than men who have the theory without the experience.

[2] Arist. *Met.* I. 2, 983 a 11.
[3] Ib. I. 1, 981 a 5.

The reason for this is that experience is knowledge of individual cases, whereas science is knowledge of universal principles, and every action and every creative process has to do with individual cases. For example, the physician does not heal mankind, except incidentally, but rather Kallias or Socrates or some other similar individual who happens, to be sure, also to belong to the *genus homo*. If, then, one possesses the theory without the experience, and has a knowledge of the general principles, but does not know how to apply them in the individual case before him, he will very often make a mistake as to the cure required; for it is always the individual case that is to be cured.

Nevertheless we think that knowledge and understanding are properties of science rather than of experience, and we hold men of science to be wiser than men of experience on the ground that in every case wisdom is to be ascribed to one in proportion to the extent of his knowledge. And the reason why we do this is because the former know the reason why, the latter do not; men of experience know the fact, men of science know the wherefore of the fact. . . .

In general the mark of knowledge is ability to impart what one knows to others; and this is why we hold science to be a higher form of knowledge than experience, men of science being able, men of experience being unable to impart their knowledge to others.

Furthermore, we do not attribute wisdom to any of the senses although they are, it is true, the chief means of knowing individual cases. But they do not tell us the wherefore of any fact, as for example, why fire is hot, but simply that it is hot. Consequently it was natural that the first man who discovered any science whatso-

ever that went beyond the knowledge of the senses which is common to all, was the wonder and admiration of his fellow-men, not only because there was something useful in his discoveries, but because they held him to be a wise man and superior to his fellows. And as more and more of the sciences are discovered, some having to do with the necessities, others with the comforts of life, we always hold men who discovered the latter to be wiser than those who discovered the former, just because in their case knowledge has nothing to do with utility. Whence it came about that when all the different sciences of these two sorts had been discovered the sciences were discovered which have nothing to do either with the pleasures or the necessities of life, and first of all in those places where men had leisure. This is why the mathematical sciences were developed first of all in the neighborhood of Egypt, for there the priestly class was left with plenty of leisure. . . . All men understand as the object of what is called wisdom knowledge of ultimate causes and first principles, so that, as we said before, the man of experience is superior in point of wisdom to the man who merely trusts his senses, whatever the sense may be, and the man of science is superior to the man of experience, the architect to the manual laborer, theory to practice. It is evident from all this that wisdom is the knowledge of causes and first principles of some kind or other.

ARISTOTLE'S CRITICISM OF THE THEORY OF IDEAS

With [4] regard to the philosophers who introduced ideas as causes we have in the first place this objection to offer, that in seeking to find an explanation of the things

[4] Arist. *Met.* I. 9, 990 a 34.

that exist they have introduced other realities equal in number; just as if one should try to count a number of objects, and should suppose that he could not do so if the number were small, but that he would have no difficulty if he made the number larger. For the ideas are practically equal in number to,—at any rate they are not less than, the things for the explanation of which they had recourse to the world of ideas. For every individual object has its synonymous reality, and over and above actual existences there are ideas of all other things wherever there is a "one in many," both in the changeable things of this world and in the eternal.

The second objection we have to offer is that of all the proofs which we bring forward for the existence of ideas there is no real evidence; for in the case of some of our arguments the conclusion does not necessarily follow, and in the case of others, ideas are also proved to exist for things for which we do not assume the existence of any ideas. For example, from the proofs which are taken from the existence of the various sciences there will be ideas of all things whatever which can serve as the objects of knowledge; according to the argument which proceeds from the "one in many," ideas will be proved to exist also in the case of negations; on the ground of our thinking what has already perished there will be ideas of things that have perished, for there still remains a certain representation of them.

But the most serious objection of all is this: what in the world do the ideas contribute to the things of sense, either to those that are imperishable or to those that arise and perish? For they are not the cause of any motion or change in them. On the contrary they help us not a whit toward the knowledge of things other than

themselves (for they are not the substances of those things, else they would be present in them); nor do they explain their existence, not being present in the things that participate in them. . . .

But again things other than the ideas do not arise from them, at least in any of the usual meanings of that expression. To call the ideas 'patterns,' and to say that other things 'participate' in them, is to use words void of meaning, or to talk in poetical metaphor. For what is it that does the work with its eyes fixed upon the ideas as patterns? It is in truth quite possible that something should come into being like something else without being expressly patterned after it. For instance, whether or not Socrates actually existed a man might arise like Socrates; and it is plain this is equally possible had the existing Socrates been imperishable.

And there must be several patterns of the same thing, consequently several ideas. For example, in the case of man there will be a pattern "animal" and "biped" as well as the pattern "man as such."

Furthermore the ideas must be patterns not only of the things of sense, but also of the ideas themselves,—class, for example, as a class of ideas. And so the same thing will be at once pattern and image. Again it would seem to be impossible that the substance should exist apart from that of which it is the substance. How then if the ideas are the substances of things can they exist apart from them?

In the *Phædo* Plato speaks as if the ideas were the causes alike of existence and of coming into being. And yet even if we grant the existence of ideas, still the things that participate in them do not come into being unless there is some cause productive of movement. Besides.

many other things come into being, such as a house or a ring, for which we do not assume the existence of ideas. This being the case it is clearly possible that other things also should be or come into being through causes like those operative in the cases just mentioned.

ARISTOTLE'S OWN VIEW REGARDING THE UNIVERSAL

That [5] it is impossible to acquire knowledge through demonstration if we have no knowledge of primary principles immediately known we have shown above. One might, however, raise the question with regard to the knowledge of these immediate principles . . . whether the habits of mind that give this knowledge, not being innate are developed in us, or whether they are innate but have escaped our notice. On the one hand it is absurd to say that we already have them, for then we should be saying that we have, all unknown to us, a knowledge more accurate than demonstration. If on the other hand we suppose that we have to begin with no such immediate principles, how should we ever know or learn them unless some knowledge had preceded? That would be impossible as we said above in treating of demonstration. The obvious inference is that it is impossible that we should already have this knowledge, and equally impossible that it should be developed in us if we are entirely ignorant and have no habits of mind [fitting us to detect them]. We must then have some such faculty, but not of such a kind as to be superior in point of accuracy to the principles themselves. And this faculty seems to be shared by all animals, for they all have an innate critical faculty called sense-perception.

[5] Arist. *An. Post.* II. 19. 99 b 20