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BOOK I (A)

CHAPTER I

ALL men by nature desire to know. An indication of this 980^a is the delight we take in our senses; for even apart from their usefulness they are loved for themselves; and above all others the sense of sight. For not only with a view to action, but even when we are not going to do anything, we prefer 25 sight to almost everything else. The reason is that this, most of all the senses, makes us know and brings to light many differences between things.

By nature animals are born with the faculty of sensation, and from sensation memory is produced in some of them, though not in others. And therefore the former are more 980^b intelligent and apt at learning than those which cannot remember; those which are incapable of hearing sounds are intelligent though they cannot be taught, e.g. the bee, and any other race of animals that may be like it; and those which besides memory have this sense of hearing, can be taught.

The animals other than man live by appearances and 25 memories, and have but little of connected experience; but the human race lives also by art and reasonings. And from memory experience is produced in men; for many memories of the same thing produce finally the capacity for a single experience. Experience is almost identified with 981^a science and art, but really science and art come to men *through* experience; for 'experience made art', as Polus says,¹ and rightly, 'but inexperience luck.' And art arises, 5 when from many notions gained by experience one universal judgement about a class of objects is produced. For to have a judgement that when Callias was ill of this disease this did him good, and similarly in the case of Socrates and in many individual cases, is a matter of experience; but to 10

¹ Cf. *Gorgias*, 448 c.

judge that it has done good to all persons of a certain constitution, marked off in one class, when they were ill of this disease, e. g. to phlegmatic or bilious people when burning with fever¹,—this is a matter of art.

With a view to action experience seems in no respect inferior to art, and we even see men of experience succeeding
 15 more than those who have theory without experience. The reason is that experience is knowledge of individuals, art of universals, and actions and productions are all concerned with the individual; for the physician does not cure *man*, except
 20 in an incidental way, but Callias or Socrates or some other called by some such individual name, who happens to be a man. If, then, a man has the theory without the experience and knows the universal but does not know the individual included in this, he will often fail to cure; for it is the individual that is to be cured. But yet we think that *know-*
 25 *ledge* and *understanding* belong to art rather than to experience, and we suppose artists to be wiser than men of experience (which implies that Wisdom depends in all cases rather on knowledge); and this because the former know the cause, but the latter do not. For men of experience know
 30 that the thing is so, but do not know why, while the other know the 'why' and the cause. Hence we think that the master-workers in each craft are more honourable and know
 981^b in a truer sense and are wiser than the manual workers because they know the causes of the things that are done [we think the manual workers are like certain lifeless things which act indeed, but act without knowing what they do, fire burns,—but while the lifeless things perform each of the functions by a natural tendency, the labourers perform them
 5 through habit]²; thus we view them as being wiser not themselves and knowing the causes. And in general it is a sign of the man who knows, that he can teach, and therefore we think art more truly knowledge than experience for artists can teach, and men of mere experience cannot.

¹ 981^a 12 read *χολώδεις πυρέττουςι καύσφι* (following H. Jackson, *J. Phil.* vi. 206).

² 981^b 2 τοὺς . . . 5 ἔθος is probably a later addition.

Again, we do not regard any of the senses as Wisdom; yet surely these give the most authoritative knowledge of particulars. But they do not tell us the 'why' of anything—e. g. why fire is hot; they only say that it is hot.

At first he who invented any art that went beyond the common perceptions of man was naturally admired by men, not only because there was something useful in the inventions,
 15 but because he was thought wise and superior to the rest. But as more arts were invented, and some were directed to the necessities of life, others to its recreation, the inventors of the latter were naturally always regarded as wiser than the inventors of the former, because their branches of knowledge did not aim at utility. Hence when all such inventions were
 20 already established, the sciences which do not aim at giving pleasure or at the necessities of life were discovered, and first in the places where men first began to have leisure. This is why the mathematical arts were founded in Egypt; for there the priestly caste was allowed to be at leisure.

We have said in the *Ethics*¹ what the difference is between art and science and the other kindred faculties; but the point of our present discussion is this, that all men suppose what is called Wisdom to deal with the first causes and the principles of things. This is why, as has been said before, the man of
 30 experience is thought to be wiser than the possessors of any perception whatever, the artist wiser than the men of experience, the master-worker than the mechanic, and the theoretical kinds of knowledge to be more of the nature of Wisdom than the productive. Clearly then Wisdom is knowledge about
 982^a certain causes and principles.

CHAPTER II

Since we are seeking this knowledge, we must inquire of what kind are the causes and the principles, the knowledge of which is Wisdom. If we were to take the notions we have about the wise man, this might perhaps make the answer more evident. We suppose first, then, that the wise man knows all things, as far as possible, although he has not

¹ vi. 3-7.

10 knowledge of each of them in detail; secondly, that he who
 can learn things that are difficult, and not easy for man to
 know, is wise (sense-perception is common to all, and there-
 fore easy and no mark of Wisdom); again, he who is most
 exact and more capable of teaching the causes is wiser, in
 every branch of knowledge; and of the sciences, also, that
 15 which is desirable on its own account and for the sake of
 knowing it is more of the nature of Wisdom than that which
 is desirable on account of its results, and the superior science
 is more of the nature of Wisdom than the ancillary; for the
 wise man must not be ordered but must order, and he must
 not obey another, but the less wise must obey *him*.
 20 Such and so many are the notions, then, which we have
 about Wisdom and the wise. Now of these characteristics
 that of knowing all things must belong to him who has
 the highest degree universal knowledge; for he knows
 a sense all the subordinate objects. And these things, the
 most universal, are on the whole the hardest for men to know
 25 for they are furthest from the senses. And the most exact
 of the sciences are those which deal most with first principles,
 for those which involve fewer principles are more exact than
 those which involve additional principles, e.g. arithmetic
 than geometry. But the science which investigates causes
 is also the more communicable, for the people who teach
 30 those who tell the causes of each thing. And understanding
 and knowledge pursued for their own sake are found most
 the knowledge of that which is most knowable; for he who
 chooses to know for the sake of knowing will choose more
 982^b readily that which is most truly knowledge, and such is the
 knowledge of that which is most knowable; and the first
 principles and the causes are most knowable; for by reason
 of these, and from these, all other things are known, but the
 are not known by means of the things subordinate to them.
 And the science which knows to what end each thing must
 5 be done is the most authoritative of the sciences, and more
 authoritative than any ancillary science; and this end is the
 good in each class, and in general the supreme good in the
 whole of nature. Judged by all the tests we have mentioned
 then, the name in question (<'Wisdom') falls to the same

science; this must be a science that investigates the first
 principles and causes; for the good, i.e. the end and aim,
 is one of the causes.

That it is not a science of production is clear even from 10
 the history of the earliest philosophers. For it is owing to
 their wonder that men both now begin and at first began to
 philosophize; they wondered originally at the obvious diffi-
 culties, then advanced little by little and stated difficulties
 about the greater matters, e.g. about the phenomena of the 15
 moon and those of the sun, and about the stars and about
 the genesis of the universe. And a man who is puzzled and
 wonders thinks himself ignorant (whence even the lover of
 myth is in a sense a lover of Wisdom, for the myth is com-
 posed of wonders); therefore since they philosophized in
 order to escape from ignorance, evidently they were pursuing 20
 science in order to know, and not for any utilitarian end.
 And this is confirmed by the facts; for it was when almost
 all the necessities of life and the things that make for comfort
 and recreation were present, that such knowledge began to be
 sought. Evidently then we do not seek it for the sake of any
 other advantage; but as the man is free, we say, who exists 25
 for himself and not for another, so we pursue this as the only
 free science,¹ for it alone exists for itself.

Hence the possession of it might be justly regarded as
 beyond human power; for in many ways human nature is in
 bondage, so that according to Simonides² 'God alone can
 have this privilege', and it is unfitting that man should not be 30
 content to seek the knowledge that is suited to him. If, then,
 there is something in what the poets say, and jealousy is
 natural to the divine power, it would probably occur in this 983^a
 case above all, and all who excelled in this knowledge would
 be unfortunate. But the divine power cannot be jealous (nay,
 according to the proverb,³ 'bards tell many a lie'), nor should
 any science be thought more honourable than one of this sort.
 For the most divine science is also most honourable; and 5
 this science alone is, in two ways, most divine. For the

¹ 982^b 26 read *αὐτὴν ὡς μόνην οὖσαν ἐλευθέραν.*

² Fr. 3 Hiller.

³ Solon, fr. 26 Hiller.

science which it would be most meet for God to have a divine science, and so is any science that deals with divine objects; and this science alone has both these qualities; for (1) God is thought to be among the causes of all things and to be a first principle, and (2) such a science either God alone can have, or God above all others. All the sciences, indeed, are more necessary than this, but none is better.

Yet the acquisition of it must in a sense end in something which is the opposite of our original inquiries. For as men begin, as we said, by wondering that the matter is so (as those who have not yet perceived the explanation marvel at automatic marionettes)—whether the object of their wonder be the solstices or the incommensurability of the diagonal of a square with the side; for it seems wonderful to all men that there is a thing which cannot be measured even by the smallest unit. But we must end in the contrary according to the proverb, the better state, as is the case in these instances when men learn the cause; for there is nothing which would surprise a geometer so much as if the diagonal turned out to be commensurable.

We have stated, then, what is the nature of the science we are searching for, and what is the mark which our search and our whole investigation must reach.

CHAPTER III

Evidently we have to acquire knowledge of the original causes (for we say we know each thing only when we think we recognize its first cause), and causes are spoken of in four senses. In one of these we mean the substance, i.e. the essence (for the 'why' is reducible finally to the formula, and the ultimate 'why' is a cause and principle); in another the matter or substratum, in a third the source of the change, and in the fourth the cause opposed to this, the purpose and the goal (for this is the end of all generation and change). We have studied these causes sufficiently in our work on nature, but yet let us call to our aid those who have attacked the

¹ *Phys.* ii. 3, 7.

investigation of being and philosophized about reality before us. For obviously they too speak of certain principles and causes; to go over their views, then, will be of profit to the present inquiry, for we shall either find another kind of cause, or be more convinced of the correctness of those which we now maintain.

Of the first philosophers, most thought the principles which were of the nature of matter were the only principles of all things; that of which all things that are consist, and from which they first come to be, and into which they are finally resolved (the substance remaining, but changing in its modifications), this they say is the element and the principle of things, and therefore they think nothing is either generated or destroyed, since this sort of entity is always conserved, as we say Socrates neither comes to be absolutely when he comes to be beautiful or musical, nor ceases to be when he loses these characteristics, because the substratum, Socrates himself, remains. So they say nothing else comes to be or ceases to be; for there must be some entity—either one or more than one—from which all other things come to be, it being conserved.

Yet they do not all agree as to the number and the nature of these principles. Thales, the founder of this school of philosophy, says the principle is water (for which reason he declared that the earth rests on water), getting the notion perhaps from seeing that the nutriment of all things is moist, and that heat itself is generated from the moist and kept alive by it (and that from which they come to be is a principle of all things). He got his notion from this fact, and from the fact that the seeds of all things have a moist nature, and that water is the origin of the nature of moist things.

Some think that the ancients who lived long before the present generation, and first framed accounts of the gods, had a similar view of nature; for they made Ocean and Tethys the parents of creation, and described the oath of the gods as being by water, which the poets themselves call Styx; for what is oldest is most honourable, and the most honourable thing is that by which one swears. It may perhaps be uncertain whether this opinion about nature is primitive and ancient, but Thales at any rate is said to have declared him-

self thus about the first cause. Hippo no one would think fit to include among these thinkers, because of the paltriness of his thought.

5 Anaximenes and Diogenes make air prior to water, and the most primary of the simple bodies, while Hippasus of Metapontium and Heraclitus of Ephesus say this of fire, and Empedocles says it of the four elements, adding a fourth—earth—to those which have been named; for these, he says, 10 always remain and do not come to be, except that they come to be more or fewer, being aggregated into one and segregated out of one.

Anaxagoras of Clazomenae, who, though older than Empedocles, was later in his philosophical activity, says the principles are infinite in number; for he says almost all the things that are made of parts like themselves are generated and destroyed 15 (as water or fire is) only by aggregation and segregation, and are not in any other sense generated or destroyed, but remain eternally.

From these facts one might think that the only cause is the so-called material cause; but as men thus advanced, the very facts showed them the way and joined in forcing them to investigate the subject. However true it may be that all 20 generation and destruction proceed from some one or more elements, why does this happen and what is the cause? For at least the substratum itself does not make itself change—e.g. neither the wood nor the bronze causes the change of either of them, nor does the wood manufacture a bed and the 25 bronze a statue, but something else is the cause of the change. And to seek this is to seek the second cause, as *we* should say,—that from which comes the beginning of the movement. Now those who at the very beginning set themselves to this kind of inquiry, and said the substratum was one, were not at all dissatisfied with themselves; but some at least of those 30 who maintain it to be one—as though defeated by this search for the second cause—say the one and nature as a whole is unchangeable not only in respect of generation and destruction (for this is a primitive belief, and all agreed in it), but also of all other change; and this view is peculiar to them. 984^b Of those who said the universe was one, none succeeded in

discovering a cause of this sort, except perhaps Parmenides, and he only inasmuch that he supposes that there is not only one but in some sense two causes. But for those who make more elements it is more possible to state the second cause, e.g. for those who make hot and cold, or fire and earth, the elements; for they treat fire as having a nature which fits it to move things, and water and earth and such things they treat in the contrary way.

When these men and the principles of this kind had had their day, as the latter were found inadequate to generate the nature of things, men were again forced by the truth itself, as 10 we said, to inquire into the next kind of cause. For surely it is not likely either that fire or earth or any such element should be the reason why things manifest goodness and beauty both in their being and in their coming to be, or that those thinkers should have supposed it was; nor again could it be right to ascribe so great a matter to spontaneity and luck. 15 When one man said, then, that reason was present—as in animals, so throughout nature—as the cause of the world and of all its order, he seemed like a sober man in contrast with the random talk of his predecessors. We know that Anaxagoras certainly adopted these views, but Hermotimus of Clazomenae is credited with expressing them earlier. Those who thought 20 thus stated that there is a principle of things which is at the same time the cause of beauty, and that sort of cause from which things acquire movement.

CHAPTER IV

One might suspect that Hesiod was the first to look for such a thing—or some one else who put love or desire among existing things as a principle, as Parmenides does; for he, in 25 constructing the genesis of the universe, says¹ :—

Love first of all the Gods she planned.

And Hesiod says² :—

First of all things was chaos made, and then
Broad-breasted earth, and love that foremost is
Among all the immortals,

¹ Fr. 13, Diels, *Vorsokratiker*.

² *Theog.* 116.