Book I (Book A) Wisdom¹

Chapter 1 All human beings by nature stretch themselves out toward knowing. A sign of this is our love of the senses; for even apart from their use, they are loved on their own account, and above all the rest, the one through the eyes. For not only in order that we might act, but even when we are not going to act at all, we prefer seeing, one might say, as against everything else. And the cause is that, among the senses, this one most of all makes us discover things, and makes evident many differences. By nature, then, the animals come into being having sense perception, though in some of them memory does not emerge out of this, while in others it does. And for this reason, these latter are more intelligent and more able to learn than those that are unable to remember, while as many of them as are not able to hear sounds are intelligent without learning (such as a bee, or any other kind of animal that might be of this sort), but as many do learn as have this sense in addition to memory. So the other animals live by images and memories, but have a small share of experience, but the human race lives also by art and reasoning. And for human beings, experience arises from memory, since many memories of the same thing bring to completion a capacity for one experience.

Now experience seems to be almost the same thing as knowledge or art, but for human beings, knowledge and art result from experience, for experience makes art, as Polus says and says rightly, but inexperience makes chance. And art comes into being whenever, out of many conceptions from experience, one universal judgment arises about those that are similar. For to have a judgment that this thing was beneficial to Callias when he was sick with this disease, and to Socrates, and one by one in this way to many people, belongs to experience. But the judgment that it was beneficial to all such people, marked out as being of one kind, when they were sick with this disease, such as to sluggish or irritable people² when they were feverish

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¹ This title for Book I supplied by the translator.

 $^{^2}$ The Greek words imply the predominance, respectively, of phlegm or yellow bile, two of the four humors whose imbalance was thought to produce many diseases.

with heat, belongs to art. For the purpose of acting, experience doesn't seem to differ from art at all, and we even see people with experience being more successful than those who have a rational account without experience. (The cause of this is that experience is familiarity with things that are particular, but art with those that are universal, while actions and all becoming are concerned with what is particular. For the doctor does not cure a human being, except incidentally, but Callias or Socrates or any of the others called by such a name, who happens to be a human being. So if someone without experience has the reasoned account and is familiar with the universal, but is ignorant of what is particular within it, he will often go astray in his treatment, since what is treated is particular.)

Nevertheless, we think that knowing and understanding are present in art more than is experience and we take the possessors of arts to be wiser than people with experience, as though in every instance wisdom is more something resulting from and following along with knowing; and this is because the ones know the cause while the others do not. For people with experience know the what, but do not know the why, but the others are acquainted with the why and the cause. For this reason we also think the master craftsmen in each kind of work are more honorable and know more than the manual laborers, and are also wiser, because they know the causes of the things they do,3 as though people are wiser not as a result of being skilled at action, but as a result of themselves having the reasoned account and knowing the causes. And in general, a sign of the one who knows and the one who does not is being able to teach, and for this reason we regard the art, more than the experience, to be knowledge, since the ones can, but the others cannot, teach.

Further, we consider none of the senses to be wisdom, even though they are the most authoritative ways of knowing particulars; but they do not pick out the why of anything, such as why fire is hot, but only that it is hot. So it is likely that the one who first discovered any art whatever that was beyond the common perceptions was wondered at by people, not only on account of there being something useful in

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 $^{^{3}}$ Some of the manuscripts have the following insertion here: "The others, as do also some of the things without souls, do what they do without knowing, as fire burns, the soulless things doing each of these things by some nature, but the manual laborers by habit."

his discoveries, but as someone wise and distinguished from other people. But once more arts had been discovered, and some of them were directed toward necessities but others toward a way of living, it is likely that such people as were discoverers of the latter kind were always considered wiser, because their knowledge was not directed toward use. Hence when all such arts had been built up, those among the kinds of knowledge directed at neither pleasure nor necessity were discovered, and first in those places where there was leisure. It is for this reason that the mathematical arts were first constructed in the neighborhood of Egypt, for there the tribe of priests was allowed to live in leisure.

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Now it has been said in the writings on ethics what the difference is among art, demonstrative knowledge, and the other things of a similar kind, but the purpose for which we are now making this argument is that all people assume that what is called wisdom is concerned with first causes and origins. Therefore, as was said above, the person with experience seems wiser than those who have any perception whatever, the artisan wiser than those with experience, the master craftsman wiser than the manual laborer, and the contemplative arts more so than the productive ones. It is apparent, then, that wisdom is a knowledge concerned with certain sources and causes.

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Chapter 2 Since we are seeking this knowledge, this should be examined: about what sort of causes and what sort of sources wisdom is the knowledge. Now if one takes the accepted opinions we have about the wise man, perhaps from this it will become more clear. We assume first that the wise man knows all things, in the way that it is possible, though he does not have knowledge of them as particulars. Next, we assume that the one who is able to know things that are difficult, and not easy for a human being to know, is wise; for perceiving is common to everyone, for which reason it is an easy thing and nothing wise. Further, we assume the one who has more precision and is more able to teach the causes is wiser concerning each kind of knowledge. And among the kinds of knowledge, we assume the one that is for its own sake and chosen for the sake of knowing more to be wisdom than the one chosen for the sake of results, and that the more ruling one is wisdom more so than the more subordinate one; for the wise man ought not to be commanded but to give orders, and ought

not to obey someone else, but the less wise ought to obey him.

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We have, then, such and so many accepted opinions about wisdom and those who are wise. Now of these, the knowing of all things must belong to the one who has most of all the universal knowledge, since he knows in a certain way all the things that come under it; and these are just about the most difficult things for human beings to know, those that are most universal, since they are farthest away from the senses. And the most precise of the kinds of knowledge are the ones that are most directed at first things, since those that reason from fewer things are more precise than those that reason from extra ones, as arithmetic is more precise than geometry. But surely the skill that is suited to teach is the one that has more insight into causes, for those people teach who give an account of the causes about each thing. And knowing and understanding for their own sakes belong most to the knowledge of what is most knowable. For the one who chooses what is known through itself would most of all be choosing that which is knowledge most of all, and of this sort is the knowledge of what is most knowable. But what are most knowable are the first things and the causes, for through these and from these the other things are known, but these are not known through what comes under them. And the most ruling of the kinds of knowledge, or the one more ruling than what is subordinate to it, is the one that knows for what purpose each thing must be done; and this is the good of each thing, and in general the best thing in the whole of nature. So from all the things that have

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That it is not a productive knowledge is clear too from those who first engaged in philosophy. For by way of wondering, people both now and at first began to philosophize, wondering first about the strange things near at hand, then going forward little by little in this way and coming to impasses about greater things, such as about the attributes of the moon and things pertaining to the sun and the stars and the coming into being of the whole. But someone who wonders and is at an impasse considers himself to be ignorant (for which reason the lover of myth is in a certain way philosophic, since a myth is composed of wonders). So if it was by fleeing ignorance that they philosophized, it is clear that by means of knowing they were in pursuit of knowing, and not for the sake of any kind of use. And the following testifies to the same thing: for it was when just about all the necessities were present,

been said, the name sought falls to the same kind of knowledge, for it must be a contemplation of the first sources and causes, since also the

as well as things directed toward the greatest ease and recreation, that this kind of understanding began to be sought. It is clear then that we seek it for no other use at all, but just as that human being is free, we say, who has his being for his own sake and not for the sake of someone else, so also do we seek it as being the only one of the kinds of knowledge that is free, since it alone is for its own sake.

For this reason one might justly regard the possession of it as not appropriate to humans. For in many ways human nature is slavish, so that, according to Simonides, "only a god should have this honor," but a man is not worthy of seeking anything but the kind of knowledge that fits him. If indeed the poets have a point and it is the nature of the divine power to be jealous, it would be likely to happen most of all in this case, and all extraordinary people would be ill-fated. But it is not even possible for the divine power to be jealous, but according to the common saying "many lyrics are lies," and one ought not to regard anything else as more honorable than this knowledge. For the most divine is also the most honorable, and this knowledge by itself would be most divine in two ways. For what most of all a god would have is that among the kinds of knowledge that is divine, if in fact any of them were about divine things. But this one alone happens to have both these characteristics; for the divine seems to be among the causes for all things, and to be a certain source, and such knowledge a god alone, or most of all, would have. All kinds of knowledge, then, are more necessary than this one, but none is better.

It is necessary, however, for the possession of it to settle for us in a certain way⁴ into the opposite of the strivings with which it began. For everyone begins, as we are saying, from wondering whether things are as they seem, such as the self-moving marvels,⁵ or about the reversals of the sun⁶ or the incommensurability of the diagonal (for it seems

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⁴ Contemplation and wonder are opposite only in a certain way; they are alike in being active, humble, and appreciative. There is all the difference in the world between problem solving, which sets aside a solved problem like a finished crossword puzzle, and an inquiry that works through wonder and out the other side.

⁵ An early commentator describes these as toys displayed in magic shows, and *Mechanics* 848a 20–38 describes a way that mechanical marvels were moved by concealed gears.

⁶ If one pays attention to the ascent and descent of the sun in the sky from day to day, the solstices are astounding events. The sun stands still at the same height for a few days before reversing direction.

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amazing to all those who have not yet seen the cause if anything is not measured by the smallest part). But it is necessary to end in what is opposite and better, as the saying goes, just as in these cases when people understand them; for nothing would be so surprising to a geometer as if the diagonal were to become commensurable. What, then, is the nature of the knowledge being sought, has been said, and what the object is on which the inquiry and the whole pursuit must alight.

Chapter 3 Since it is clear that one must take hold of a knowledge of the causes that originate things (since that is when we say we know each thing, when we think we know its first cause), while the causes are meant in four ways, of which one is thinghood, or what it is for something to be (since the why leads back to the ultimate reasoned account, and the first why is a cause and source), another is the material or underlying thing, a third is that from which the source of motion is, and the fourth is the cause opposite to that one, that for the sake of which or the good (since it is the completion of every coming-intobeing and motion), which have been sufficiently looked into by us in the writings about nature, still, let us take up also those who came before us into the inquiry about beings and philosophized about truth. For it is clear that they too speak of certain sources and causes. So for those who go back over these things, there will be some profit for the present pursuit; for we will either find out some other kind of cause or be more persuaded about the ones we are now speaking of.

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Of those who first engaged in philosophy, most thought that the only sources of all things were of the species of material; that of which all things are made, out of which they first come into being and into which they are at last destroyed, its thinghood abiding but changing in its attributes, this they claim is the element and origin of things, for which reason nothing ever comes into being or perishes, since this sort of nature is always preserved, just as we would not say either that Socrates simply comes into being when he becomes beautiful or educated in refined pursuits, or that he perishes when he sheds these conditions, since the underlying thing, Socrates himself, persists, so

⁷ The Pythagorean demonstration that no fraction of the side of a square, however small, could fit any exact number of times into its diagonal, is given in the Dovergedition of Euclid's Elements, Vol. III, p. 2.

neither does anything else. For there must be some nature, either one or multiple, out of which the other things come into being while that one is preserved. About the number and kind of such sources, however, they do not all say the same thing, but Thales, the founder of this sort of philosophy, says it is water (for which reason too he declared that the earth is on water), getting hold of this opinion perhaps from seeing that the nourishment of all things is fluid, and that heat itself comes about from it and lives by means of it (and that out of which things come into being is the source of them all). So he got hold of this opinion by this means, and because the seeds of all things have a fluid nature, while water is in turn the source of the nature of fluid things.

There are some who think that very ancient thinkers, long before the present age, who gave the first accounts of the gods, had an opinion of this sort about nature. For they made Ocean and Tethys the parents of what comes into being, and made the oath of the gods be by water, called Styx by them; for what is oldest is most honored, and that by which one swears is the most honored thing. But whether this opinion about nature is something archaic and ancient might perhaps be unclear, but Thales at least is said to have spoken in this way about the first cause. (One would not consider Hippo worthy to place among these, on account of his cut-rate thinking.) Anaximenes and Diogenes set down air as more primary than water and as the most originative of the simple bodies,8 while Hippasus of Metapontium and Heracleitus of Ephesus set down fire, and Empedocles, adding earth as a fourth to those mentioned, sets down the four (for he says these always remain and do not come into being except in abundance or fewness, being combined and separated into or out of one). Anaxagoras of Clazomenae, who was before Empedocles in age but after him in his works, said the sources were infinite; for he said that almost all homogeneous things are just like water or fire in coming into being or perishing only by combination and separation, but otherwise neither come into being nor perish but remain everlasting.

From these things, then, one might suppose that the only cause is the one accounted for in the species of material; but as people went forward in this way, their object of concern itself opened a road for 984a

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⁸ Aristotle does not consider earth, air, fire, and water elements, since they can turn into each other, but only as the simplest bodies. What underlies them is no longer bodily.

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them, and contributed to forcing them to inquire along it. For no matter how much every coming-into-being and destruction is out of some one or more kinds of material, why does this happen and what is its cause? For surely the underlying material itself does not make itself change. I mean, for example, neither wood nor bronze is responsible, respectively, for its own changing, nor does the wood make a bed or the bronze a statue, but something else is responsible for the change. But to inquire after this is to seek that other kind of source, which we would call that from which the origin of motion is. Now some of these who from the very beginning applied themselves to this sort of pursuit and said that the underlying material was one thing, were not at all displeased with their own accounts, but some of those who said it was one, as though defeated by this inquiry, said that the one and the whole of nature were motionless, not only with respect to coming into being and destruction (for this is present from the beginning and everyone agrees to it), but also with respect to every other kind of change, and this is peculiar to them. So of those who said that the whole is one, none happened to catch sight of this sort of cause unless in fact Parmenides did, and he only to the extent that he set down the causes as being not only one but in some way two.9 But it is possible to say so about those who made things more than one, such as hot and cold, or fire and earth; for they use the nature of fire as having the power to set things in motion, but water and earth and such things as the opposite.

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But after these people and sources of this kind, since they were not sufficient to generate the nature of things, again by the truth itself, as we say, people were forced to look for the next kind of source. For that some beings are in a good or beautiful condition, or come into being well or beautifully, it is perhaps not likely that fire or earth or any other such thing is responsible, nor that they would have thought so. Nor, in turn, would it be a good idea to turn over so great a concern to chance or luck. So when someone said an intellect was present, just as in animals, also in nature as the cause of the cosmos and of all order, he looked

⁹ Parmenides's poem can be read as a complex refutation of the sort of account given by such thinkers as Thales and Anaximenes, who said the world was one permanent material which turned into the many things of experience. On the basis of reason (Parmenides's way of truth), the one being could not change, while on the basis of appearance (his way of seeming), there must be two ultimate causes at work (light and night).

like a sober man next to people who had been speaking incoherently beforehand. Obviously we know that Anaxagoras reached as far as saying these things, but Hermotimus of Clazomenae is given credit for saying them earlier. Those, then, who took things up in this way set down a source which is at the same time the cause of the beautiful among things and the sort of cause from which motion belongs to things.

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Chapter 4 One might suspect that Hesiod was the first one to seek out such a thing, or someone else who had set down love or desire among the beings as a source, as Parmenides also did; for he, in getting things ready for the coming into being of the whole, says that first "of all the gods, [the all-governing divinity] devised love," while Hesiod says

Chaos came into being as the very first of all things, but then

Broad-breasted earth...and also

Love, who shines out from among all the immortals, as though there needed to be present among beings some sort of cause that would move things and draw them together. Now how I ought to distribute their portions to them about who was first, permit me to postpone judging. But since the opposites of the good things are obviously also present in nature, and there is not only order and beauty but also disorder and ugliness, and more bad and ordinary things than good and beautiful ones, in this way someone else brought in friendship and strife, each as the cause of one of these kinds of thing. For if one were to pursue and get hold of Empedocles' thinking, rather than what he said inarticulately, one would find that friendship was the cause of the good things and strife of the bad. So if one were to claim that Empedocles both says and is the first to say that bad and good are sources, one would perhaps speak rightly, if in fact the cause of all good things is the good itself.

So these people, as we are saying, evidently got this far with two causes out of those we distinguished in the writings about nature, the material and that from which the motion is, but did so dimly and with no clarity, rather in the way nonathletes do in fights; for while dancing around they often land good punches, but they do not do so out of knowledge, nor do these people seem to know what they are saying. For it is obvious that they use these causes scarcely ever, and only to a tiny extent. For Anaxagoras uses the intellect as

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a makeshift contrivance for cosmos production, and whenever he comes to an impasse about why something is necessarily a certain way, he drags it in, but in the other cases he assigns as the causes of what happens everything but the intellect; and Empedocles, though he uses his causes more than that, surely does not either use them sufficiently or come up with any consistency with them. Certainly in many places friendship separates things for him, and strife combines things. For whenever the whole is divided by strife into its elements, fire is combined into one, as is each of the other elements; but whenever they come back together into one, the parts must be separated back out of each element. Empedocles was the first who, beyond those before him, brought in this sort of cause by dividing it, making the source of motion not one thing but different and opposite ones, and furthermore, 985a 30 he first spoke of the so-called four elements as the causes in the species of material. (In fact, though, he didn't use them as four, but as though they were only two: fire on one side by itself, and its opposites, earth, air, and water, as one nature on the other side. One may get this by looking carefully at what is in the verses.)

So as we are saying, he claimed that the sources were of this sort and this many. But Leucippus and his colleague Democritus say the elements are the full and the void, of which the one, as what is, is full and solid, while the other, what is not, is void (for which reason they say that being in no sense is more than nonbeing, nor body more so than void), and that these are responsible for things as material. And just as those who make the underlying being one, and generate the other things by means of modifications of it, set down the rare and the dense as the sources of the modifications, in the same way these people too say that the differences in the material are responsible for the other things. They, however, say these differences are three: shape, order, and position. For they say that what is differs only by means of "design, grouping, and twist," but of these, design is shape, grouping is order, and twist is position. For A differs from N in shape, AN from NA in order, and Z from N in position. As for motion, from what source or in what way it belongs to things, these people, much like the others, lazily let it go. So about the two causes, as we are saying, the inquiry seems to have gone this far on the part of our predecessors.

Chapter 5 But among these people and before them, those who are called Pythagoreans, taking up mathematical things, were the first to

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Book II (Book α)¹ Inquiry²

Chapter 1 The beholding of truth is in one way difficult, but in another way easy. A sign of this is that, while no one happens to be capable of it in an adequate way, neither does anyone miss it, but each one says something about nature, and though one by one they add little or nothing to it, from all of them put together something comes into being with a certain stature. So if it seems that we happen to be in the condition of the common saying, "who could miss the doorway?," in this way it would be easy, but to have the whole in a certain way, and yet be incapable of part of it, shows what is difficult about it. But perhaps, since the difficulty is of two sorts, the cause is not in the things but in us; for in just the way that the eyes of bats are related to the light of mid-day, so also is the intellect of our soul related to those things that are by nature the most evident of all. And it is right to feel gratitude not only to those whose opinions one shares, but even to those whose pronouncements were more superficial, for they too contributed something, since before us they exercised an energetic habit of thinking. For if there had been no Timotheus, there is much lyric poetry we would not have had, but were it not for Phrynis, there would have been no Timotheus. And it is the same way too with pronouncements about truth; for we have inherited certain opinions from certain people, but others have been responsible for bringing

And it is also right to call philosophy the knowledge of truth. For the end of contemplative knowledge is truth, but of practical knowledge it is action; for even if people devoted to the active life do examine the way things are, they do not contemplate the cause in its own right, but

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¹ This book is labeled "little alpha," and is an obvious insertion between Books I and III. The *Metaphysics* is pieced together from many separate strands of related writings, but it is assembled with great care to form a single argument. There are some overlapping passages, and others not strictly necessary to the dialectical advance of the whole, but no open-minded reading could confirm the judgement of those scholars who think the parts represent different and incompatible "stages" of Aristotle's "development." The coherence of the work is not apparent by philological analysis, but emerges unmistakably for a serious philosophic reader. (See the Introduction.)

² This title for Book II supplied by the translator.

in relation to something now. But without the cause we do not know the truth, but each thing is what it is most of all, and more so than other things, if as a result of it the same name also belongs to those other things. (For example, fire is the hottest thing, since it is also responsible for the hotness of the other things.) Therefore also, what is responsible for the being-true of derivative things is more true than they are. For this reason the sources of the things that always *are* must be true in the highest sense (for they are not sometimes true, nor is anything a cause for them of their being, but they are the cause of other things), so what each thing has of being, that too it has of truth.³

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Chapter 2 Now surely it is clear that there is some source of things and that the causes are not infinite either in a straight line or in kind. For it is not possible for one thing to come from another infinitely, either as from material (such as flesh from earth, earth from air, air from fire, and in this way without stopping), or from where the origin of motion is (such as for a human being to be moved by the air, this by the sun, the sun by strife, and for there to be no limit of this); nor, similarly, can that for the sake of which go on to infinity—walking for the sake of health, this for the sake of happiness, happiness for the sake of something else, and for one thing to be for the sake of another forever in this way—and likewise in the case of what it is for something to be. For of in-between things, which have some last thing and some more primary one, the more primary must be the cause of the ones after it. For if we had to say which of the three things was the cause, we would say the first one; for it is surely not the last one, since the last of all is the cause of nothing, but neither is it the middle one, though it is the cause of one thing (and it makes no difference if there is one or more than one middle thing, nor whether there are infinitely or finitely many). But of things infinite in this way, and of the infinite in general, all the parts are alike middle ones down to the present one; therefore,

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if there is no first thing, there is no cause at all.

But surely it is not possible to go to infinity in the downward direction either, of something that has a beginning above, so that out

³ Etymologically, the Greek word for truth means something like "what emerges from hiddenness." It therefore applies to things as well as to knowing. This paragraph is a first and highly compressed sketch of the structure of the *Metaphysics* as a whole. It is a search for that which most of all *is*, as a result of which other things are.

of fire would come water, and out of this earth, and so forever some other kind coming into being. For one thing comes out of another in two ways: either as a man comes into being out of a boy by his changing, or as air comes into being out of water. So the sense in which we say a man comes into being out of a boy is as what has become comes out of what is becoming, or what is complete out of what is being completed. (For just as becoming is always between being and not being, so also the thing that is becoming is between something that is and something that is not; for the one who is learning is a knower coming into being, and this is what it means to say that a knower comes out of a learner.) But the sense in which air comes into being out of water is by the destruction of one of the two things. For this reason the former kind do not turn back into one another, and a boy does not come into being out of a man (for out of the process of becoming there does not come something that is becoming, but something that is after the process of becoming, for so too a day comes out of morning because it is after it, for which reason morning does not come out of a day), but the other kind do turn back into one another. But in both ways it is impossible to go to infinity; for of the in-between sort of beings there must necessarily be an end, while the other sort turn back into one another, since the destruction of one of them is the coming into being of the other. But at the same time it is impossible for the first thing, which is everlasting, to be destroyed; for since the process of becoming is not infinite in the upward direction, what came into being out of a first thing that was destroyed could not be everlasting.4

And since that for the sake of which something *is* is an end, and this sort of thing is what is not for the sake of anything else, but they for the sake of it, then if there is any such last thing, there will not be an infinity, but if there is no such thing, there will be nothing for the sake of which it is. But those who make there be an infinite are unaware that they abolish the nature of the good. (Yet no one would make an effort to do anything if he were not going to come to a limit.) And there would not be intelligence among beings; for what has intelligence always acts for the sake of something, and this is a limit. And neither is it possible that

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⁴ The last sentence means that even if a process of becoming began with, say, water, and water never reappeared in the series, still the very fact that it was destroyed would mean it could not have generated an infinite series of effects. Compare *Physics* 266a 10–266b 6.

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what it is for something to be should be led back to another definition that that has a fuller articulation; for it is always the earlier definition that is more and the later that is not, and what is not in the first one is not in the next one either. What's more, those who say that it is abolish knowing, since it is not possible to know until one has come to what is knowing, since it is not possible to know until one has come to what is indivisible; and there isn't any knowing, for how is it possible to think what is infinite in that way? For it is not the same thing as with a line, which does not come to an end of divisions but which is not possible to think unless one stops dividing it (for which reason the one who goes through the line as an infinity will not count up the divisions).

But in something that moves it is also necessary to think about the material. And for nothing is it possible that it be infinite; or if it is, at least the being-infinite of it is not an infinite series. But surely also if the kinds of causes were infinite in number, neither would there be any knowing for that reason; for we think that we know something when we are acquainted with its causes, but what is infinite by addition is not possible to go all the way through in a finite time.

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Chapter 3 Courses of lectures go along with one's habits; for in the way that we are accustomed, in that way we think it fitting for something to be said, and what departs from this does not seem the same, but through lack of acquaintance seems too obscure and alien. For what we are used to is familiar. And what great strength the customary has, the laws show, in which the mythical and childish things are of greater strength than knowing about them, because of custom. Some people do not give a favorable reception to what is said if one does not speak mathematically, others if one speaks without giving examples, and others expect one to bring in a poet as a witness. Some expect everything to be said with precision, while others are annoyed by precision, either because they can't keep the connections

⁵ By "what it is for something to be," Aristotle means (a) what a thing always is, of continues being, and (b) all that is present in it in order that it be. The first qualification excludes what is individual and incidental, while the second excludes what is universal and incomplete. The species is at the exact rung of the scale of particularity and generality that articulates what anything is, and one does not improve it by adding something from either side. Only self-sustaining independent beings have this kind of articulation

articulation.

6 Even if the material of the world were infinite in extension it would not constitute an infinity of material causes.

straight or because of its hairsplitting pettiness. For precision does have something of this sort about it, so that, just as in business agreements, so also in reasoning it seems to some people to be ungenerous. For this reason one must have been trained in how one ought to receive each kind of argument, since it is absurd to be searching at the same time for knowledge and for the direction to knowledge; and it is not possible to get either of the two easily. Now mathematical precision of speech is something one ought to demand not in all things, but concerning those that do not have material. For this reason it is not a way that is suited to nature, for presumably all nature has material. Therefore one must first consider what nature is, for in this way it will also be clear what the study of nature is concerned with.⁷

⁷ This requirement is not picked up immediately, but is part of an array of preliminary cautions in the woven texture of the *Metaphysics*. It is picked up indirectly at two of the main structural points in the work: at 1029a 33–1029b 12, where the inquiry gets going in earnest, and at 1064a 10–28, where a passage from the *Physics* is inserted to prepare the way to the culmination of the inquiry in Book XII.