BOOK I

CHAPTER 1

In all disciplines in which there is systematic knowledge of 184[a]
things with principles, causes, or elements, it arises from a grasp
of those: we think we have knowledge of a thing when we have
found its primary causes and principles, and followed it back
to its elements. Clearly, then, systematic knowledge of nature 15
must start with an attempt to settle questions about principles.

The natural course is to proceed from what is clearer and
more knowable to us, to what is more knowable and clear by
nature; for the two are not the same. Hence we must start thus
with things which are less clear by nature, but clearer to us, 20
and move on to things which are by nature clearer and more
knowable. The things which are in the first instance clear
and plain to us are rather those which are compounded. It is
only later, through an analysis of these, that we come to
know elements and principles.

That is why we should proceed from the universal to the
particular. It is the whole which is more knowable by per- 25
ception, and the universal is a sort of whole: it embraces
many things as parts. Words stand in a somewhat similar 184[b]
relationship to accounts. A word like 'circle' indicates a whole
indiscriminately, whereas the definition of a circle divides it
into particulars. And little children at first call all men father
and all women mother, only later coming to discriminate
each of them.

CHAPTER 2

There must be either one principle or more than one. If one, it
must be either unchangeable, the view of Parmenides and 15
Melissus, or subject to change, the view of the physicists, of
whom some make air and others water the primary principle.

If there are more principles than one, they must be either limited in number—that is, there are either two, three, four, or some such definite number of them—or unlimited. In the latter case, either they are all the same in kind, and ⟨differ⟩ only in shape, as Democritus held, or they are different or even opposed in species. We are here raising the same question as those who ask how many things there are: they are really inquiring about the primary constituents of things, whether they are one or several, and if several, whether they are limited or unlimited in number, so they too are inquiring into the number of principles and elements.

Now the question whether what is is one and unchangeable, does not belong to a discussion of nature. Just as the geometer has nothing left to say to the man who does away with the principles of geometry, but must refer him to a student of something else, or of what is common to all studies, so it is when we are inquiring into principles: there will be no principle left if what is is one thing only, and one in this way. A principle must be a principle of some thing or things. Discussing whether what is is one in this way, is like discussing any other thesis advanced for the sake of having a discussion, like that of Heraclitus, or the view that what is is a single man. Or like exposing a quibble, such as is latent in the arguments of both Melissus and Parmenides: for both reason invalidly from false premisses, but Melissus is the duller and more obvious: grant him one absurdity and he is able to infer the rest—no great achievement.

For ourselves, we may take as a basic assumption, clear from a survey of particular cases, that natural things are some or all of them subject to change. And we should not try to expose all errors, but only those reached by arguing from the relevant principles; just as it is the geometer's job to refute a quadrature by means of lunes, but not one like Antipho's. Nevertheless, since, though they are not writing about nature, the Monists happen to raise difficulties pertinent to it, we would do well, perhaps, to say a little about them; for the inquiry offers scope for philosophy.

The most appropriate way of all to begin is to point out that things are said to be in many ways, and then ask in what way they mean that all things are one. Do they mean that there is nothing but reality, or nothing but quantity or quality? And do they mean that everything is one single reality, as it might be one single man, or one single horse, or one single soul, or, if all is quality, then one single quality, like pale,* or hot, or the like? These suggestions are all very different and untenable. If there is to be reality and quality and quantity, then whether these are apart from one another or not, there will be more things than one. And if everything is quality or quantity, then whether there is also reality or not, we run into absurdity, if, indeed, impossibility can be so called. Nothing can exist separately except a reality; everything else is said of a reality as underlying thing.

Melissus says that what is is unlimited. It follows that what is is some quantity. For the unlimited is unlimited in quantity, and no reality, quality, or affection can be unlimited, except by virtue of concurrence, there being also certain quantitative things. For quantity comes into the account of the unlimited, but reality and quality do not. If, then, there is reality and quantity as well, what is is twofold and not one; if there is just reality, so far from being unlimited, it will have no magnitude at all; if it had, there would be some quantity.

Again, as things are said to be, so they are said to be one, in many ways; so let us see in what way the universe is supposed to be one. A thing is called one if it is a continuum, or if it is indivisible, and we also call things one if one and the same account is given of what the being of each would be: so, for instance, wine and the grape.

Now if the universe is continuous, the one will be many; for continua are divisible without limit. (There is a difficulty about parts and wholes, though perhaps it is a problem on its own and not relevant to the present discussion: are the parts and the whole one thing or several, and in what way are they one or several, and if several, in what way are they several? And what about the parts which are not continuous?

And is each indivisibly one with the whole, since they will be the same with themselves also?)

Is the universe one, then, in that it is indivisible? Then nothing will have any quantity or quality, and what is will be neither unlimited, as Melissus says, nor limited, as Parmenides prefers. For it is limits which are indivisible, not limited things.

If, however, all things are one in account, like raiment and apparel, they will find themselves in the position of Heraclitus. The being of good and the being of bad, of good and not good, will be the same, so that good and not good, man and horse, will be the same, and the thesis under discussion will no longer be that all things are one, but that they are nothing at all. And the being of a certain quality and the being of a certain quantity will be the same.

Thinkers of the more recent past also were much agitated lest things might turn out to be both one and many at the same time. Some, like Lycophron, did away with the word 'is'; others sought to remodel the language, and replace 'That man is pale' 'That man is walking', by 'That man pales' 'That man walks', for fear that by inserting 'is' they would render the one many—as if things were said to be or be one in only one way. Things, however, are many, either in account (as the being of pale is different from the being of a musician*, though the same thing may be both: so the one is many), or by division, like the parts of a whole. At this point they got stuck, and began to admit that the one was many; as if it were not possible for the same thing to be both one and many, so long as the two are not opposed: a thing can be one in possibility and in actuality.

CHAPTER 3

If we approach the matter thus, it appears to be impossible that things are all one, and the arguments in fact adduced are not hard to rebut. Both of them, Melissus and Parmenides, argue in quibbles; they reason invalidly from false premisses;

but Melissus is the duller and more obvious: grant him one absurdity, and he is able to infer the rest—no great achievement.*

The fallacies of Melissus are patent. He thinks that if he has made it a premiss that whatever comes to be has a beginning, he has also made it a premiss that whatever does not come to be has no beginning. It is also absurd to say that in all cases there is a beginning, not only of the time, but of the thing, and that, not only when the coming to be is a coming simply into being, but also when it is a qualitative change— as if change never took place on an extended front. And then, how does it follow, because all is one, that all is unchangeable? If a part of the universe which is one, like this water here, can change in itself, why not the whole? And why should there be no such thing as qualitative change? In fact, the contents of the universe cannot be one even in species—men and horses are different in species and so are opposites—unless inasmuch as they are made of the same sort of stuff; and some of the physicists, indeed, say that all is one in that way, though not in the other.

Parmenides is open to all these objections, besides others exclusive to himself. The answer to him is that he assumes what is not true and infers what does not follow. His false assumption is that things are said to be in only one way, when they are said to be in many. As for the invalidity, suppose we say that there are only pale things, and that 'pale' means only one thing: the pale things will be none the less many and not just one. The pale will not be one in virtue of being continuous, nor will it be one in account. For the being of pale will be different from the being of that which has received it. By that I do not imply that anything can exist separately except the pale: it is not because they can exist separately, but because they differ in their being, that the pale and that to which it belongs are different. This, however, is something Parmenides did not get far enough to see.

He must make it a premiss, then, not only that 'is' means

only one thing, whatever is said to be, but that it means precisely what is, and precisely what is one. For that which supervenes is said of some underlying thing, so if 'is' supervenes, that on which it supervenes will not be, for it will be something different from that which is; and therefore there will be somewhich is not. Precisely what is, then, will not be something which belongs to something else. It cannot be a particular sort of thing which is, unless 'is' means more things than one, such that each is a sort of being, and it was laid down that 'is' means only one thing.

But now, if precisely what is does not supervene on anything else, but ⟨other things⟩ rather supervene on it, why does 'precisely what is' mean 'is' more than 'is not'? Suppose that precisely what is is also pale, and that the being of pale is not precisely what is (for being cannot even supervene on it, since nothing is a thing which is except precisely what is): it will follow that that which is pale is not. And I do not mean that it will not be this or that: it will not be at all. But then precisely what is will not be: for it was true to say that it was pale, and that meant something which is not. So 'pale' also must mean precisely what is. But then 'is' will have more than one meaning.

Again, if what is is precisely what is, then what is will not have magnitude, for the being of each of its parts would be different.

That precisely what is divides into something else which is precisely what is, is clear as soon as we try to give an account. Suppose a man is* precisely what is; then animal must be something which is precisely what is, and so must biped. If not, they must be supervenient; must supervene, then, either on man or on some other underlying thing; and neither alternative will stand.

A thing is called supervenient, either if it is such that it can belong or not belong* [or if that on which it supervenes comes into the account of it] or if the account of that on which it supervenes comes into it. Thus being seated is supervenient in that it is separable, and the account of the nose on which we

say snub supervenes comes into snub. Further, whatever enters as a constituent into the definitory account of a thing must be such that the account of the whole thing does not enter into the account of it. Thus the account of man does not come into biped, and the account of pale man does not come into pale. That being so, if biped supervened on man, either biped would have to be separate from man, so that we could have men who were not bipeds; or the account of man would enter into the account of biped. This last, however, is impossible, since biped comes into the account of man.

If, on the other hand, animal and biped supervene on something other than man, and each is not something which is precisely what is, man too will be something which supervenes on something else. But we must take it that precisely what is does not supervene on anything, and if both [and each] of two things are said of something, so must that which they constitute. Does the universe, then, consist of indivisibles?

Some people gave in to both arguments: to the argument that if 'is' means only one thing, all things must be one, when they said that there is that which is not; and to the argument from dichotomy, when they posited indivisible magnitudes. But it is obviously untrue that if 'is' means only one thing, and nothing can both be and not be, there will be nothing which is not. That which is not, need not not be* altogether: it may not be something definite. And to say that if nothing is over and above what is itself, all things will be one, is absurd. For who understands by 'what is itself' anything but precisely what is something definite? If that is so, there is still nothing to stop there being a plurality of things, as has been said. That it is impossible, then, for what is to be one in the way claimed is clear.

CHAPTER 4

There are two main lines taken by the physicists. Some make the underlying body one, making it either one of the three, or something else which is more solid than fire but less solid

than air. From this they produce everything else (and they allow a plurality of products) by means of density and rarity. These are opposites, and, to put it in general terms, are excess and defect, as are the great and small in Plato; though Plato differs from them in that he makes the great and small matter, and what is one the form, whilst they make the one underlying thing matter, and the opposites differentiating principles and forms.

The other line is taken by those who, like Anaximander, make the one stuff already contain in it oppositions, which are then separated out, and also by those who say that it is both one and many, like Empedocles and Anaxagoras. They too posit a hotchpotch, from which everything else emerges by separation. They differ, however, in that Empedocles posits periodic mixtures and separations, whilst Anaxagoras posits only one, and Anaxagoras posits an unlimited number both of homeomerous elements and of opposites, while Empedocles posits only the elements which are so called.*

Anaxagoras probably made his elements unlimited in this way because he accepted as true the general opinion of the physicists that nothing comes to be out of what is not. It is on this ground that they say that things were once 'all together', and that he makes the coming to be of a thing of a certain sort alteration, while they make it coming together and dissolution. It was also a consideration, that opposites come to be out of one another: they must, it seemed, have been there all the time. For if everything which comes to be must do so either out of what is or out of what is not, then, if the latter is impossible (and about that there is unanimity among all who discuss nature), the former, they thought, must be true: everything comes to be out of things which already exist and are present, but cannot be perceived by us because they are extremely tiny. According to them, then, everything is mixed together in everything, because they saw everything coming to be out of everything: things only look different, and are said to be one thing rather than another, because there is a numerical preponderance of that in the

mixture of the unlimited particles; there is no whole object which is purely pale, dark, sweet, flesh, or bone, but whichever a thing has most of is commonly taken as constituting its nature.

Now if the unlimited as such is unknowable, then there is no knowing the quantity of that which is unlimited in number or size, and no knowing what sort of thing a thing is, if there is no limit to its forms. If, then, the principles are unlimited both in number and in forms, there can be no knowledge of the things they make up. For we think we have knowledge of something composite, when we know the variety and number of its components.

Further, if it is necessary that, if a part of a thing (and I am speaking of the parts into which, as constituents present in it, the whole can be divided) can be as large or small as you please, then so can the whole, and if it is not possible for any animal or plant to be as large or small as you please, it is not possible that any part should be either; for if it could, so could the whole. Now flesh and bone are parts of animals, and fruits are parts of plants. Clearly, then, neither flesh nor bone nor anything of that sort can proceed indefinitely far either in enlargement or in diminution.

Again, if all such things are already present in one another, and do not come into existence, but are merely separated out after being there all along, objects getting their appellation from whatever is present in most abundance; and if anything can come to be out of anything, for instance water be separated out from flesh, and flesh from water; and if only a limited quantity of stuff is needed to do away with a limited quantity of stuff: it plainly follows that everything cannot be present in everything. For suppose that some flesh is removed from some water, and then more flesh extracted from what remains: even if the yield is lower each time, there will still always be some quantity smaller than any yet yielded. Hence either the separating out will come to an end, in which case the residue of water will be completely void of flesh, and it will not be true that everything is in everything; or else it will not come

to an end, but more can always be extracted, in which case we shall have the impossibility that there is an unlimited number of equal limited parts in a limited magnitude.

Further, if every body must become smaller when something is removed from it, and if flesh cannot increase or diminish in quantity beyond a certain limit, it is plain that from the least possible quantity of flesh nothing corporeal can be extracted. For there would then be a quantity of flesh smaller than the least possible.

Again, the unlimited number of corporeal particles would each contain an unlimited supply of flesh, blood, and brain, ⟨not⟩ indeed separated from one another, but none the less real and unlimited; but that is nonsense.

That the separating out will never be complete is true, but Anaxagoras did not understand why. Affections are not capable of separation. If colours and states are mixed together, then if they get separated out, we shall have a pale or a healthy which is nothing else, which is not even *of* an underlying thing. Hence Anaxagoras' Mind is absurd: it is seeking the impossible, since it wants to effect a separating which cannot be effected, whether it is conceived as a separation of quantities or of qualities: from the former angle, because there is no smallest magnitude, from the latter, because affections are not capable of separation. Anaxagoras did not get right even the coming to be of things of the same species, for in one way clay divides into clay but in another it does not. As for his suggestion that water and air are constituted and come to be out of one another in the way in which you get bricks out of houses and houses out of bricks, the cases are not parallel. Altogether it is better to make your basic things fewer and limited, like Empedocles.

CHAPTER 5

That opposites are principles is universally agreed: by those who say that the universe is one and unchanging (for Parmenides in effect makes hot and cold principles, though he

calls them fire and earth), by those who make use of dense and rare, and by Democritus. Democritus posits the full and the empty, saying that the one is present as that which is, and the other as that which is not; he also makes use of position, shape, and arrangement, and these are genera of opposites: position comprises above and below, in front and behind; shape comprises angular and smooth, straight and curved. Clearly, then, all in some way agree that opposites are the principles. And that is plausible. For the principles must come* neither from one another nor from anything else, and everything else must come from them. Primary opposites fulfil these conditions: because they are primary they do not come from anything else, and because they are opposite they do not come from one another. But we must also see what emerges from logical considerations.

Our first point must be that nothing whatever is by nature such as to do or undergo any chance thing through the agency of any chance thing, nor does anything come to be out of just anything, unless you take a case of concurrence. For how could pale come to be out of knowing music, unless the knowing music supervenes on the not pale or the dark? Pale comes to be out of not pale—not, that is, out of just anything other than pale, but out of dark or something between the two; and knowing music comes to be out of not knowing music, that is, not out of just anything other than knowing music, but out of ignorant of music, or something in between if there is anything in between. And a thing does not pass away into just anything in the first instance; thus the pale does not pass away into the knowing music, except by virtue of concurrence, but into the not pale, and not into any chance thing other than the pale, but into the dark or something in between. Similarly the knowing music passes away into the not knowing music, and not into any chance thing other than the knowing music, but into the ignorant of music or something in between if there is anything in between. It is the same in all other cases, since the same account holds for things which are not simple but composite, though we do not notice, because the opposed

dispositions have no name. It is necessary that the united* should always come to be out of disunited, and the disunited out of united, and that the united should pass away into disunion, and not just any chance disunion, but that opposed to the preceding union. And it makes no difference whether we speak of union, or arrangement, or composition: plainly the same account holds. And a house, a statue, what you please, comes to be in the same way. The house comes to be out of the not being put together but dispersed thus of these materials, and the statue or anything else which is shaped, arises out of shapelessness. Every one of these things is an arrangement or composition.

If this is true, everything which comes to be comes to be out of, and everything which passes away passes away into, its opposite or something in between. And the things in between come out of the opposites—thus colours come out of pale and dark. So the things which come to be naturally all are or are out of opposites.

So far most thinkers are prepared to go along with us, as I said above. For they all represent their elements and what they call their principles as opposites, even if they give no reason for doing so, as though the truth itself were forcing them on. They differ among themselves in that some take pairs which are prior and some take pairs which are posterior, and some choose pairs which are more readily known with the aid of an account, and some choose pairs which are more readily known by perception: for some put forward hot and cold as the causes of coming to be, and others wet and dry, and others odd and even or strife and love, and these differ in the manner just stated. So the pairs they propose are in a way the same and different: they are different, as indeed they are generally thought to be, but by analogy the same. For they are taken from the same list, some of the opposites being wider in extent and others included under them. This is how it is that the principles put forward are the same and different, and some better and some worse; and some, as we said, more easily known with the aid of an account, like the great and the

small, and others more easily known by perception, like the rare and the dense—for that which is universal is more easily known in the former way, since accounts are of what is universal, and that which is particular in the latter, since perception is of particulars.

That the principles, then, must be opposites is plain.

CHAPTER 6

We must next say whether they are two, three, or more in number.

They cannot be one, since opposites are not one and the same; and they cannot be unlimited, since if they were, what is would be unknowable, since there is one opposition in any one kind of thing, and reality is one such kind, and since we can get on with a limited number, and it is better to use a limited, like Empedocles, than an unlimited. Empedocles claims to do everything Anaxagoras can do with his unlimited plurality. Further, some pairs of opposites are prior to others, and some, like sweet and bitter, pale and dark, arise from others,* whereas principles ought to be constant.

That shows that they can be neither one nor unlimited in number. But if they are limited, there is an argument for not making them only two. For it is hard to see how density could be by nature such as to act on rarity or vice versa, and similarly whatever the opposition: love does not gather up strife and make something out of it, nor does strife act thus with love, but both must act on a third thing distinct from them. And some people enlist even more principles to constitute the nature of things.

We may also run into the following difficulty if we do not posit some additional nature to underlie the opposites. We never see opposites serving as the reality of anything, and yet a principle ought not to be something said of some underlying thing. If it is, the principle will itself have a principle, for

that which underlies is a principle, and is thought to be prior to that which is said of it.

Again, we do not say that one reality is the opposite of another. How, then, can a reality be constituted by things which are not realities? And how can that which is not a reality be prior to that which is?

Anyone, then, who accepts both the earlier argument and this, must, if he is to preserve both, posit some third thing which underlies, as do those who say that the universe is one single nature, such as water or fire or something between the two. The last suggestion is the most hopeful, since fire, earth, air, and water are already tangled up with oppositions. Those, then, are not without reason, who make the underlying thing different from any of these, or, if one of them, air, since that has the least perceptible differentiating features. After it comes water. Anyhow, all shape their one stuff with the opposites, with density and rarity and the more and the less; and these clearly, as I said above, are, in general terms, excess and defect. It does not seem to be at all a novel idea, that the principles of things are the one, excess and defect, though it has been put forward in different ways: earlier inquirers made the single principle passive and the pair active, whilst certain more recent thinkers prefer to turn it round and say that it is the one which is active and the pair passive.

That there are as many as three elements, then, may seem arguable to anyone guided by these and similar considerations; but at three we might draw the line. The single one is enough for being acted on; and if there are four, giving us two oppositions, we shall have to supply a further intermediate nature for each separately. Or if there are two pairs and they can produce things out of one another, one of the oppositions will be otiose. Moreover, there cannot be more than one primary opposition. Reality is a single kind of thing, so that the principles can differ only in being prior or posterior to one another, and not in kind. In any one kind there is always one opposition, and all oppositions seem to reduce to one.

That the elements, then, are neither one in number, nor more than two or three, is plain; but whether they are two or three is, as I have said, a very difficult question.

CHAPTER 7

This is how I tackle it myself. I shall be dealing first with coming to be in general, since the natural procedure is first to say what is common to all cases, and only then to consider the peculiarities of each.

When we say that one thing comes to be out of another, or that something comes to be out of something different, we may be talking either about what is simple or about what is compound. Let me explain. A man can come to be knowing music, and also the not knowing music can come to be knowing music, or the not knowing music man a man knowing music. I call the man and the not knowing music simple coming-to-be things, and the knowing music a simple thing which comes to be. When we say that the not knowing music man comes to be a knowing music man, both the coming-to-be thing and that which comes to be are compound.

In some of these cases we say, not just that this comes to be, but that this comes to be out of this—for instance, knowing music comes to be out of not knowing music. But not in all: knowing music does not come to be out of man, but the man comes to be knowing music.

Of what we call the simple coming-to-be things, one remains when it comes to be, and the other does not. The man remains and is a man when he comes to be knowing music,* but the not knowing music and the ignorant of music do not remain, either by themselves or as components.

These distinctions having been made, in all cases of coming to be, if they are looked at as I suggest, this may be taken as definite, that there must always be something underlying which is the coming-to-be thing, and this, even if it is one in number, is not one in form. (By 'in form' I mean the same

as 'in account'.) The being of a man is not the same as the being of ignorant of music. And the one remains and the other does not. That which is not opposed remains—the man remains—but the not knowing music and the ignorant of music do not remain, and neither does the compound of the two, the ignorant of music man.

We say that something comes to be out of something, and not that something comes to be something, chiefly in connection with that which does not remain. Thus we say that knowing music comes to be out of not knowing music, but we do not say that it comes to be out of man. Though we sometimes speak thus about things that do remain: we say that a statue comes to be out of bronze, not that bronze comes to be a statue. But we speak in both ways of that which comes to be out of what is opposed to it and does not remain: we say both 'this comes to be out of this' and 'this comes to be this'. Out of ignorant of music comes to be knowing music, and ignorant of music comes to be knowing music. Hence it is the same with the compound; we say both that out of a man who is ignorant of music, and that a man who is ignorant of music, comes to be one who knows music.

Things are said to come to be in many ways, and some things are said, not to come to be, but to come to be something, while only realities are said simply to come to be. In the case of other things it is plain that there must be something underlying which is the coming-to-be thing—for when a quantity, quality, relation, [time,] or place comes to be, it is *of* an underlying thing, since it is only realities which are not said of anything further, and all other things are of realities. But that realities too, and whatever things simply are, come to be out of something underlying, will, if you look attentively, become plain. There is always something which underlies, out of which the thing comes to be, as plants and animals come to be out of seed. The things which simply come to be do so some of them by change of shape, like a statue, some by addition, like things which grow, some by subtraction, as a Hermes comes to be out of the stone, some by composition, like a house,

some by alteration, like things which change in respect of their matter. All things which come to be like this plainly come to be out of underlying things.

From what has been said, then, it is clear that that which comes to be is always composite, and there is one thing which comes to be, and another which comes to be this, and the latter is twofold: either the underlying thing, or the thing which is opposed. By that which is opposed, I mean the ignorant of music, by that which underlies, the man; and shapelessness, formlessness, disarray are opposed, and the bronze, the stone, the gold underlie.

Plainly then if there are causes and principles of things which are due to nature, out of which they primarily are and have come to be not by virtue of concurrence, but each as we say when we give its reality,* everything comes to be out of the underlying thing and the form. For the knowing music man is composed in a way of man and knowing music. Analyses are into accounts of these two. So it is clear that things which come to be come to be out of them. The underlying thing, however, though one in number, is two in form. On the one hand there is the man, the gold, and in general the measurable matter; this is more of a this thing here, and it is not by virtue of concurrence that the thing which comes to be comes to be from this. On the other hand there is the lack or opposition, which is supervenient. As for the form, it is one: it is the arrangement, or the knowledge of music, or some other thing said of something in the same way. Hence from one angle we must say that the principles are two, and from another that they are three; and from one angle they are the opposites—as when we say that they are the knowing music and the ignorant of music, or the hot and the cold, or the united and the disunited—but from another angle not, for opposites cannot be acted upon by one another. This difficulty too is resolved by the fact that the underlying thing is something else, and that other thing is not an opposite. So in one way the principles are not more numerous than the opposites, but are, you might say, two in number; but

191a they are not two in every way, because of the diverse being which belongs to them, but three. (For the being of a man is different from the being of ignorant of music, and the being of shapeless from the being of bronze.)

How many principles there are of natural things [which are involved in coming to be],* and in what way they are so many, has now been said. It is clear that there must be some-
5 thing to underlie the opposites, and that the opposites must be two in number. Yet in another way that is not necessary. One of the opposites, by its absence and presence, will suffice to effect the change.

As for the underlying nature, it must be grasped by analogy. As bronze stands to a statue, or wood to a bed, or [the matter
10 and] the formless before it acquires a form to anything else which has a definite form, so this stands to a reality, to a this thing here, to what is. This, then, is one principle, though it neither is, nor is one, in the same way as a this thing here; another principle is that of which we give the account; and there is also the opposite of this, the lack. In what way these
15 principles are two, and in what way more than two, has been said above. The theory originally was that the only principles were the opposites; then that there had to be something else to underlie them, making the principles three; on our present showing it is plain what sort of opposites are involved,* how the principles stand to one another, and what the underlying thing is. Whether the form or the underlying thing has
20 the better claim to be called the reality, is still obscure; but that the principles are three, and how, and what the manner of them is, is clear.

So much on how many and what the principles are.

CHAPTER 8

That this is the only way of resolving the difficulty felt by thinkers of earlier times must be our next point. The first
25 people to philosophize about the nature and truth of things

got so to speak side-tracked or driven off course by inexperience, and said that nothing comes to be or passes away, because whatever comes to be must do so either out of something which is, or out of something which is not, and neither is possible. What is cannot come to be, since it is already, and nothing can come to be out of what is not, since there must be something underlying. And thus inflating the consequences of this, they deny a plurality of things altogether, and say that there is nothing but 'what is itself'.

They embraced this opinion for the reasons given. We, on the other hand, say that it is in one way no different, that something should come to be out of what is or is not, or that what is or is not should act on or be acted on by something, or come to be any particular thing, than that a doctor should act on or be acted on by something, or that anything should be or come to be out of a doctor. By this last we may mean two things, so clearly it is the same when we say that something is out of something which is, and that what is acts or is acted on. A doctor builds a house, not as a doctor, but as a builder, and comes to be pale, not as a doctor, but as dark. But he doctors and comes to be ignorant of medicine as a doctor. Now we most properly say that a doctor acts or is acted on, or that something comes to be out of a doctor, only if it is as a doctor that he does or undergoes or comes to be this. So clearly to say that something comes to be out of what is not, is to say that it does so out of what is not, as something which is not. They gave up through failing to draw this distinction, and from that mistake passed to the greater one of supposing that nothing comes to be or, apart from what is itself, is, thus doing away with coming to be altogether. We too say that nothing comes to be simply out of what is not; but that things do come to be in a way out of what is not, sc. by virtue of concurrence. A thing can come to be out of the lack, which in itself is something which is not, and is not a constituent. This, however, makes people stare, and it is thought impossible that anything should come to be in this way, out of what is not.

Similarly there can be no coming to be out of what is or of what is, except by virtue of concurrence. In that way, however, this too can come about, just as if animal came to be out of animal and animal of a particular sort out of animal of a particular sort, for instance dog ⟨out of dog or horse⟩ out of horse. The dog would come to be, not only out of a particular sort of animal, but out of animal; not, however, as animal, for that belongs already. If a particular sort of animal is to come to be, not by virtue of concurrence, it will not be out of animal, and if a particular sort of thing which is, it will not be out of thing which is; nor out of thing which is not. We have already said what it means to say that something comes to be out of what is not: it means out of what is not, as something which is not. Further, there is no violation here of the principle that everything either is or is not.

That is one way of handling the matter; another is to point out that the same things may be spoken of either as possible or as actual. That, however, is dealt with in greater detail elsewhere.

So, as we have said, the difficulties are resolved, by which people were driven to do away with some of the things mentioned. For that was why the earlier thinkers too were diverted so far from the path to coming to be, passing away, and change generally; when this nature, if they had seen it, would have put them right.

CHAPTER 9

Others, indeed, have touched its surface, but they did not go deep enough. In the first place, they agree that it is in a general way the case that a thing comes to be out of what is not,* and that so far Parmenides was right. And then it appears to them that if it is one in number, it is only one in possibility, which is not at all the same thing. We for our part say that matter and lack are different, and that the one, the matter, by virtue of concurrence is not, but is near to

reality and a reality in a way, whilst the other, the lack, in itself is not, and is not a reality at all. According to them, on the other hand, the great and the small, whether together or separate, are what is not in the same way. So their three things and ours are completely different. They got as far as seeing that there must be an underlying nature, but they made it one. And if someone calls it a pair, viz. great and small, he is still doing the same thing, for he overlooked the other nature. The one remains, joint cause with the form of the things which come to be, as it were a mother. The other half of the opposition you might often imagine, if you focus on its evil tendency, to be totally non-existent. Given that there is one thing which is divine and good and yearned for, our suggestion is that there is one thing which is opposite to this, and another which is by nature such as to yearn and reach out for it in accordance with its own nature. They, however, will find that the opposite is reaching out for its own destruction. But the truth is that neither can the form yearn for itself, since it is in need of nothing, nor can its opposite yearn for it, since opposites are mutually destructive, but it is the matter which does the yearning. You might say that it yearns as the female for the male and as the base for the beautiful; except that it is neither base nor female, except by virtue of concurrence.

And in one way it passes away and comes to be, and in another not. Considered as that in which, it does in itself pass away [for that which passes away, the lack, is in it].* Considered, however, as possible, it does not in itself pass away, but can neither be brought to be nor destroyed. If it came to be, there would have to be something underlying, out of which, as a constituent, it came to be; that, however, is the material nature itself, for by matter I mean that primary underlying thing in each case, out of which as a constituent and not by virtue of concurrence something comes to be; so it would have to be before it had come to be. And if it passed away, this is what it would ultimately arrive at, so it would have passed away before it had passed away.

As for the formal principle, whether such principles are
35 one or many, and of what sort or sorts they are, are questions to be treated in detail in first philosophy, so we may leave them aside until we come to that. In what follows we shall be speaking of natural forms which can pass away.

That there are principles, then, and what and how many they are, we may take as settled in this way. Let us now proceed, making a fresh start.